CITY of CLOVIS

AGENDA • CITY COUNCIL MEETING

Council Chamber, 1033 Fifth Street, Clovis, CA 93612 (559) 324-2060
www.cityofclovis.com

May 11, 2020 6:00 PM Council Chamber

SPECIAL NOTICE REGARDING PUBLIC PARTICIPATION DUE TO COVID-19

Given the current Shelter-in-Place Order covering the State of California and the Social Distance Guidelines issued by Federal, State, and Local Authorities, the City is implementing the following changes to participate in Council meetings until notified otherwise. The Council chambers will be open to the public but we will be implementing social distancing policies and will limit the number of people who may be in the Council chambers. We are encouraging residents to participate virtually following the directions below. If you are sick, please do not attend the meeting. Any member of the City Council may participate from a remote location by teleconference.

- The meeting will be webcast and accessed at: https://cityofclovis.com/government/city-council/city-council-agendas/

Written Comments

- Members of the public are encouraged to submit written comments at: https://cityofclovis.com/government/city-council/city-council-agendas/ at least one (1) hour before the meeting (5:00 p.m.). You will be prompted to provide:
  - Council Meeting Date
  - Item Number
  - Name
  - Email
  - Comment

SCAN ME

- Please submit a separate form for each item you are commenting on.
- A copy of your written comment will be provided to the City Council noting the item number. If you wish to make a verbal comment, please see instructions below.
- Please specify if you would like to have your written comment read into the record. If so, your comment will be read into the record during the public comment portion when the item is heard. Any portion of your comment extending past three (3) minutes may not be read aloud due to time restrictions, but will be made part of the record of proceedings.
- Please be aware that any written comments received that do not specify a particular agenda item will be marked for the general public comment portion of the agenda.

- If a written comment is received after 5:00 p.m. on the day of the meeting, efforts will be made to provide the comment to the City Council during the meeting. However, staff cannot guarantee that written comments received after 5:00 p.m. will be provided to City Council during the meeting. All written comments received prior to the end of the meeting will be made part of the record of proceedings.

Verbal Comments

- If you wish to speak to the Council on an item by telephone, you should contact the City Clerk at (559) 324-2060 no later than 5:00 p.m. the day of the meeting.

- You will be asked to provide your name, phone number, and your email. You will be emailed instructions to log into Webex to participate in the meeting. Staff recommends participants log into the Webex at 5:30 p.m. the day of the meeting to perform an audio check.

- All callers will be placed on mute, and at the appropriate time for your comment your microphone will be unmuted.

- You will be able to speak to the Council for up to three (3) minutes.

Webex Participation

- Reasonable efforts will be made to allow written and verbal comment from a participant communicating with the host of the virtual meeting. To do so, a participant will need to chat with the host and request to make a written or verbal comment. The host will make reasonable efforts to make written and verbal comments available to the City Council. Due to the new untested format of these meetings, the City cannot guarantee that these written and verbal comments initiated via chat will occur. Participants desiring to make a verbal comment via chat will need to ensure that they accessed the meeting with audio transmission capabilities.

CALL TO ORDER

FLAG SALUTE - Councilmember Flores

ROLL CALL

PUBLIC COMMENT

ORDINANCES AND RESOLUTIONS - With respect to the approval of resolutions and ordinances, the reading of the title shall be deemed a motion to waive a reading of the complete resolution or ordinance and unless there is a request by a Councilmember that the resolution or ordinance be read in full, further reading of the resolution or ordinance shall be deemed waived by unanimous consent of the Council.

CONSENT CALENDAR - Items considered routine in nature are to be placed upon the Consent Calendar. They will all be considered and voted upon in one vote as one item unless a Councilmember requests individual consideration. A Councilmember's vote in favor of the Consent Calendar is considered and recorded as a separate affirmative vote in favor of each action listed. Motions in favor of adoption of the Consent Calendar are deemed to include a motion to waive the reading of any ordinance or resolution on the Consent Calendar. For adoption of ordinances, only those that have received a unanimous vote upon introduction are considered Consent items.

1. Administration - Approval - Minutes from the May 4, 2020 Council Meeting.
2. Administration - Adopt - Ord. 20-09, Amending Title 4, Chapter 4.4 Article 1 of the Clovis Municipal Code relating to the California Fire Code. (Vote: 5-0)
3. General Services – Receive and File – 3rd Quarter FY 2019-20 General Services Department Report.

PUBLIC HEARINGS - A public hearing is an open consideration within a regular or special meeting of the City Council, for which special notice has been given and may be required. When a public hearing is continued, noticing of the adjourned item is required as per Government Code 54955.1.

4. Consider items associated with approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues. Multiple property owners; Woodside 06N, LP., applicant; Yamabe & Horn Engineering, Inc., representative.

   a. Consider Approval - Res. 20-___, A request to approve an environmental finding of a Mitigated Negative Declaration for General Plan Amendment GPA2019-006, Prezone R2019-007, Prezone R2020-002, & Vesting Tentative Tract Map TM6284.

   b. Consider Approval - Res. 20-___, GPA2019-006, A request to amend the General Plan to re-designate approximately 34.3 acres from Rural Residential (1 lot per 2 acres) classification to Low Density Residential (2.1 to 4 DU/Ac) classification.

   c. Consider Introduction - Ord. 20-___, R2019-007, A request to prezone approximately 50.80 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

   d. Consider Approval - Res. 20-___, TM6284, A request to approve a vesting tentative tract map for a 74-lot single-family subdivision on 32.19 acres of land.

   Staff: George González, MPA, Associate Planner
   Recommendation: Approve

5. Consider Approval - Res. 20-___, RO301, A Resolution of Application for the Annexation of the Territory known as the Teague-Fowler SW Reorganization located at the southwest corner of Teague and N. Fowler Avenues. Various owners; Woodside 06N, LP., applicant; Yamabe & Horn Engineering, Inc., representative.

   Staff: George González, MPA, Associate Planner
   Recommendation: Approve

6. Consider Approval – Res. 20-___, Adoption of the City of Clovis 2020-21 Annual Action Plan for expenditure of Community Development Block Grant (CDBG) Funds and amending the 2019-20 Annual Action Plan to include expenditure of CDBG-CV Funds; and Amending the FY 2019-20 Housing and Community Development Budget to Increase the Funds by $441,214.

Staff: Andrew Haussler, Community and Economic Development Director
Recommendation: Approve

7. Consider Approval – Program Guidelines for City of Clovis Meals on Wheels Program and Emergency Housing Payments Program.

Staff: Andrew Haussler, Community and Economic Development Director
Recommendation: Approve

COUNCIL ITEMS

8. Workshop – For the Clovis City Council to conduct a workshop to discuss the impact on ongoing City operations during the COVID-19 State of Emergency as declared by the Federal Government, State of California, County of Fresno, and City of Clovis; and to explore actions the City may take in response to the crisis.

Staff: Luke Serpa, City Manager
Recommendation: Approve

CITY MANAGER COMMENTS

COUNCIL COMMENTS

ADJOURNMENT

MEETINGS AND KEY ISSUES

Regular City Council Meetings are held at 6:00 P.M. in the Council Chamber. The following are future meeting dates:

May 18, 2020 (Mon.) (Budget Introduction)
June 1, 2020 (Mon.)
June 8, 2020 (Mon.)
June 15, 2020 (Mon.)

CLOVIS CITY COUNCIL MEETING

May 4, 2020 **6:00 P.M.** **Council Chamber**

Meeting called to order by Mayor Bessinger
Flag Salute led by Councilmember Flores

Roll Call: Present: Councilmembers Ashbeck, Flores, Mouanoutoua, Whalen
Mayor Bessinger
Absent: None

It was the consensus of City Council to move the workshop (Item 14) to the beginning of the agenda.

ITEM 14A – 6:07 p.m. - APPROVED – **RES. 20-52**, A RESOLUTION ADOPTING EMERGENCY ORDER 2020–13 IN ORDER TO ADD CLARITY TO THE CITY'S ROLES AND RESPONSIBILITIES UNDER THE GOVERNOR'S STAY AT HOME ORDER BY: (1) REPEALING EMERGENCY ORDERS 2020-01 (BARS AND RESTAURANT CLOSURES), 2020-02 (GYMS AND PLACES OF AMUSEMENT), AND 2020-10 (CITY PARKS) AS UNNECESSARILY DUPLICATIVE AS THE STATEWIDE STAY AT HOME ORDER COVERS THESE AND OTHER ITEMS; AND (2) CLARIFYING THE CITY'S ENFORCEMENT RESPONSIBILITIES; AND **ITEM 14B** - APPROVED – A LETTER TO GOVERNOR NEWSOM REGARDING THE REOPENING OF BUSINESSES IN THE CITY OF CLOVIS; AND **ITEM 14C** - APPROVED - A LETTER TO GOVERNOR NEWSOM SEEKING TO ESTABLISH VARIOUS ACTIONS IN SUPPORT OF LOCAL FUNDING FOR CITIES IMPACTED BY THE COVID-19 STATE OF EMERGENCY

City Manager Luke Serpa provided an overview of the proposed resolution adopting Emergency Order 2020 – 13 in order to add clarity to the city's roles and responsibilities under the governor's stay at home order by: (1) repealing emergency orders 2020-01 (bars and restaurant closures), 2020-02 (gyms and places of amusement), and 2020-10 (city parks) as unnecessarily duplicative as the statewide stay at home order covers these and other items; and (2) clarifying the city's enforcement responsibilities. Luke Serpa provided an overview that explained that by approving the resolution and repealing the three orders as they were unnecessarily duplicative as the statewide stay at home order covered these areas. Luke Serpa also provided a recommendation for two letters to Governor Newsom regarding the reopening of businesses in the City of Clovis, and a letter seeking to establish various actions in support of local funding for cities impacted by the COVID-19 State of Emergency. Discussion by the Council.

Brad Mills, Fred Leonard, Tim Adams, Dr. James, Tim Rollins, Matt Lock, Emily Wolfe, Mark Edwards, Alisha Wisehower, Eric Rollins, Diana, Steve, Cora Shipley, Daniel, Larry Baumeister, Larry, Ron Escuella, Miguel, Greg Newman, Selena Merrihart, Josh Fulfer, Krystal Reed, Mark Wall, pastors / teachers / residents / small business owners all expressed concern with how the state of emergency is impacting their business / church / way of life. The group requested the City Council to take whatever action they could to open up the Clovis economy using social distancing and best practices going forward.

Motion by Councilmember Whalen, seconded by Councilmember Flores for the Council to approve Resolution 20-52, adopting Emergency Order 2020 – 13 in order to add clarity to the city's roles and responsibilities under the governor's stay at home order by: (1) repealing emergency orders 2020-01 (bars and restaurant closures), 2020-02 (gyms and places of amusement), and 2020-10 (city parks) as unnecessarily duplicative as the statewide stay at home order covers these and other items; and (2) clarifying the city's enforcement responsibilities. Motion carried 4-1 with Councilmember Ashbeck voting no.

Motion by Councilmember Whalen, seconded by Councilmember Flores, for the Council to approve a letter to Governor Newsom regarding the reopening of businesses in the City of Clovis with minor edits provided by Council. Motion Carried by unanimous vote.

Motion by Councilmember Whalen, seconded by Councilmember Flores, for the Council to approve a letter to Governor Newsom seeking to establish various actions in support of local funding for cities impacted by the COVID-19 State of Emergency. Motion Carried by unanimous vote.

PUBLIC COMMENTS 9:20

CONSENT CALENDAR 9:27

Motion by Councilmember Flores, seconded by Councilmember Mouanoutoua, that the items on the Consent Calendar be approved. Motion carried by unanimous vote.

1. Administration - Approved - Minutes from the April 20, 2020 Council Meeting.
2. Finance - Approved – **Res. 20-48**, A Resolution of Intention (ROI) to Annex Territory (Annexation #60) (Solivita Commons-Northeast Corner of Willow and Alluvial), to the Community Facilities District (CFD) 2004-1 and to Authorize the Levy of Special Taxes Therein and Setting the Public Hearing for June 15, 2020.
3. Finance - Approved – **Res. 20-49**, A Resolution of Intention (ROI) to Annex Territory (Annexation #62) (T6239-Northeast Corner of Locan and Loyola), to the Community Facilities District (CFD) 2004-1 and to Authorize the Levy of Special Taxes Therein and Setting the Public Hearing for June 15, 2020.
4. General Services - Approved – **Res. 20-50**, Approving Amendments to the City's Internal Revenue Code Section 125 Flexible Benefits Plan.
5. Planning and Development Services - Approved - Bid Award for CIP 18-08, Minnewawa Avenue Street Improvements, and; Authorize the City Manager to execute the contract on behalf of the City.
6. Planning and Development Services – Approved - Bid Award for CIP 20-01, Rubberized Cape Seal 2020, and; Authorize the City Manager to execute the contract on behalf of the City.
7. Public Utilities – Approved – Bid Award for CIP 20-02 Electric Vehicle Bus Chargers; Authorize the City Manager to execute the contract on behalf of the City; and **Res. 20-51**, amending the 2019-2020 General Government Facilities budget in the Community Investment Program to allocate funds for the project.

8. Public Utilities – Approved – Letter of Support on behalf of Fresno Metropolitan Flood Control District for AB 2050, regarding amendments to the Fresno Metropolitan Flood Control District Principal Act.

PUBLIC HEARINGS

9. 9:30 - CONTINUED – RES. 20-XX, ADOPTION OF THE CITY OF CLOVIS 2020-21 ANNUAL ACTION PLAN FOR EXPENDITURE OF COMMUNITY DEVELOPMENT BLOCK GRANT FUNDS. (CONTINUE TO THE MAY 11, 2020 MEETING).

   Mayor Bessinger indicated that this item was being continued to the meeting of May 11, 2020.

10. 9:31 - APPROVED - **RES. 20-53**, A RESOLUTION CONFIRMING THE DIAGRAM AND ASSESSMENTS FOR THE ANNUAL LEVY FOR LANDSCAPE MAINTENANCE DISTRICT NO. 1 FOR 2020-2021.

    Public Utilities Director Scott Redelfs presented a report confirming the diagram and assessments for the annual levy for landscape maintenance district no. 1 for 2020-2021. A Public Hearing is required by the Landscape and Lighting Act of 1972 (ACT) to consider all written statements and to afford all interested persons the opportunity to hear and be heard concerning the Landscape Maintenance District assessments for the coming year. There have been no written comments made or filed as of the writing of this report. At the conclusion of the Public Hearing, the Council will confirm the diagram and assessments in the Engineer's Report, as presented or amended, in order to levy assessments on parcels in the LMD for the following fiscal year. There being no public comment, Mayor Bessinger closed the public portion. Discussion by the Council.

    Motion by Councilmember Whalen, seconded by Councilmember Mouanoutoua, for the Council to approve Resolution 20-53 confirming the diagram and assessments for the annual levy for landscape maintenance district no. 1 for 2020-2021. Motion carried by unanimous vote.

11. 9:33 - APPROVED INTRODUCTION – **ORD. 20-09**, AMENDING TITLE 4, CHAPTER 4.4 ARTICLE 1 OF THE CLOVIS MUNICIPAL CODE RELATING TO THE CALIFORNIA FIRE CODE.

    Fire Chief John Binaski presented a report on a request to approve the introduction of the ordinance to begin the adoption process for proposed Clovis Municipal Code amendments to include applicable California Fire Code. Council approved the adoption of the 2019 California Fire Code (CFC) with local amendments in November of 2019. The adoption of the code places more stringent requirements related to fire apparatus access roads than current Fire Department standards. In addition, there have been occasional challenges related to definitions, design, and installation of roadways for temporary and permanent access. An example of this is the term Emergency Vehicle Access (EVA). This term has been used widely throughout the years, but is not the term used in the CFC. The goal of this amendment is to bring the terms, Emergency Vehicle Access, Temporary Fire Access, and Fire Apparatus Access into compliance with the definition and terms as outlined in

accordance with the adopted CFC. The amendment of Title 4 will provide uniform definitions and standards that reduce confusion within the development community while codifying our local standards that allow less restrictive designs than those within the CFC. There being no public comment, Mayor Bessinger closed the public portion. Discussion by the Council.

Motion by Councilmember Flores, seconded by Councilmember Whalen, for the Council to approve the introduction of Ordinance 20-09, amending Title 4, Chapter 4.4 Article 1 of the Clovis Municipal Code relating to the California Fire Code. Motion carried by unanimous vote.

ADMINISTRATIVE ITEMS

12. 9:38 - RECEIVED AND FILED – 2019 FIRE DEPARTMENT ANNUAL REPORT AND COUNCIL PRESENTATION.

Mayor Bessinger indicated that this item was being continued to the meeting of May 18, 2020.

13A. 9:39 - RECEIVED AND FILED – UPDATE ON THE IMPACT TO THE CITY OF CLOVIS LOCAL ECONOMY DUE TO THE COVID-19 STATE OF EMERGENCY; AND ITEM 13B. RECEIVED AND FILED – A SUMMARY AND PROJECTION OF THE IMPACT ON THE GENERAL FUND DUE TO THE STATE OF EMERGENCY AND PREPARING THE 2020-2021 BUDGET.

Economic Development Director Andy Haussler and Finance Director Jay Schengel presented informational reports on how the state of emergency is financially impacting the City of Clovis. Jay Schengel provided an update on how things have changed in the last sixty days when he last reported out to Council on the five year forecast. Jay Schengel indicated that his most current forecast would require use of emergency reserves to balance the budget for 2020-2021. Jay Schengel summarized the impact on revenues as well as measured cuts the city manager is recommending such as freezing hiring to assist getting through the state of emergency.

Mayor Bessinger adjourned the meeting of the Council to May 11, 2020

Meeting adjourned: 10:20 p.m.

_____ _____

Mayor City Clerk

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Administration

DATE: May 11, 2020

SUBJECT: Administration - Adopt - Ord. 20-09, Amending Title 4, Chapter 4.4 Article 1 of the Clovis Municipal Code relating to the California Fire Code. (Vote: 5-0)

ATTACHMENTS: 1. Ordinance 20-09 with minor changes

This item was approved for introduction on May 4, 2019 with a unanimous vote. Please find attached a copy of the ordinance with minor changes highlighted.

Please direct questions to the City Manager's office at 559-324-2060.

ORDINANCE 20-

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CLOVIS AMENDING SECTION 102 OF CHAPTER 4 OF TITLE 4 OF THE CLOVIS MUNICIPAL CODE RELATING TO FIRE PREVENTION REGULATIONS BY ADOPTING LOCAL AMENDMENTS

The City Council of the City of Clovis does ordain as follows:

Section 1 Section 102 of Chapter 4 of Title 4 of the Clovis Municipal Code is hereby amended to add subsections (n) and (o) ~~read~~ as follows:

4.4.102 Amendments to Fire Code

(n~~a~~) Add/Amend CFC Section 503.2.1 Dimensions
Section 503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of 20 feet measured from the base of curb to base of curb and an unobstructed vertical clearance of not less than 14 feet. Access roads shall be installed and maintained per Clovis Fire Department Standard 1.1 Standard for Fire Apparatus Access.

(o~~b~~) Appendix D – Fire Apparatus Access Roads

SECTION D101 GENERAL
D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the California Fire Code.

SECTION D102 REQUIRED ACCESS
D102.1 Access and loading. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing up to 80,000 pounds.

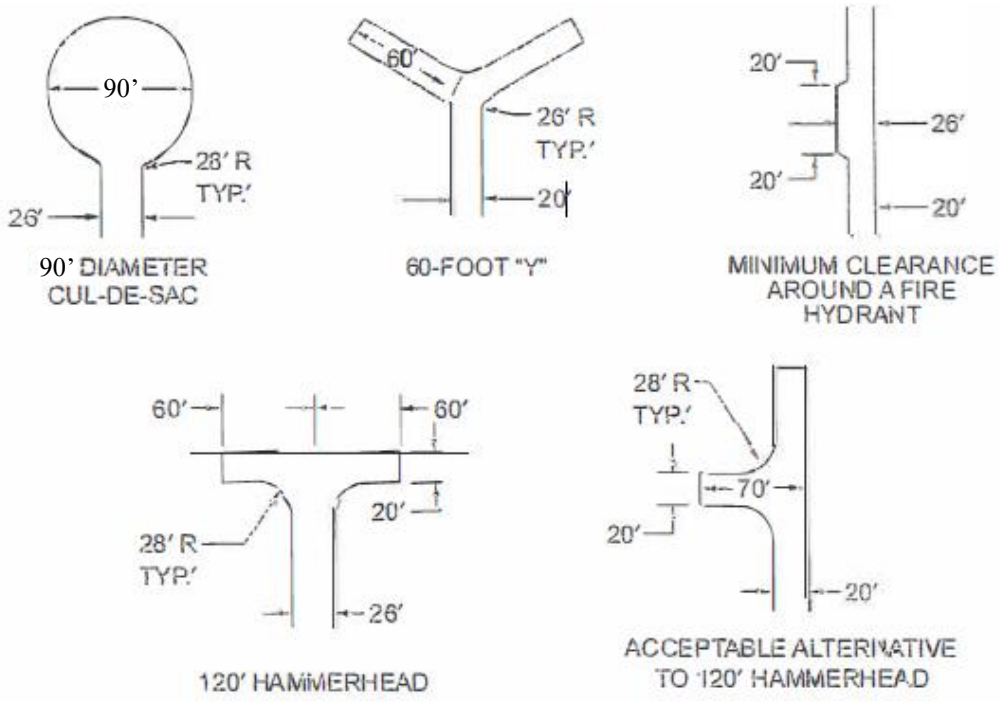
D102.2. Fire apparatus access roads. All required fire apparatus access roads shall be constructed per City of Clovis streets standards and completed prior to any occupancy of any building(s) on a site.

SECTION D103 MINIMUM SPECIFICATIONS

MINIMUM SPECIFICATIONS
D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet, exclusive of shoulders.

D103.2 Grade. Fire apparatus access roads shall not exceed 10 percent in grade.

ATTACHMENT 1



For SI: 1 foot = 304.8 mm.

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

D103.3 Turning radius. The minimum turning radius shall be determined by the fire code official.

D103.4. Dead ends. Dead-end fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with Table D103.4

Table D103.4
REQUIREMENTS FOR DEAD-END
FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-500	20	120-foot Hammerhead, 60-foot "Y" or 90-foot diameter cul-de-sac

D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. Where a single gate is provided, the gate width shall be not less than 20 feet. Where a fire apparatus road consists of a divided roadway, the gate width shall be not less than 14 feet.
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.

4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Methods of locking shall be submitted for approval by the fire code official.
7. Electric gate operators, where provided, shall be listed in accordance with UL 325.
8. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.
9. Gates shall be installed per the City of Clovis Fire Department Standard #1.5. Electric gates require plans be submitted and approved prior to the installation of the gate. Prior to occupancy, the electric gate shall be inspected and approved by the City of Clovis Fire Department.

D103.6 Signs. Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING – FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches wide by 18 inches high and have red letters on a white reflective background. Signs shall be posted on one or both of the fire apparatus road as required by Section D103.6.1 or D103.6.2.

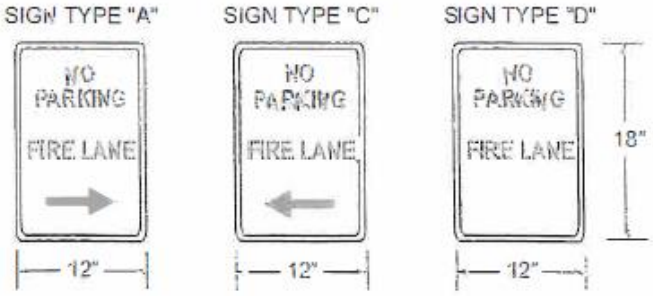


FIGURE D103.6
FIRE LANE SIGNS

D103.6.1.1. Single Family Residential Developments. Roads 32 feet in width to less than 36 feet in width with houses on one side of the street only. Fire lane signs as specified in section 103.6 shall be posted on the side of fire apparatus access roads with no houses. All other fire apparatus access roads shall be a minimum of 36 feet in width.

D103.6.2.1 Multiple-Family Residential and Commercial Developments. Roads 26 feet in width to less than 32 feet in width. Fire lane signs as specified in section 103.6 shall be posted on both sides of fire apparatus access roads that are 26 feet in width to less than 36 feet in width.

D103.6.3.1 Commercial Developments With Areas Subject to Loading and Unloading With Truck Traffic. Commercial developments with areas subject to loading and unloading with truck traffic with roads 30 feet in width to less than 36 feet in width. Fire lane signs as specified in section 103.6 shall be posted on both sides of fire apparatus access roads that are 30 feet in width to less than 36 feet in width.

D103.6.3.2 Commercial developments with areas subject to loading and unloading with truck traffic with roads 36 feet in width to less than 42 feet in width. Fire lane signs as specified in section 103.6 shall be posted on one side of fire apparatus access roads that are 36 feet in width to less than 42 feet in width.

SECTION D104 COMMERCIAL AND INDUSTRIAL DEVELOPMENTS

D104.1 Buildings exceeding three stories or 30 feet in height. Buildings or facilities exceeding 30 feet or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

D104.2 Buildings exceeding 62,000 square feet in area. Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.
Exception: Projects having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road where all buildings are equipped throughout with approved automatic sprinkler systems.

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses. The fire code official shall have the authority to modify the required separation while still providing adequate access to the development.

D104.4 Emergency vehicle access. Emergency vehicle access may only be used for two adjacent parcels for a commercial or industrial development when no other means is available to provide a required second point of access for fire apparatus. Gates shall be installed per the City of Clovis Fire Department Standard #1.5. A reciprocal access agreement shall be provided for all emergency vehicle access prior to approval.

SECTION D105 AERIAL FIRE APPARATUS ACCESS ROADS

D105.1 Where required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet, approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

D105.2 Width. Aerial fire apparatus roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

D105.3 Proximity to building. One or more of the required access routes meeting this condition shall be located not less than 15 feet and not greater than 30 feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

SECTION D106 MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses. The fire code official shall have the authority to modify the required separation while still providing adequate access to the development.

SECTION D107 ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS

D107.1 One- or Two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads.

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses. The fire code official shall have the authority to modify the required separation while still providing adequate access to the development.

SECTION D108 REFERENCED STANDARDS

ASTM F2200-13 Standard Specification for Automated Vehicular Gate Construction, D103.5

ICC IFC-15 International Fire Code, D101.1 and D107.1

UL 325-02 Door, Drapery, Gate, Louver, and Window Operators and Systems, with Revisions through June 2013, D103.5

Section 2 If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid, such a decision shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of Clovis hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact any one or more sections, subsections, clauses or phrases be declared invalid.

Section 3 The City Clerk is hereby directed to file a copy of this Ordinance with the California Building Standards Commission of the State of California.

Section 4 This ordinance shall go into effect and be in full force and operation from and after thirty (30) days after its final passage and adoption.

APPROVED: Date the Ordinance was introduced

_____ _____

Mayor City Clerk

* * * * * * * * * *

The foregoing Ordinance was introduced and read at a regular meeting of the City Council held on_____, and was adopted at a regular meeting of said Council held on _____, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED:

_____

City Clerk

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: General Services Department

DATE: May 11, 2020

SUBJECT: General Services - Receive and File – 3rd Quarter FY 2019-20 General Services Department Report.

The General Services Department Quarterly Report contains statistical data and information related to the Personnel/Risk Management division, Department Support division, and Community Services division.

GENERAL SERVICES DEPARTMENT
Personnel/Risk Management Division
Quarterly Report
January 2020 - March 2020

Departmental Performance Measures

- Employee recruitment will be conducted with the objective of recruiting, testing, and selecting the most qualified candidates for departmental hiring. As a benchmark, the Personnel/Risk Management Division will complete 95% of all recruitments within 90 days

90-Day Recruitment:

FY 2017-2018	FY 2018-2019	FY 2019-2020 (current)
95%	95%	100%

- Employee Benefit programs will be administered in a manner that will ensure quality services and cost containment. The benchmarks will measure cost savings whenever possible, to continue to contain costs in the Employee Health Plan at or below the annual medical inflation rates, and maintain quality health services without reducing benefit levels.

Savings Achieved:

2018	2019	2020
Contained to 3.57% Increase	Contained to 10.72% Increase	2.25% Increase

- The Risk Management Section will continue to emphasize the protection of the public, City employees, and City assets through training, risk identification, risk transfer, and insurance coverage procurement. As a benchmark, the number of annual work-related employee accidents resulting in lost workdays will be 15 or less, and safety/risk management training programs will be offered to all employees.

Injuries Involving Lost Work Days:

FY 2017-2018 Total	FY 2018-2019 Total	FY 2019-2020 To Date
17	16	25

Safety/Risk Management Training Programs:

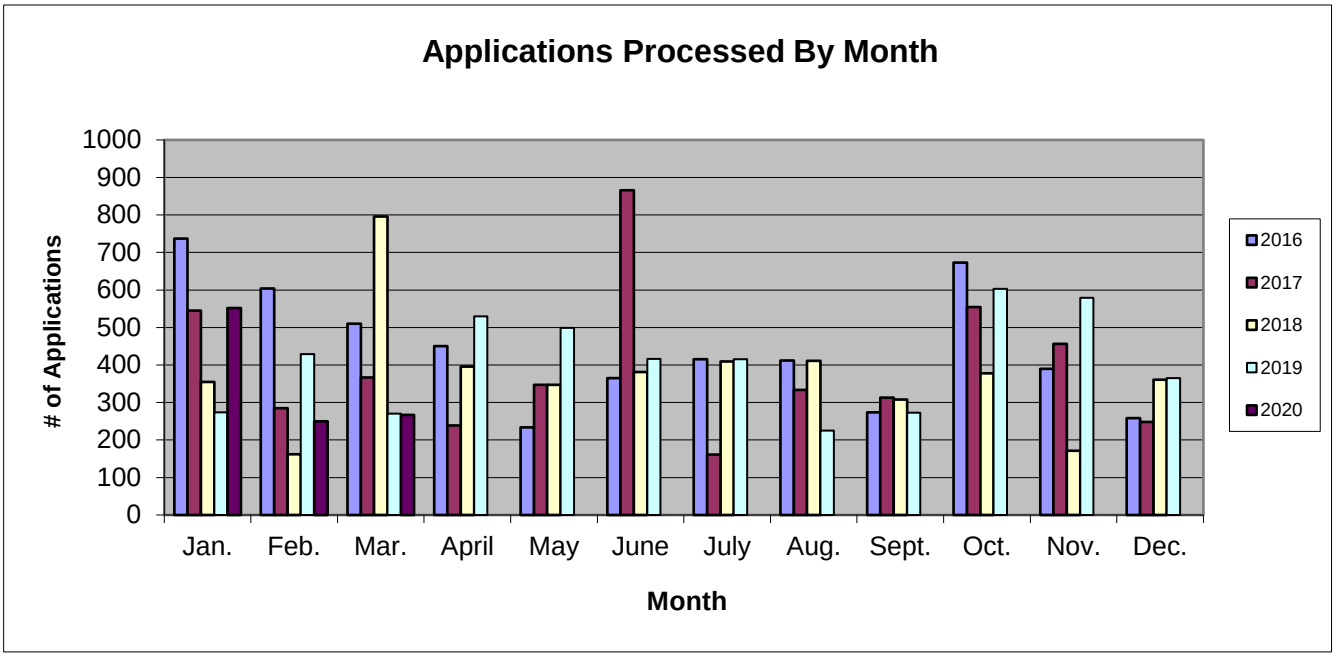
FY 2017-2018 Total	FY 2018-2019 Total	FY 2019-2020 To Date
172	54	81

Personnel Section

Personnel received and processed **1069** employment applications for the months of January, February, and March.

The chart below reflects the number of applications processed by month during the last five years.

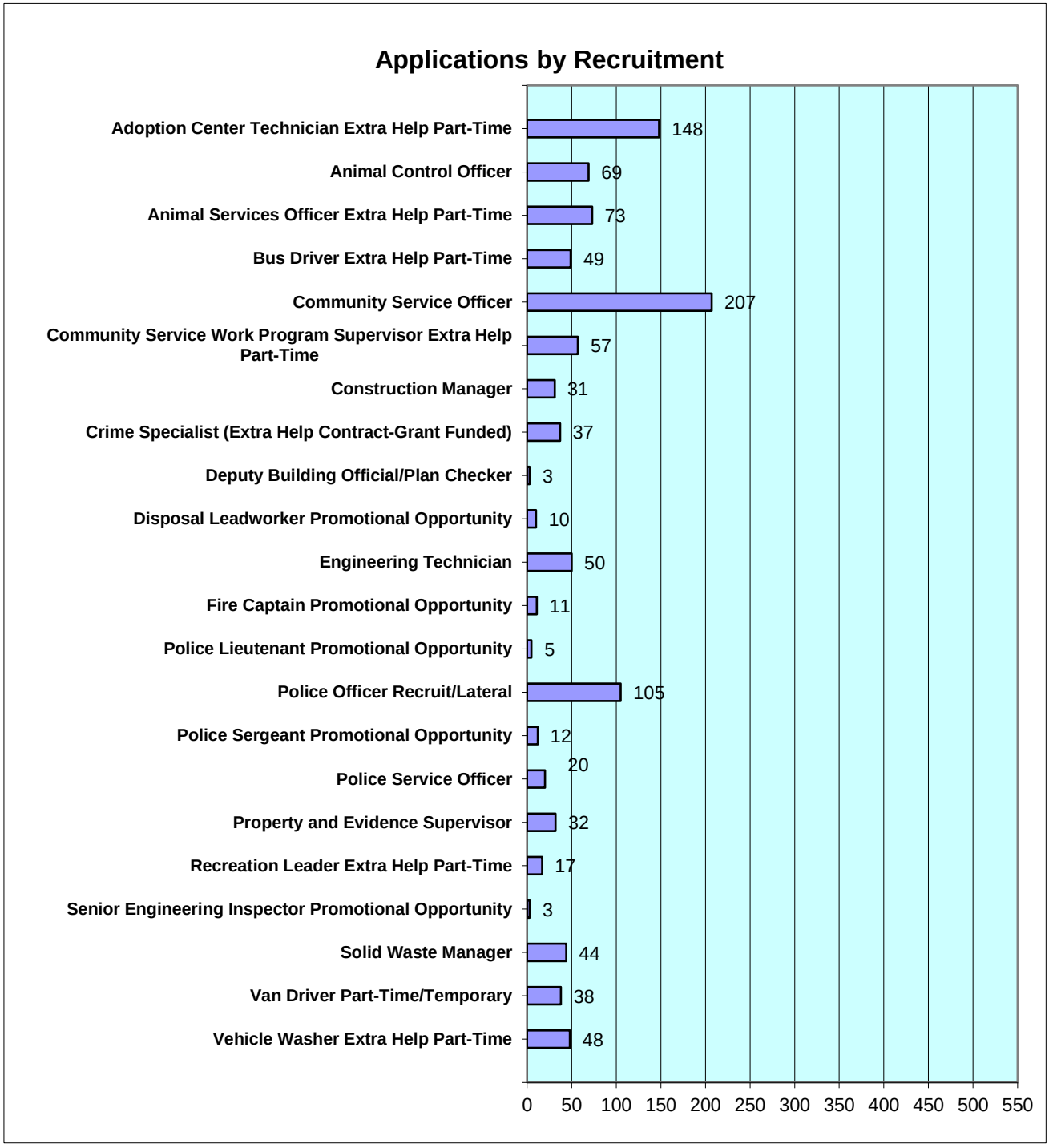
Yr.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Yearly % Increase
2016	737	604	510	450	234	365	415	412	274	673	390	258	**5322**	**-0.9%**
2017	545	285	367	239	347	866	161	333	313	554	456	248	**4714**	**-12.12%**
2018	355	162	796	396	347	381	409	411	308	378	171	361	**4475**	**-5.2%**
2019	274	429	270	530	499	416	415	225	273	603	579	365	**4878**	**8.6%**
2020	552	250	267										**1069**	



This chart shows the number of applications received for each of the recruitments during the months of January, February, and March.

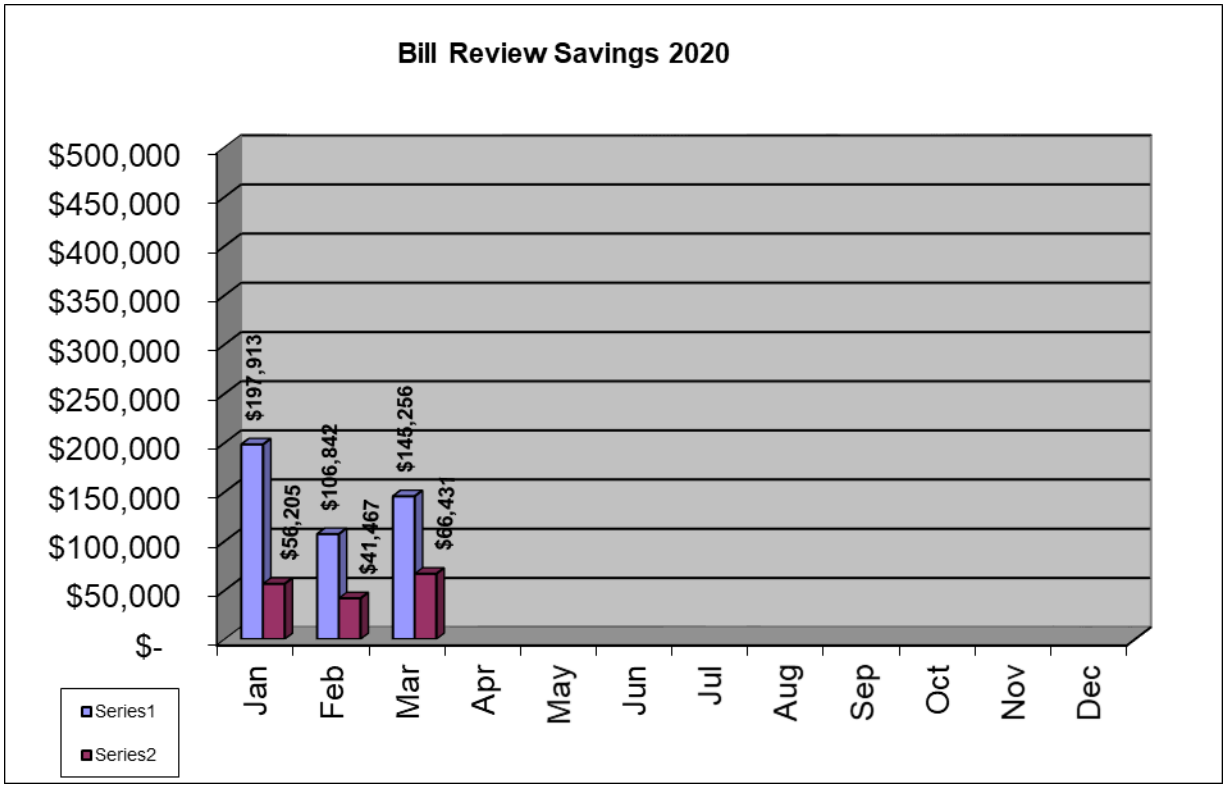
Exams were administered and eligibility lists were established for the Community Service Officer, Construction Manager, Crime Specialist (Extra Help Contract-Grant Funded), Engineering Technician, Police Lieutenant Promotional Opportunity, Police Service Officer, Senior Engineering Inspector Promotional Opportunity, and Solid Waste Manager classifications.

There was one (1) Personnel Commission interview panel conducted from January to March for the Bus Driver and Police Officer classifications.


Applications by Recruitment
Adoption Center Technician Extra Help Part-Time
148
Animal Control Officer
69
Animal Services Officer Extra Help Part-Time
73
Bus Driver Extra Help Part-Time
49
Community Service Officer
207
Community Service Work Program Supervisor Extra Help Part-Time
57
Construction Manager
31
Crime Specialist (Extra Help Contract-Grant Funded)
37
Deputy Building Official/Plan Checker
3
Disposal Leadworker Promotional Opportunity
10
Engineering Technician
50
Fire Captain Promotional Opportunity
11
Police Lieutenant Promotional Opportunity
5
Police Officer Recruit/Lateral
105
Police Sergeant Promotional Opportunity
12
Police Service Officer
20
Property and Evidence Supervisor
32
Recreation Leader Extra Help Part-Time
17
Senior Engineering Inspector Promotional Opportunity
3
Solid Waste Manager
44
Van Driver Part-Time/Temporary
38
Vehicle Washer Extra Help Part-Time
48
0 50 100 150 200 250 300 350 400 450 500 550

Workers' Compensation

In an effort to ensure a cost effective Workers' Compensation program, the Personnel/Risk Management Division utilizes a bill review process through the City's Third Party Administrator. While the California Labor Code caps a majority of the costs associated with Workers' Compensation treatment, the City has been able to realize additional savings through the use of contract physicians. The chart below describes the savings obtained by using a bill review service.

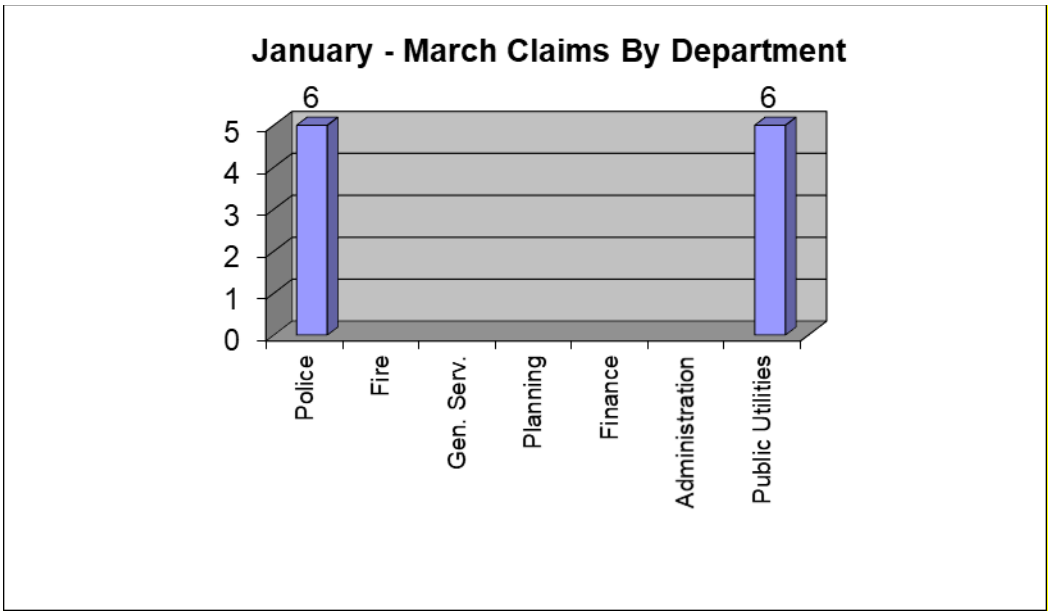


Series one represents the total medical expenses that were charged and series two represents the total amount paid for the medical charges after the bill review.

In addition to bill review savings, the Personnel/Risk Management Division utilizes nurse case managers to attend appointments with employees. Nurse case managers achieve additional savings by working with physicians to return employees back to work sooner and reduce the frequency and costs of various treatments that may not be necessary.

Workers' Compensation Claims

There were 12 work related injuries reported in the period of January through March 2020. The chart below shows the number of claims by department during this quarter:



These injuries have gone through a job analysis/assessment to determine what causes contributed to the incident and any future preventative measures that can be taken to avoid future incidents. None of the injuries suffered were serious.

Liability Claims

The City received 11 liability claims during January through March 2020.

Safety Training:

Aerial Bucket Truck Operator Training
Back Safety
Code of Safe Practices 2020
Coronavirus Disease 2019 (COVID-19)
COVID-19 Update from the Fresno Co. Dept. Of Public Health
CPR/AED
Fire Extinguishers: Ready to Respond
Hearing Protection
Homeless Encampment Clean-Up
Job Hazards (Eye Strain)
Maximizing Supervisory Skills for the First Line Supervisor
Navigating the Crossroads of Discipline and Disability Accommodation
Nuts & Bolts: Navigating Common Legal Risks for the Front Line Supervisor
PPE
Prop. 65

Tailgate Safety
Top Five Things to Know About the Flu

Computer Loans
During the months of January, February and March, 6 computer loans were issued by Personnel/Risk Management staff.

GENERAL SERVICES DEPARTMENT
Department Support Division
Quarterly Report
January 2020 - March 2020

Facilities Maintenance Section

Scope of Duties

- This Section performs routine monthly maintenance as required. Routine monthly maintenance is defined as those tasks performed on a schedule once a month or more frequently. These tasks include interior lighting replacement, light fixture repairs, emergency stand-by generator monitoring (required by the San Joaquin Valley Air Pollution Control District), and HVAC filters in the areas not covered by a contract.

- This Section maintains all facility systems, including HVAC, lighting, security, solar systems, electrical, plumbing and daytime janitorial services. The section also performs new construction projects involving office remodels and complex HVAC upgrades.

- Facilities Maintenance staff also responds to daily service requests not classified as routine in nature.

Departmental Performance Goal

- The goal of the Section is to respond to each service request within 24-hours of notification. This Section is meeting that goal.

Quarterly CRM Service Request Activity

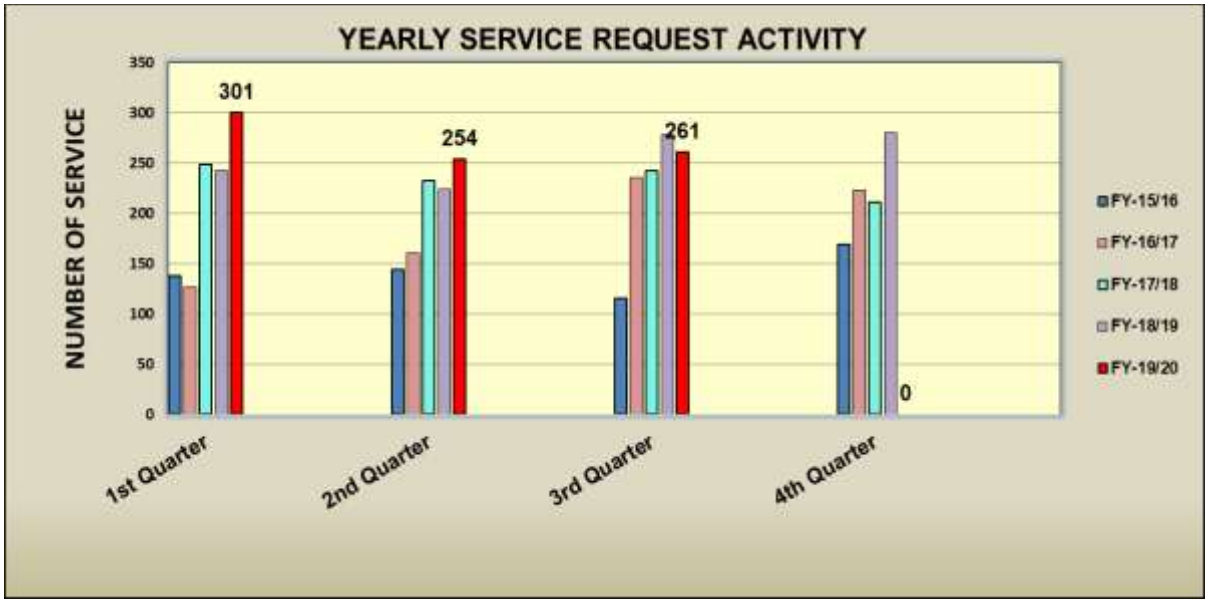
The Facilities Maintenance Section received 261 internal *"Citizen Relationship Manager*" (CRM) service requests this quarter, with Facilities Maintenance staff responding to and completing 273 CRM's. Following is a historical chart showing

typical CRM activity for the last three (3) years during the 3rd Quarter and totals for their respective fiscal years.

	3rd Qtr. FY 17-18	3rd Qtr. FY 18-19	3rd Qtr. FY 19-20
CRM Received	243	279	261
CRM Completed This Qtr.	245	277	273
Completed Year to Date	737	753	864

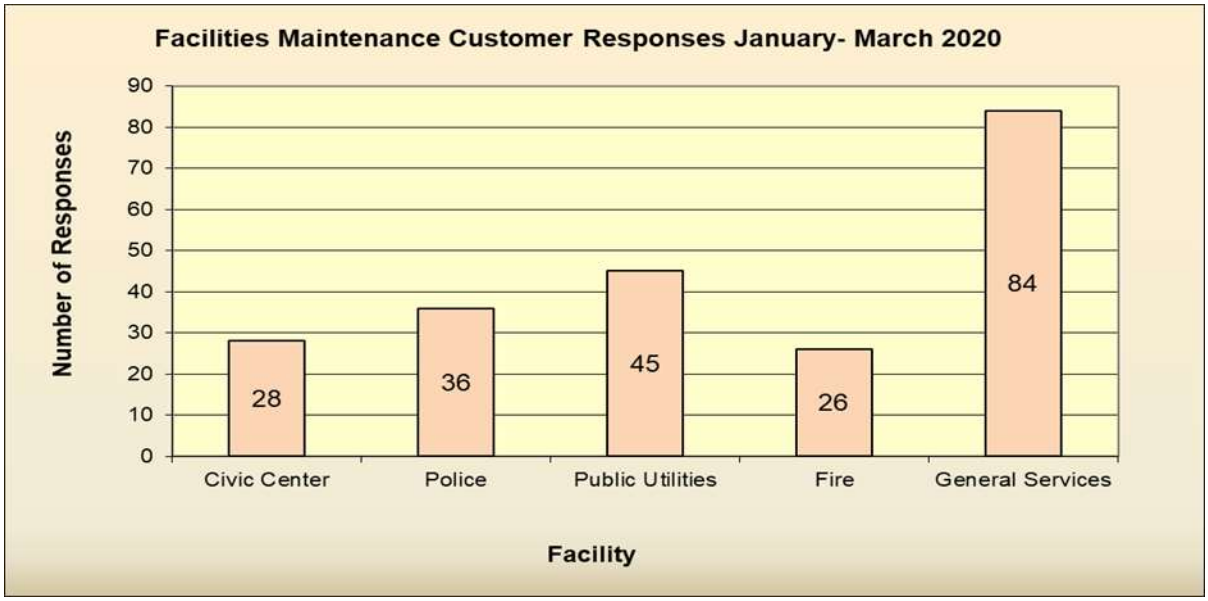
Yearly Service Request Activity

The chart below reflects the number of non-routine service requests processed by quarter for the last five (5) fiscal years.



Non-CRM Responses

The quarterly service responses are the total number of on-site responses that occurred during the course of the 3rd Fiscal Quarter. These responses include non-routine service requests and new construction projects. This chart reflects the number of non-CRM requests by city department / facility during January – March 2020.



Facilities Maintenance Project Highlights for January - March 2020:

Facilities Maintenance Staff installed new pre-fabricated composite information kiosks in and around downtown.

Facilities Maintenance Staff installed Employees of the Year plaques at Public Safety.

Facilities Maintenance Staff replaced damaged ceiling tiles and cleaning up water leaks at Public Safety.

Facilities Maintenance Staff replaced rotten wood skirting with Hardie board siding at IT modular.

Facilities Maintenance Staff fabricated and installed a new fire access gate for Streets on Armstrong.

Facilities Maintenance Staff modified existing lighting to accommodate PDS staff needs.

Facilities Maintenance Staff trained on how to use GenEon disinfecting machine.

Facilities Maintenance Staff installed new mini split system at backup Police Dispatch.

Facilities Maintenance Staff repaired exhaust extraction system at Fire Station #4.

Facilities Maintenance Staff assisted Public Safety with reconfiguring of office space.

Other Facilities Maintenance Activities:

- Staff is participating in the Landmark Commons bi-weekly meetings to provide insight from a facilities maintenance perspective.
- Staff is participating in meetings with Public Utilities related to the new Facilities Maintenance shop.
- Staff acquired pricing to re-roof Building A at the Operation's and Maintenance Service Center (Corporation Yard).

Purchasing Section

The Purchasing Section is responsible for the purchasing and acquisition of goods and services utilized for department support functions.

Purchasing Section's Monthly Highlights for 3rd Quarter FY19/20:

- Staff received City Council approval to enter into an agreement with Sonitrol to provide security and fire system monitoring at Operations and Maintenance Service Center.

- Staff procured multiple disinfecting machines for city departments to combat COVID-19.

- Staff generated and executed an agreement between the City and Trane Inc. for Heating, Ventilation, and Air Conditioning (HVAC) control throughout the City's facilities.

- Staff assisted other departments with acquiring pricing for next fiscal year budget.

- Staff coordinated with our current janitorial company to provide additional disinfecting service's due to COVID-19.

- Staff acquired pricing from a local HVAC contractor to provide an estimate to install new split systems in lieu of hydronic line replacement for all of Civic Center.

- Staff participated and provided feedback in monthly meetings with Planning & Development Services for Fire Station #6.

GENERAL SERVICES DEPARTMENT
Community Services Division
Quarterly Report
January 2020 – March 2020

The following programs, services and activities are highlights of the activities occurring within the Community Services Division during the third quarter of FY19-20.

Senior Services Section

Tracking of senior program participants occurs as seniors sign-in for services and activities. New senior participants are tracked when they complete a confidential form. During this quarter, 155 new seniors participated in services and activities offered through the Clovis Senior Activity Center.

Program Participants	**FY19**	**FY20**	**YTD FY19**	**YTD FY20**
Information and Assistance	25,715	21,377	79,665	78,141
Outreach	393	319	2,026	1,563
Newsletters	9,858	12,270	28,597	36,971
Community Services	20,771	18,727	56,104	60,873
Health Services	404	212	1,019	851
Senior Nutrition *In Center (includes special meals)* *Frozen Meals for Homebound*	 *2,944* *8,904*	 *2,235* *9,226*	 *9,027* *21,532*	 *8,182* *25,508*
Consumer Services	6,645	4,660	13,270	9,065
Volunteers	1,506	1,909	2,042	4,984
Volunteer Hours	3,709	2,176	11,390	9,322

Revenue Generated	**FY19**	**FY20**	**YTD FY19**	**YTD FY20**
Rental	$6,951	$9,235	$27,953	$26,332
Older American Act Funding	$3,999	$3,999	$9,333	$9,333
Memorial District	$0	N/A	$0	N/A
Sales: Taxable & Non-Taxable & Misc.	$1,800	$0	$3,125	$1,387
Special Events	$3,285	$16,468	$6,982	$22,170
Class User Fees	$20,280	$15,119	$60,225	$47,670
Project Income	$5,856	$4,227	$16,746	$13,927
In House Nutrition Program	$4,206	$3,626	$12,302	$10,945
Homebound Nutrition Program	$365	$469	$680	$1,169
Donations	$2,737	$1,531	$10,722	$2,274
Total	**$49,479**	**$54,674**	**$148,068**	**$135,207**

Note: Due to COVID-19, the Senior Center closed to the public starting the afternoon of March 13, 2020 until further notice. The City declared a state of emergency on March 16, 2020.

The Senior Center's annual Noon-Year's Eve party was complete with a countdown to the "New/Noon Year", dancing, and singling of Auld Lang Syne. A group picture of some of the attendees was taken to commemorate another great year at the center with good friends saying farewell to 2019 and hello to 2020!

Love was in the air at the Senior Center on February 14 as over 100 participants enjoyed a free Valentine's Day Party! The party included hot appetizers and cake, a live western band for dancing, and a chance to win prizes. Staff also constructed a photo booth that was used to take pictures of friends and couples.

Billiards are one of the most popular activities at the senior center. Each day, players of all skill levels come to the center to play pool and improve their game. The center sponsors a monthly tournament that is highly competitive. Winners receive a small prize, but more importantly, they win bragging rights until the next tournament. Teams from Selma Senior Center, Kerman Senior Center, and Fresno State compete each quarter at Clovis. (pictured below are January and February's tournament winners)

Clovis Transit Quarterly Report
FY19/20 3rd Quarter

Stageline Revenue Q3

Funding Source:	FY19	FY20	YTD FY19	YTD FY20
Fares	$10,428	$12,667	$35,843	$46,730
Bus Passes/Metro Pass	$5,916	$7,766	$15,775	$16,177
Sub Total	$16,344	$20,433	$51,618	$62,907
Trolley Rentals/Advertising	$1,081	$2,200	$17,206	$48,434
Measure C	$0	$0	$0	$0
LTF Article 4	$0	$0	$0	$0
STA	$221,944	$230,502	$470,062	$230,502
SB1 State of Good Repair Grant	$151,926	$70,458	$237,106	$70,041
TOTAL	**$391,295**	**$323,593**	**$775,992**	**$411,884**

Round Up Revenue Q3

Funding Source:	FY19	FY20	YTD FY19	YTD FY20
Fares	$17,945	$14,656	$48,039	$61,307
Bus Passes	$4,384	$4,288	$14,682	$11,871
Sub Total	$22,329	$18,944	$62,721	$73,178
Measure C	$0	$0	$0	$0
LTF Article 4/4.5	$2,334,048	$2,969,500	$2,667,440	$3,430,766
STA	$0	$0	$0	$0
SB1 State of Good Repair Grant	$0	$0	$52,317	$0
TOTAL	**$2,356,377**	**$2,988,444**	**$2,782,478**	**$3,503,944**

RIDERSHIP

Stageline Ridership

	FY 18/19						FY 19/20					
Month	**10**	**50**	**70**	**80**	**W-Mart Shuttle**	**Total**	**10**	**50**	**70**	**80**	**W-Mart Shuttle**	**Total**
July	4,581	2,932	0	0	80	7,593	4,448	2,497	0	0	24	6,969
August	6,301	3,952	126	94	45	10,518	7,823	4,119	162	197	34	12,335
Sept	6,633	4,027	194	191	67	11,112	9,142	5,341	358	359	23	15,223
Oct	7,116	4,753	274	261	68	12,472	9,493	5,826	417	410	31	16,177
Nov	5,788	3,563	196	155	72	9,774	6,243	3,828	299	285	53	10,708
December	5,025	3,222	167	134	18	8,566	6,111	4,042	259	307	35	10,754
Jan	5,412	3,420	194	198	22	9,246	6,437	4,419	421	344	5	11,626
Feb	5,250	3,334	165	217	14	8,980	6,520	4,549	410	342	44	11,865
March	6,131	3,910	187	225	63	10,516	4,260	2,812	225	181	62	7,540
TOTAL	**52,237**	**33,113**	**1,503**	**1,475**	**449**	**88,777**	**60,477**	**37,433**	**2,551**	**2,425**	**311**	**103,197**

Round Up Ridership

	FY 18/19			FY 19/20		
Month	**Fresno**	**Clovis**	**Total**	**Fresno**	**Clovis**	**Total**
July	1,448	2,239	3,687	1,846	2,942	4,788
August	1,914	2,650	4,564	2,314	3,551	5,865
Sept	1,853	2,287	4,140	2,194	3,218	5,412
Oct	2,240	2,626	4,866	2,843	3,292	6,135
Nov	1,673	2,434	4,107	1,785	2,821	4,606
Dec	1,458	3,046	4,504	1,853	2,928	4,781
Jan	1,879	2,525	4,404	2,023	3,106	5,129
Feb	1,720	2,268	3,988	1,877	2,914	4,791
March	2,021	2,814	4,835	1,275	1,909	3,184
TOTAL	16,206	22,889	39,095	18,010	26,681	44,691

Round Up Passenger No-Shows

FY 19/20				
Month	**No-Shows**	**% of Total Trips**	**Warnings**	**Suspensions**
July	63	1.32%	2	0
August	76	1.30%	0	0
Sept	103	1.90%	1	0
Oct	111	2.00%	0	1
Nov	87	2.00%	0	0
Dec	91	2.00%	0	0
Jan	96	2.00%	3	0
Feb	76	1.59%	2	0
March	82	3.00%	0	0
TOTAL	**785**	**1.90%**	**8**	**1**

Complaint Calls

FY 18/19								
Month	**Rude Driver**	**Missed Passenger**	**Unsafe Driving**	**Late Bus**	**Device Use**	**Full Bus**	**Other**	**Total**
July	0	0	0	0	0	0	0	0
August	1	0	1	0	0	0	0	2
Sept	0	0	1	0	0	0	0	1
Oct	1	1	1	0	0	0	0	3
Nov	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0
Jan	1	0	0	0	0	0	0	1
Feb	0	1	0	0	0	0	0	1
March	0	0	0	0	0	0	0	0
TOTAL	**3**	**2**	**3**	**0**	**0**	**0**	**0**	**8**

Stageline On-Time Performance

FY 19/20	
Month	**% On Time**
July	97.4%
August	96.9%
September	96.5%
October	95.9%
November	97.1%
December	97.0%
January	96.4%
February	96.1%
March	98.0%

Fleet Information

	FY 19/20	
Month	**Collisions**	**Road Calls**
July	2	1
August	3	2
Sept	2	1
Oct	2	2
Nov	0	1
Dec	1	0
Jan	1	0
Feb	2	1
March	1	1
TOTAL	**14**	**9**

Recreation Section

Quarter 3

Revenue Generated This Quarter:	FY 19	FY 20	YTD 19	YTD 20
User Fees	$52,769	$58,044	$140,422	$171,767
Project Income	$211	$156	$376	$428
Batting Cage	$16,089	$21,548	$24,970	$38,903
Donations	$0	$0	$0	$0
Totals	**$69,069**	**$79,748**	**$165,768**	**$211,098**

Food Services				
Candy Machines	$98	$0	$98	$99
Batting Cage Snack Bar	$134	$159	$299	$394
Totals	**$232**	**$159**	**$397**	**$493**

Adult programs

- The City Of Clovis Recreation indoor coed soccer, basketball and floorball leagues finished up the Winter session on March 5, 2020. These adult sports generated $11,113 in revenue during the third quarter.

Youth Programs

- The City of Clovis Recreation Winter session is one of our busiest. The youth Basketball League for kids 1st through 6th grade continues to be the most popular program. Each team gets to practice twice a week and the games are played on Saturdays. The basketball league had 32 teams with a total 320 players. The youth programs brought in $18,431 in the third quarter.

Clovis Batting Range

- The Clovis Batting Range reopened to the public on January 24, 2020. The batting range was open to the public Monday - Friday 4:00 PM – 8:00 PM, Saturday Noon - 8:00 PM and Sunday Noon - 7:00 PM through March 16, 2020.
- The batting range had 10,773 participants and brought in $21,548 in the 59 days that it was open to the public during the third quarter.

Skatepark

- The Clovis Rotary Skatepark hours are Monday – Sunday 10:00 AM – 9:00 PM. Before the Skatepark was closed due to the outbreak of COVID-19, it had 1,568 participants for this quarter.

Program Participation	Qtr 3/19	Qtr 3/20	YTD FY19	YTD FY20
Program Participation	19,941	25,939	50,090	58,084

These numbers are not taking into consideration participants that use the Recreation Center on a walk in basis or spectators. Some duplication may be included.

Class User Fee Quarter 3 Participation and Revenue Numbers						
Program	Sessions	Participants for Quarter	Daily Average	Volunteers	Total	Revenue
Baseball Tiny Sluggers	0	0	0	0	0	$342
Baseball Youth League	0	0	0	0	0	$250
Basketball Adult Men's Comp	8	400	50	0	400	$983
Basketball Adult Men's Rec	17	1000	59	0	1000	$6,067
Basketball Little Dribblers	13	520	40	140	660	$2,014
Basketball Middle School Camp	0	0	0	0	0	$246
Basketball MS League	17	952	56	204	1156	$480
Basketball Youth League	67	6570	98	1408	7978	$10,844
Basketball Youth Skills and Drills	0	0	0	0	0	$2,929
Batting Cages	59	10773	183	0	10773	$21,548
Drop-In	40	814	20	0	814	$1,633
Floorball	7	525	75	0	525	$2,706
Reservation Parks	0	0	0	0	0	$1,575
Reservation Rec Center	0	0	0	0	0	$18,719
Santa's Little Helpers	0	0	0	0	0	$52
Skatepark	129	1568	12	0	1568	$0
Soccer Adult Coed	8	480	60	0	480	$1,357
Soccer Youth Skills and Drills	0	0	0	0	0	$946
Softball Adult Slow Pitch Adult Coed	0	0	0	0	0	$1,004
Softball Youth Camp	0	0	0	0	0	$315
Spring Camp	0	0	0	0	0	$97
Start Smart Baseball	0	0	0	0	0	$290
Start Smart Basketball	6	60	10	0	60	$788
Start Smart Soccer	18	252	14	0	252	$728
Start Smart Tennis	0	0	0	0	0	$208
Tennis Youth Camp	0	0	0	0	0	$50
Tiny Tumblers	11	247	22	0	247	$1,600
Basketball Adult 30+	9	1200	133	0	1200	$0
Soccer Toddler	18	198	11	0	198	$1,044
Basketball Toddler	18	365	20	0	365	$542
Roller Skate	0	0	0	0	0	$87
Fitness 101	6	15	3	0	15	$145
Total	451	25939		1752	27676	$79,589

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Planning and Development Services

DATE: May 11, 2020

SUBJECT: Consider items associated with approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues. Multiple property owners; Woodside 06N, LP., applicant; Yamabe & Horn Engineering, Inc., representative.

a. Consider Approval - Res. 20-___, A request to approve an environmental finding of a Mitigated Negative Declaration for General Plan Amendment GPA2019-006, Prezone R2019-007, Prezone R2020-002, & Vesting Tentative Tract Map TM6284.

b. Consider Approval - Res. 20-___, GPA2019-006, A request to amend the General Plan to re-designate approximately 34.3 acres from Rural Residential (1 lot per 2 acres) classification to Low Density Residential (2.1 to 4 DU/Ac) classification.

c. Consider Introduction - Ord. 20-___, R2019-007, A request to prezone approximately 50.80 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

d. Consider Approval - Res. 20-___, TM6284, A request to approve a vesting tentative tract map for a 74-lot single-family subdivision on 32.19 acres of land.

Staff: George González, MPA, Associate Planner
Recommendation: Approve

ATTACHMENTS:
1. Location Map
2. Conditions of Approval TM6284
3. Initial Study & Mitigated Negative Declaration
4. Draft Resolution CEQA
5. Draft Resolution GPA2019-006
6. Draft Ordinance R2019-007
7. Draft Resolution TM6284
8. Planning Commission Minutes
9. Applicant's Justification for GPA2019-006
10. Correspondence from Commenting Agencies
11. Letter from Corey File
12. Letter from Marcus N. DiBuduo
13. Letter from Norman D. Morrison IV
14. Miscellaneous Comment Letters Support and Opposition
15. Vesting Tentative Tract Map TM6284
16. Dry Creek Preserve Master Plan

CONFLICT OF INTEREST
None.

RECOMMENDATION
Planning Commission and staff recommend that the City Council:

- Approve an environmental finding of a mitigated negative declaration for General Plan Amendment GPA2019-006, Prezone R2019-007, & Vesting Tentative Tract Map TM6284;
- Approve General Plan Amendment GPA2019-006;
- Approve Prezone R2019-007;
- Approve Vesting Tentative Tract Map TM6284, subject to the conditions of approval listed as Attachment 2; and
- Make a finding of consistency that the dedication toward public right-of-way is proportionate to the development being requested.

EXECUTIVE SUMMARY
The applicant is proposing the development of a 74-lot residential subdivision on approximately 32.19 acres of property within the Dry Creek Preserve. The proposal will require annexation into the City before development can proceed, and a general plan amendment application has been filed to implement the provisions of the Dry Creek Preserve Master Plan. The general plan amendment would change the land use designation from Rural Residential (1 lot per 2 acres) to Low Density Residential (2.1 to 4 DU/Ac). A prezoning application has also been submitted to prepare the future annexation boundary to become part of the City. The 50.8 acre prezoning area is larger than the subdivision site, because it also includes the surrounding rural residential properties that are necessary to achieve a logical annexation boundary. The subdivision properties are proposed to be prezoned to Clovis R-1 (Single-Family Residential), while the rural residential properties will be prezoned to Clovis R-R (Rural Residential), consistent with the City's General Plan. Approval of this Project would allow the developer to continue processing development drawings.

BACKGROUND

- General Plan Designation: Rural Residential (1 lot per 2 acres)
- Specific Plan Designation: Herndon-Shepherd Specific Plan (Rural Residential)
- Existing Zoning: County R-R (Rural Residential)
- Lot Size: Thirteen properties totaling 50.80 acres
- Current Land Use: Rural Residential and vacant land
- Adjacent Land Uses:
    - North: Rural Residential and Single-Family Residential
    - South: Rural Residential
    - East: Rural Residential
    - West: Rural Residential

On June 4, 2018, the City Council approved the Dry Creek Preserve Master Plan for this area, which is also referred to as Focus Area #7 in the Clovis General Plan Land Use Diagram (see **Figure 1** below). The approval of the Dry Creek Preserve Master Plan came after years of collaboration and compromises between the City, the primary developer (Woodside Homes) and property owners in the Dry Creek Preserve area. Woodside Homes conducted several community meetings as well as outreach to individual property owners to receive comments and help address concerns that had been raised. Additionally, the City conducted multiple public hearings to consider Woodside's first project (TM6154), Dry Creek Preserve Master Plan and Annexation Agreement in 2018.

The Dry Creek Preserve Master Plan (Master Plan) established goals, standards and guidelines for the entire Master Plan area. The Master Plan acknowledges the overall vision and intent of this area and seeks to preserve the rural lifestyle of the current property owners while providing for limited urban development. Key components of the Master Plan include an annexation agreement, protecting agricultural operations, land use guidelines, and development standards for new housing developments (see **Attachment 16**). An annexation program was also included describing the probable development in this area over the next 18 years.

The primary goal of the Master Plan is to respect the rural lifestyle that has been historically enjoyed by the property owners in the Dry Creek Preserve. According to page 30 of the Master Plan, new housing development proposals are limited to a density of 2.3 units per acre, and only where the project is 10 acres or more. Properties less than 10 acres may still develop in the Dry Creek Preserve at 0.5 units per acre per the existing General Plan, either within the County or as a City project. The standards include unique elements for this area, such as asphalt or decomposed sidewalks, split rail/concrete fencing, thematic lighting, and limited curbs and gutters.

Focus Area #7 is approximately 736 acres, generally bound by Nees Avenue on the south, Big Dry Creek on the west, Enterprise Canal to the east, and Shepherd Avenue to the north. Subsequent to the approval of the Master Plan, the City Council approved a general plan amendment, prezone, vesting tentative tract map, and annexation for the development of a

95-lot single-family residential subdivision (TM6154) at the northwest corner of Teague and Fowler Avenues (see **Figure 1** below), immediately northeast of the current request.

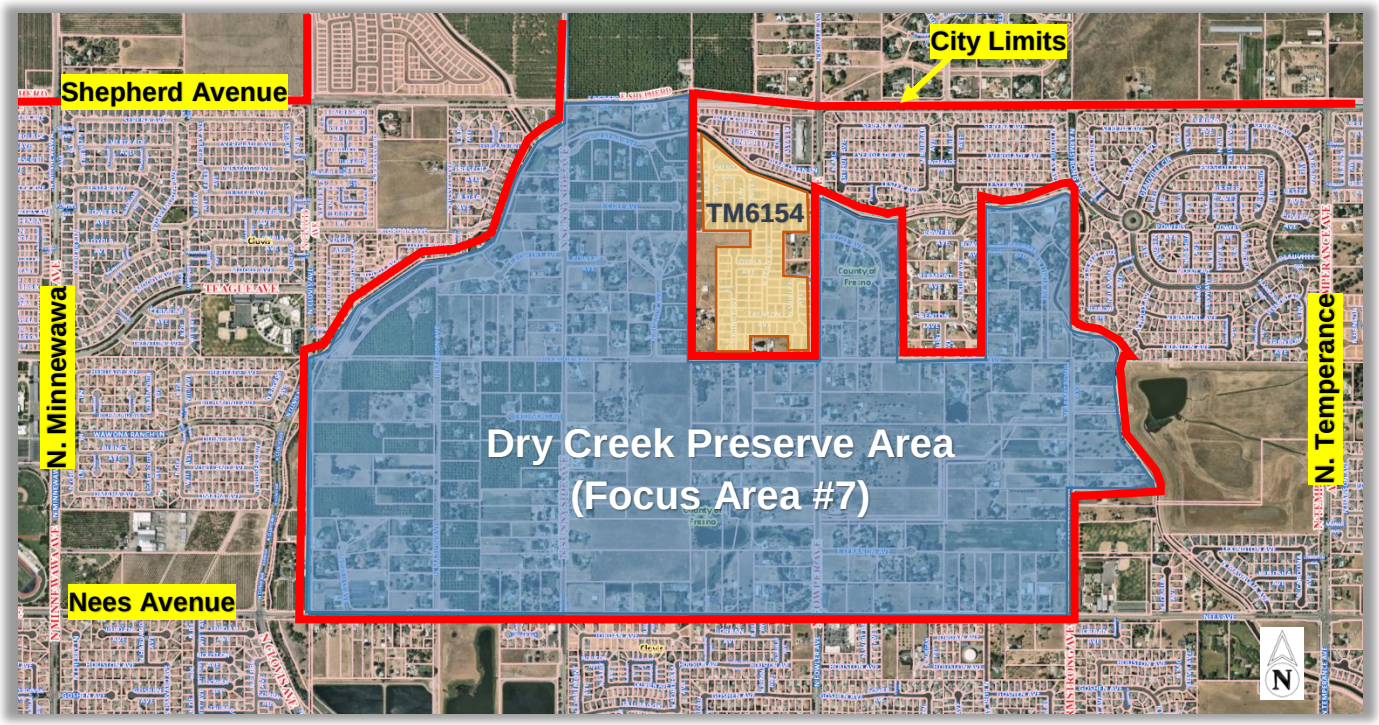


Figure 1

PROPOSAL AND ANALYSIS

General Plan Amendment

The applicant is requesting to amend the Clovis General Plan Land Use Diagram and Herndon-Shepherd Specific Plan for an area currently designated as Rural Residential (1 DU/2 Ac) to the Low Density Residential designation, which permits a range of 2.1 to 4.0 units per acre. The plan amendment would amend the land use diagram for approximately 34.3 acres of land. A general plan amendment is a change in City policy and requires a compelling reason for change. The applicant has provided a justification for the general plan amendment (see **Attachment 9**).

This general plan amendment (see **Figure 2** below) is accompanied with a specific project density of 2.3 units per acre, which is consistent with the Dry Creek Preserve Master Plan. The proposed general plan amendment to the Low Density Residential designation is required to implement the Master Plan. The requested land use designation of Low Density Residential is similar to the project density within the approved Woodside Homes single-family development located to the northeast of the subject project (94 units at 2.3 units per acre). Staff's analysis of the proposed Low Density Residential land use considered the location of the site, its surroundings, and the potential environmental impacts associated.

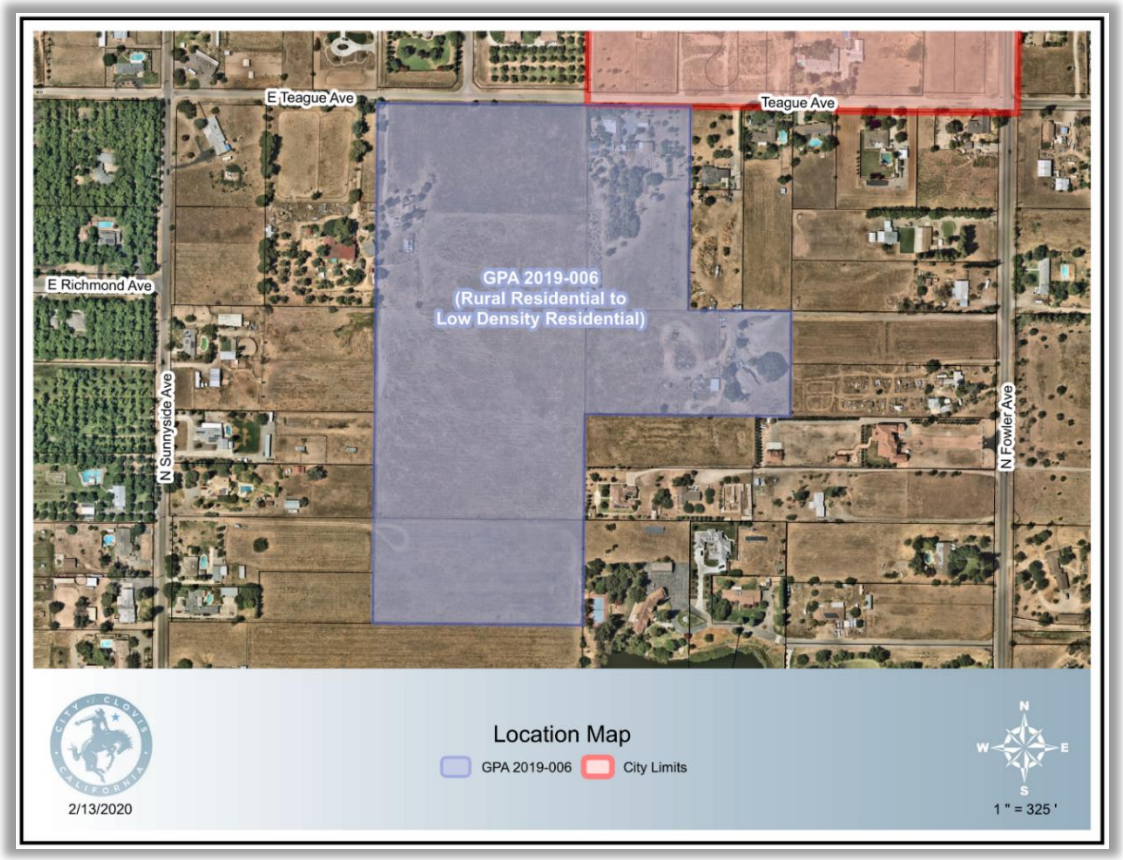


Figure 2

Prezone

The applicant is requesting to prezone approximately 50.80 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and Clovis R-R (Rural Residential) Zone Districts (see **Figure 3** below). The R-1 District will be applied to the proposed subdivision properties and will allow the development of the 74 lots that are envisioned by the applicant. The R-1 District is consistent with the Low Density Residential general plan designation that is also being proposed as part of the Project. The R-R Zone District will be applied to the nine (9) rural residential properties located east of the subdivision. These parcels make up part of the area which constitutes a logical annexation boundary. Pursuant to state law, these properties need to be prezoned before they can be annexed.

Figure 3

Development Standards

The Clovis R-1 and R-R Zone Districts include specific development standards, such as lot size, setbacks, lot coverage, and building height.

Zoning Standards

R-1 Setbacks	R-R Setbacks
Front – 20 Feet	Front – 35 Feet
Sides – 5 Feet (Interior Lots)	Sides – 10 Feet (Interior Lots)
Rear – 20 Feet	Rear – 20 Feet
Lot Coverage – 40%	Lot Coverage – 30%
Maximum Height – 35 Feet	Maximum Height – 35 Feet

The development of Vesting Tentative Tract Map TM6284 will be subject to the development standards of the R-1 Zone District, including a 20 to 24-foot front yard setback, 20-foot rear yard setback, and 5-foot setback on each side for interior lots.

Vesting Tentative Tract Map

The project includes a Vesting Tentative Tract Map TM6284. The map includes 74 lots and is consistent with the requirements of the Subdivision Map Act.

Circulation and Lot Sizes

The project is accessible from one main entry along the Teague Avenue frontage, which is a designated collector street in the circulation diagram of the Clovis General Plan. Traffic circulation is carefully evaluated and addressed, particularly with a request to increase residential density. An increase in density for the vesting tentative tract map has the potential to impact not only Teague Avenue, but also other streets in the vicinity such as Sunnyside and Fowler Avenues. The Project circulation was analyzed by Peters Engineering Group, in cooperation with the County of Fresno Department of Public Works and Planning. The report concluded that the Project will contribute to increased traffic in the vicinity streets; however, the circulation system identified in the Clovis General Plan can accommodate the proposed increase in density (see pages 50-53 of **Attachment 3**). The project includes 50-foot wide public rights-of-way with standard City streets and sidewalks. All of the proposed streets follow the City standards and Codes regarding street widths. The lot sizes range from 11,375 square feet to 38,163 square feet, with an average lot size of 15,611 square feet.

The project will provide a Fire Apparatus Access Road (FAAR) in the southwest area of TM6284 which connects to Sunnyside Avenue. The FAAR will be utilized by Clovis emergency vehicles when necessary to access TM6284 from Sunnyside Avenue. The ultimate width of the FAAR will be 54 feet and Woodside Homes will be securing/providing 42 feet of this ultimate width with this development. The additional 12 feet will be provided at such time the properties on the south side of the FAAR are developed. Woodside Homes will be providing the 42-foot FAAR in fee title, transferring ownership of the right-of-way to the City of Clovis. The FAAR will be equipped with two electric gates complying with Clovis Fire Department standards and will have Opticom devices installed per Fire Department requirements. Infrastructure to be provided within the FAAR right-of-way will include sewer, water and storm drain. This FAAR will eventually become a City public street in the future, as development occurs on the north and south sides of its alignment.

In response to neighborhood concerns associated with traffic impacts, the applicant provided an updated Traffic Impact Study (TIS) dated March 3, 2020. The latest TIS provides information which includes, but is not limited to, updated traffic count data, which was performed on Tuesday, February 25, 2020, between the peak hours of 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. Additionally, in response to neighborhood concerns, the TIS provided a more comprehensive list of approved projects in the analysis to assess cumulative impacts. It is important to note that the updated TIS was not performed as a result of any deficiency found in the environmental analysis, but rather, it was provided to help clarify concerns of the neighborhood. This updated TIS was forwarded to the three property owners that provided letters of opposition (see **Attachments 11, 12 & 13**). The updated TIS does not change or add new mitigation measures in the environmental analysis, therefore, recirculation of the Project's Initial Study was not warranted or required under CEQA Guidelines.

Thematic Elements

Branding of the Dry Creek Preserve Master Plan with specific elements is essential to create a "signature look" or uniqueness as envisioned by the Master Plan. Thematic lighting, fencing, public structures, monuments, signage, and street signs have been established for the Dry Creek Preserve Master Plan. Staff will be looking for these elements to help preserve the rural nature of the Dry Creek Preserve. The developer will provide these details, and they will need to be reviewed and approved by City staff in conjunction with the final map approval process with the Engineering Division.

Water and Sewer Impact

The Project's impacts to water and sewer facilities were analyzed during the California Environmental Quality Act (CEQA) review. Provost and Pritchard provided a summary of water impacts and concluded that the City has capacity to serve and the infrastructure can accommodate the Project upon completion of the recommended connections. The City Engineer completed a sewer analysis and concluded that the City has capacity to accommodate the Project. Installation of sewer lines through the proposed subdivision and outside its boundaries will be required to serve the project.

Similar to Woodside's subdivision located immediately northeast of the current project, a temporary pump station and force main are proposed in lieu of constructing the full range of permanent improvements required to serve the project area. Due to the inconsistent pattern and uncertain timing of development in Dry Creek Preserve, the permanent master plan improvements may reasonably be considered cost prohibitive for the proposed subdivision. If the temporary system is approved and utilized, all costs for installation and maintenance will be borne by the applicant until the gravity system is available. The applicant will be responsible for all costs associated with removal of the temporary system. Staff anticipates that the applicant will request that the proposed subdivision properties be annexed into the community facilities district recently established for the same purpose on the Woodside subdivision to the northeast.

The project lies inside of the Fresno Irrigation District boundary and therefore is eligible to utilize entitled surface water from the Kings River. However, this project will pay fees to acquire additional water supplies necessary for the project demands.

Exception to Utility Stub-Out Policy

During the initial meetings and discussions between the developer and property owners along Teague Avenue, requests for utility stub-outs were submitted to City staff. The current City policy allows the installation of utility stubs only with the simultaneous connection of the home and payment of the connection fees. The requests currently under consideration allow for connection at an unspecified date in the future. Because this type of stub-out is not consistent with City policy, the Council must grant an exception to allow the developer to make the installations.

Due to the nature of the Dry Creek Preserve and the difficulty developing this area, staff recommends that the Council allow an exception to this policy specifically for the property owners along Teague Avenue.

List of properties along Teague Avenue:

- 5261 E Teague Ave Clovis, CA 93619
- 5333 E Teague Ave Clovis, CA 93619
- 5343 E Teague Ave Clovis, CA 93619
- 5373 E Teague Ave Clovis, CA 93619
- 5413 E Teague Ave Clovis, CA 93619

The proposed exception would allow Woodside Homes to install sewer and water stubs without requiring the existing homes to be connected or pay connection fees when the stub-outs are provided. However, the property owners will need to pay the appropriate fees currently in place when the sewer and water stubs are connected for service. If approved by Council, this exception will not set a precedent with future annexations within the Dry Creek Preserve or other growth areas of the City.

Conditions of Approval

Staff is requesting that the Council approve the elimination of condition #82 under **Attachment 2.** After further review, staff found this condition to be in conflict with condition #81 and the current City policy. Condition #82 requires the applicant to install a City standard water service connection to all parcels along the new water main where new pavement will be installed. This condition will be removed from future engineering development requirements.

Landscape Setbacks

The Dry Creek Preserve Master Plan adopted specific street section designs for arterial and collector streets within this area. Teague Avenue is proposed to have a 14-foot landscape/pedestrian setback, with a 4-foot parkway, 5-foot sidewalk, and 5-foot landscape setback.

Neighborhood Meeting

Per City policy, the applicant held a neighborhood meeting (prior to the Planning Commission hearing) on Wednesday, February 19, 2020, at Dry Creek Elementary School. Approximately 50-55 residents were in attendance along with the Project team and City staff. Here is a bullet point summary of comments raised:

- Matt Smith with Woodside Homes discussed traffic in the Dry Creek Preserve Area and the annexation scenarios in the Master Plan.
- Woodside Homes was hoping to have this project on the March 26, 2020, Planning Commission hearing.
- Matt answered questions from the public regarding County road conditions in the Dry Creek Preserve area and improvements to Teague Avenue.
- Discussions occurred regarding traffic calming issues at the Sunnyside and Teague Avenues intersection and the possibility of providing the County with options to consider.
- Matt confirmed that the project will have one (1) ingress/egress access point from Teague Avenue to the proposed development.
- Discussion occurred regarding possible improvements on Sunnyside Avenue, including the possibility of a sidewalk on one side of the street.
- Planning staff answered questions related to annexation and discussed the Annexation Agreement available to the Dry Creek Preserve property owners.

Per City policy, the applicant was required to hold a second neighborhood meeting (prior to the City Council hearing); however, Woodside 06N LP will not be conducting an in-person neighborhood meeting due to the shelter-in-place order and social distancing guidelines covering the State of California. As an alternative to an in-person meeting, the applicant has mailed individual letters to property owners in the Dry Creek Preserve and provided contact information to submit comments associated with the proposed project. The applicant has personally replied back to each comment received. This approach is a collaborative effort between the applicant and the City to ensure compliance with the City's policy of conducting neighborhood meetings. It has been staff's intent to maintain our current policies as much as possible during the shelter-in-place order, with the exception of minor adjustments as needed.

Public Comments

In early February 2020, a public notice was sent to area residents within 800 feet of the property boundaries and all property owners within the Dry Creek Preserve Area. Prior to the Planning Commission hearing, two property owners came to the front counter at Planning & Development Services to ask questions about the proposed project and planning staff provided information pertaining to their inquiries. Staff also received several letters and emails in response to the project, both in support and opposition. Three specific (3) letters of opposition, included with this report as **Attachments 11, 12 & 13**, outline specific concerns regarding the City's review process. All of the other comment letters are compiled as **Attachment 14**.

Staff has evaluated each comment letter received regarding the project, with particular focus on the concerns described in **Attachments 11, 12, & 13**. Staff has determined that the assertions regarding flaws in the City's CEQA analysis made in these letters are incorrect. Staff prepared the CEQA analysis in accordance with CEQA guidelines and a response is provided below to the assertions made by the opposition for the Council's review and consideration.

Assertion by Opposition: The CEQA analysis in the project description in the initial study is inadequate because the rural residential properties east of TM6284 were not analyzed for potential development.

Staff Response: This assertion is unfounded. CEQA law requires the lead agency to analyze a proposed project/development and its potential impacts on the environment. Therefore, the proposed development here is Woodside's 74-lot single-family residential development, not the existing rural residential properties to the east that have no proposed development on their properties. These nine rural residential properties are being included in the prezone and annexation boundaries to comply with the Fresno Local Agency Formation Commission (LAFCo) policies and objectives. These policies and objectives include (1) creating logical annexation boundaries, (2) orderly formation and (3) planned, well-ordered, efficient development patterns. Therefore, this is not considered "piecemeal" development and CEQA does not require an analysis of the "potential" development of these nine existing rural residential properties.

Assertion by Opposition: The CEQA document must be updated to reflect the requirements as outlined in the updated traffic report.

Staff Response: The updated traffic impact study and addendum were not performed as a result of any deficiency found in the environmental analysis, but rather, they were provided to help clarify concerns. The updated traffic impact study information served to amplify and clarify the information provided in the initial study. No new mitigation measures are required and no changes have been made to the level of significance of any impact.

Assertion by Opposition: The mitigation measure TRAF-1 is inadequate and assuming that impacts would be mitigated simply by paying a fee is not allowed under CEQA.

Staff Response: Mitigation Measure TRAF-1 is not inadequate. The City does have a traffic impact fee program identified and any interested individual may acquire this information at any time by contacting Sean Smith in our Engineering Division at 559-324-2363 or seans@cityofclovis.com.

Assertion by Opposition: The Air Quality Impact Analysis needs to evaluate "potential" development within the rural residential properties on the east side of TM6284.

Staff Response: This assertion is false. The Air Quality Impact Analysis is required to evaluate the impacts of the proposed 74-lot single-family residential development. The San Joaquin Valley Unified Air Pollution Control District has reviewed the proposed development and provided comments to the City accordingly. Per the Air District's letter dated September 11, 2019, the District concluded that the project would have a less than significant impact on air quality when compared to the annual criteria pollutant emissions significance thresholds (see letter for listed pollutants).

Assertion by Opposition: The CEQA document must analyze the environmental effect of the future conversion of the Fire Apparatus Access Road (FAAR) to a full service street.

Staff Response: This assertion is false. CEQA requires an analysis of the reasonably foreseeable impacts resulting from direct and indirect physical changes caused by the Project. The City has established that because permanent utilities are proposed to be located in the FAAR, its alignment must be considered a future public street. However, the Project only proposes a gated, limited access facility. Future development outside the Project will dictate when and if the FAAR becomes a public street. Future baseline conditions in the vicinity of the FAAR, and the conditions associated with future development, cannot be known. For these reasons, the City has determined that evaluating the FAAR as other than a limited-access gated facility is speculative, not reasonably foreseeable and, therefore, not subject to analysis under CEQA.

Assertion by Opposition: The CEQA documents submitted in support of the proposed project are based on outdated, erroneous material and fails to take into account other developments.

Staff Response: This assertion is false. The CEQA environmental analysis was prepared in accordance with the requirements of the California Environmental Quality Act and CEQA guidelines. Furthermore, CEQA law gives a lead agency the ability to determine an environmental baseline condition. Meaning, this baseline memorializes a specific date for the environmental analysis performed and prevents individuals from attempting to add more near-term projects to the traffic impact study.

It is important to note that the County of Fresno has participated from the beginning in the review of the prepared traffic impact study. The traffic impact study was reviewed by professional City and County engineers and

have mutually agreed on the findings of the study. Both agencies agreed on the date of the traffic counts provided in the study and the number of near-term projects identified in the traffic analysis.

The opposition letters fail to mention that the City of Clovis' Traffic Impact Study Guidelines give an engineer what is referred to as engineering judgment. In the professional opinion of the engineer who prepared the traffic impact study, the traffic count dates which are older than twelve (12) months, are in fact acceptable and accurate. The project engineer also found the two (2) near-term projects identified in the study to be acceptable. Again, City and County professional engineers evaluated and agreed with these findings.

Staff has reviewed all correspondence and comment letters associated with the project. Staff is confident that the traffic impact study prepared for the project is dependable, accurate and in compliance with CEQA law.

Finally, comments in the opposition letters suggest that revisions to the environmental document are necessary and that recirculation of the initial study would be required based on the aforesaid assertions. Per Section 15073.5 of the California Environmental Quality Act & CEQA Guidelines, recirculation of a mitigated negative declaration is required only when substantial revisions are made after the document has been noticed as being available for review. Substantial revisions include:

- A new, avoidable significant effect is identified and mitigation measures or project changes must be added in order to reduce the effect to a less-than-significant level; or
- The City determines that the proposed mitigations or project revisions will not reduce potential effects to less than significant and new measures or revision must be required.

Substantial revisions to the initial study have not been made which meet the criteria outlined above. As indicated above, while an updated traffic analysis was completed, this information served to amplify and clarify the information provided in the initial study. Again, no new mitigation measures are required and no changes have been made to the level of significance of any impact; therefore, a recirculation of the initial study is not required.

Staff has not received any additional comments or concerns from the public upon finalization of this report.

Review and Comments from Agencies

The Project was distributed to all City Divisions as well as outside agencies, including Cal Trans, Clovis Unified School District, Fresno Irrigation District, Fresno Metropolitan Flood Control District, AT&T, PG&E, San Joaquin Valley Air Pollution Control District, State Department of Fish and Wildlife, County of Fresno, and the Fresno Local Agency Formation Commission (LAFCo).

Comments received are attached only if the agency has provided concerns, conditions, or mitigation measures. Routine responses and comment letters are placed in the administrative record and provided to the applicant for their records.

Planning Commission Comments

The Planning Commission considered this Project on Thursday, April 9, 2020. The Commission recommended approval of the project by a vote of 4-0-1 (Commissioner Antuna absent).

The Commission clarified with Planning staff some of the comments provided in the opposition letters. The Commission expressed support of the proposed project and found it consistent with the Dry Creek Preserve Master Plan. Please see **Attachment 8** to review the Planning Commission minutes for detailed discussion on the opposition comments, fire apparatus access road and project design.

Consistency with General Plan Goals and Policies

Staff has evaluated the Project in light of the goals and policies of the General Plan, Herndon-Shepherd Specific Plan and Dry Creek Preserve Master Plan. The following goals and policies reflect Clovis' desire to maintain Clovis' tradition of responsible planning and well managed growth to preserve the quality of life in existing neighborhoods and ensure the development of new neighborhoods with an equal quality of life.

General Plan

Goal 5: A city with housing, employment, and lifestyle opportunities for all ages and incomes of residents.

Policy 5.1: **Housing variety in developments.** The Clovis General Plan has been planned to provide a variety of housing product types suitable to each stage of a person's life. Each development should contribute to a diversity of housing sizes and types within the standards appropriate to the land use designation. This policy does not apply to projects smaller than five acres.

Goal 6: A city that grows and develops in a manner that implements its vision, sustains the integrity of its guiding principles, and requires few and infrequent amendments to the General Plan.

Policy 6.1: **Amendment criteria.** The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:

- The proposed change is and will be fiscally neutral or positive.
- The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.

The Project (TM6284) requests to re-designate property from Rural Residential to Low Residential providing a diverse housing type for the area. If approved, the project will

contribute to the City's Community Facilities District, and complete infrastructure including streets, sewer, storm drain to serve the development and its surroundings. The Project provides a residential development within biking distance to commercial services and open space.

Herndon Shepherd Specific Plan

3.1 Major Goals

3.11 Organize and develop a well-planned, well-designed, high quality, and functional community which meets the needs of a diverse population.

3.13 Create a unique living environment that provides the amenities of a modern urban community while retaining the existing equestrian character of plan area.

3.14 Minimize the impact of expanding urban development on existing agricultural operation, and allow such operations to continue as long as desired by the property owner.

3.2 Residential Land Use Objectives

- Provide an attractive, quality residential environment to accommodate a variety of lifestyles.
- Preserve areas for lower densities, semi-rural residential character yet provide for further development of variable lot size subdivisions to meet the continuing demand for housing in Clovis.

3.22 Housing

- Promote diverse high quality housing products, types and price ranges organized to create harmonious and compatible neighborhoods.
- Encourage variety in subdivisions in the design of streets and street landscapes, the location of parks, and recreation areas, and the placement of homes on lots.

Dry Creek Preserve Master Plan

4.0 Master Plan Goals

- **Maintain the DCP's Rural Character and Appearance**. Establish area-unique design standards to maintain the preferred semi-rural look and feel of the area.
- **Protect the Ability of Current Landowners to Maintain Their Current Lifestyle**. This is accomplished through thoughtful standards for future development, provision for owners to execute individual Annexation Agreement with the City of Clovis, required recordation of "Right to Farm" covenants on developing lands, and the grandfathering of all preexisting permissible land uses which have existed within the Rural Residential zoning of Fresno County.
- **Provide a Framework for Future Development**. Identify desirable development guidelines which promote lower housing densities to allow compatible development but encourage a rural look and feel for the Plan area.

- **Build Identity**. Create a "signature look" for the plan area, to set it apart as a unique and special place, which is semi-rural in character and thus preserves the Historic Clovis Western Way of Life.
- **Establish Predictability in Land Use Changes**. Respect the guidance and direction provided in the development guidelines that were collaboratively developed.

Community Facilities District

The fiscal analysis of the Southeast Urban Center Specific Plan identified possible long-term funding shortfalls in the City's operating and maintenance costs. To address this issue, the City of Clovis is implementing a Community Facilities District. Community Facilities Districts (CFD's) are a means of providing additional funding for the provision of public facilities and services for public safety, parks and recreation services, and other important municipal services in newly developing areas of the community where the City would not otherwise be able to afford to continue to provide an adequate level of service as the City continues to grow. The use of CFD's is fairly common among cities in California experiencing high rates of growth during this past decade, such as Clovis, due to significant losses of local revenue from tax shifts authorized by the State of California and the need to continue to provide an adequate level of service as growth occurs.

A condition of approval has been added to this tentative map requiring participation of this Project in the CFD.

California Environmental Quality Act (CEQA)

The City of Clovis has completed an environmental review (an assessment of the project's impact on natural and manmade environments) of the proposed project, as required by the State of California. The City Planner has recommended approval of a mitigated negative declaration (a written statement announcing that this project will not have a significant effect on the environment). Recommendation of a proposed mitigated negative declaration does not necessarily mean this project will be approved.

The City published notice of this public hearing in *The Business Journal* on Wednesday, April 29, 2020.

FISCAL IMPACT

None.

REASON FOR RECOMMENDATION

The proposal will provide a diversity in housing types and a quality residential environment for this area as envisioned by the General Plan, Herndon-Shepherd Specific Plan and Dry Creek Preserve Master Plan. The Project does not substantially impact sewer, water and other public services and will contribute a proportionate share of infrastructure and open space. The proposed vesting tentative tract map is consistent with the goals and policies of the General Plan, Herndon-Shepherd Specific Plan, Dry Creek Preserve Master, and Development Code. Planning Commission and staff therefore recommend approval of

GPA2019-006, R2019-007 and TM6284, subject to the conditions of approval attached as **Attachment 2**.

The findings to consider when making a decision on a general plan amendment application include:

1. The proposed amendment is internally consistent with the goals, policies, and actions of the General Plan. This finding is based on the following:

   The proposed general plan amendment is necessary to implement the density provisions of the Dry Creek Master Plan, which provide for a density of 2.3 units per acre. As described in the section of this staff report titled “Consistency with General Plan Goals and Policies” the proposed amendment implements and or is consistent with the goals and policies of the General Plan and applicable specific plans and master plans.

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City. This finding is based on the following:

   The Project has been reviewed by public safety and utility providers and appropriate conditions have been incorporated to ensure that the applicable standards are adhered to. The proposed amendment will be subject to the Community Facilities District (CFD) funding annexation, which provides additional funding for the provision of public facilities and services for public safety, parks and recreation services, and other important municipal services.

3. If applicable, the parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested/anticipated project. This finding is based on the following:

   The proposed amendment affects approximately 34.3 acres of land, which meets the minimum ten (10) acre requirement under the Dry Creek Preserve Master Plan for new developments. Therefore, the project site is physically suitable for the requested Project.

4. There is a compelling reason for the amendment. This finding is based on the following:

   The proposed amendment is required for the implementation of the Dry Creek Preserve Master Plan. Any developments greater than 0.5 units per acre require a general plan amendment. Therefore, there is a compelling reason for the amendment and a finding can be made based on the proposed Project.

5. The City Council does approve a mitigated negative declaration for the project, pursuant to CEQA guidelines. This finding is based on the following:

   The City Council has independently reviewed, evaluated, and considered the initial study, mitigated negative declaration and all comments, written and oral, received from persons who reviewed the mitigated negative declaration, or otherwise commented on the Project. Additionally, the mitigated negative declaration has been prepared, circulated, and made available for public comment pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code, section 21000, et seq., and Guidelines for implementation of CEQA, 14 California Code of Regulations, sections 15000, et seq.

The findings to consider when making a decision on a prezone application include:

1. The proposed amendment is consistent with the goals, policies, and actions of the General Plan. This finding is based on the following:

   The proposed amendment is consistent with several goals, and policies of the 2014 Clovis General Plan, including those identified above under the section of this staff report titled "Consistency with General Plan Goals and Policies." Furthermore, as described throughout this staff report, the Project is consistent with the maximum density requirements of 2.3 units per acre as memorialized in the Dry Creek Master Plan.

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City. This finding is based on the following:

   The Project has been reviewed by public safety and utility providers and appropriate conditions have been incorporated to ensure that the applicable standards are adhered to. The proposed amendment will be subject to the Community Facilities District (CFD) funding annexation, which provides additional funding for the provision of public facilities and services for public safety, parks and recreation services, and other important municipal services. Therefore, this finding can be made based on the proposed Project.

3. The parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested zoning designations and anticipated land uses/projects. This finding is based on the following:

   The proposed amendment affects approximately 50.80 acres of land, suitable for the development of the 74-lot single-family residential development and the nine (9) rural residential parcels located to the east of TM6284. Therefore, the project site is physically suitable for the requested zoning designations.

4. The City Council does approve a mitigated negative declaration for the project pursuant to CEQA guidelines. This finding is based on the following:

   The City Council has independently reviewed, evaluated, and considered the initial study, mitigated negative declaration and all comments, written and oral, received from persons who reviewed the mitigated negative declaration, or otherwise commented on the Project. Additionally, the mitigated negative declaration has been prepared, circulated, and made available for public comment pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code, section 21000, et seq., and Guidelines for implementation of CEQA, 14 California Code of Regulations, sections 15000, et seq.

The findings to consider when making a decision on a tentative subdivision map application are as follows:

1. The proposed map, subdivision design, and improvements are consistent with the General Plan and any applicable specific plan. This finding is based on the following:

   The proposed map design and associated improvements are consistent with several goals, and policies of the 2014 Clovis General Plan, including those identified above under the section of this staff report titled "Consistency with General Plan Goals and Policies." Furthermore, as described throughout this staff report, the Project is consistent with the maximum density requirements of 2.3 units per acre as memorialized in the Dry Creek Master Plan.

2. The site is physically suitable for the type and proposed density of development. This finding is based on the following:

   The proposed tentative tract map affects approximately 32.19 acres of land with a density of 2.3 unit per acre. The average lot size within TM6284 will be 15,611 square feet. Therefore, the site is physically suitable for the proposed density of TM6284.

3. The design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat. This finding is based on the following:

   As indicated in the Initial Study, the proposed project and associated improvements would not result in any significant impacts with implementation of mitigation measures prescribed in the Initial Study. Therefore, the Project will not cause substantial environmental damage or injury to fish and wildlife.

4. The design of the subdivision or type of improvements is not likely to cause serious public health or safety problems. This finding is based on the following:

The design of the subdivision will adhere to the Fire Department standards, Clovis Development Code and Building Code regulations for public health and safety compliance.

5. The design of the subdivision or the type of improvements will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision. This finding may also be made if the review authority finds that alternate easements for access or use will be provided, and that they will be substantially equivalent to ones previously acquired by the public. This finding shall apply only to easements of record, or to easements established by judgment of a court of competent jurisdiction, and no authority is hereby granted to the review authority to determine that the public at large has acquired easements of access through or use of property within the proposed subdivision. This finding is based on the following:

   All easements acquired by the public at large will be identified during the review process of the final map through the City's Engineering Division. If necessary, alternative easements will be provided that will be substantially equivalent to ones previously acquired for access through the proposed TM6284.

6. The discharge of sewage from the proposed subdivision into the community sewer system will not result in violation of existing requirements prescribed by the California Regional Water Quality Control Board. This finding is based on the following:

   As previously indicated above, the City Engineer completed a sewer analysis and concluded that the City has capacity to accommodate the Project. Installation of sewer lines through the proposed subdivision and outside its boundaries will be done in compliance with requirements of the California Regional Water Quality Control Board.

7. The design of the subdivision provides, to the extent feasible, passive or natural heating and cooling opportunities. This finding is based on the following:

   The proposed subdivision will comply with the Clovis Development Code and California Building Code requirements as it relates to heating and cooling opportunities within TM6284.

8. The proposed subdivision, its design, density, and type of development and improvements conform to the regulations of this Development Code and the regulations of any public agency having jurisdiction by law. This finding is based on the following:

   The proposed subdivision is proposing a density of 2.3 units per acre, which is consistent with the Dry Creek Preserve Master Plan. The proposed subdivision is

single-family product type as required by the Master Plan for residential developments.

9. The City Council does approve a mitigated negative declaration for the project pursuant to CEQA guidelines. This finding is based on the following:

   The City Council has independently reviewed, evaluated, and considered the initial study, mitigated negative declaration and all comments, written and oral, received from persons who reviewed the mitigated negative declaration, or otherwise commented on the Project. Additionally, the mitigated negative declaration has been prepared, circulated, and made available for public comment pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code, section 21000, et seq., and Guidelines for implementation of CEQA, 14 California Code of Regulations, sections 15000, et seq.

In light of court decisions, it is appropriate for the City to make findings of consistency between the required dedications and the proposed development. Every dedication condition needs to be evaluated to confirm that there is a rough proportionality, or that a required degree of connection exists between the dedication imposed and the proposed development. The City of Clovis has made a finding that the dedication of property for this project satisfies the development's proportionate contribution to the City's circulation system. The circulation system directly benefits the subject property by providing access and transportation routes that service the site. Further, the circulation system also enhances the property's value.

ACTIONS FOLLOWING APPROVAL

The second reading of the Prezone Ordinance will be heard by the City Council at its next regular meeting and if approved, will go into effect 30 days from its passage and adoption.

Prepared by: George González, MPA, Associate Planner

Reviewed by: City Manager

GPA2019-006, R2019-007 & TM6284

ATTACHMENT 1

Conditions of Approval - TM6284
(As approved by the Clovis Planning Commission – April 9, 2020)
(Text modifications are in **Bold** & Underline)
(Text deletions are in ~~Strikethrough~~)
Planning Division Comments
(George González, MPA, Associate Planner – 559-324-2383)

1. This Project is subject to the development standards of the Herndon-Shepherd Specific Plan and Dry Creek Preserve Master Plan.

2. The applicant shall notify all property owners within the annexation boundary and along streets where new water and sewer utilities will be constructed to determine if they wish to purchase a lateral connection per City policy.

3. The applicant shall obtain City approval in advance of temporary and permanent subdivision signs through separate sign review, consistent with the development criteria of the Clovis Municipal Code Sign Ordinance.

4. The developer shall repair and or replace any broken or damaged irrigation lines, valves, and other equipment on their properties which are intended to serve adjacent or downstream properties.

5. Prezone R2019-007 approves an R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

6. The density within TM6284 shall be consistent with the Dry Creek Preserve Master Plan and Herndon-Shepherd Specific Plan and not exceed 2.3 dwelling units per acre.

7. No more than two of the same unit type (floor layout and exterior materials package) shall be repeated side by side. When two of the same units are repeated side by side, they shall be different colors. These identical provisions may be waived by the City Planner on a specific lot basis within the project when the size or configuration of a lot would otherwise prevent compliance with the above requirements of any other siting or setback/yard requirements established under this application. If such a waiver is requested, the developer and City Planner shall work together to ensure that any sitings of units not in compliance with the above requirements shall be of different materials and elevations in order to minimize any adverse visual impacts that may result.

8. TM6284 is subject to the development standards of the R-1 Zone District.

9. Setbacks shall be measured to the exterior face of the framing of the structure. Exceptions to the setbacks are identified in §9.24.100, of the Clovis Municipal Code.

10. Maximum lot coverage is 40% unless specifically approved through a residential site plan review or variance.

ATTACHMENT 2

11. The developer shall construct a fence along the property line of adjacent rural residential properties that will not impact the existing and/or permitted animals.

12. Where lots front onto Teague Avenue, the applicant shall install a combination masonry/rock pillar and split rail fence within the front yards.

13. All transformers for this subdivision shall be located underground. Pad mounted transformers may be considered through approval of an administrative use permit.

14. The developer shall utilize the PG&E Halophane street light or a model which will shield the light from up lighting.

15. The developer may utilize concrete, asphalt curbs, gutters and or swales along local streets. Cooperation and approval of the Fresno Metropolitan Flood Control District and City of Clovis Utilities.

16. The developer shall record a Covenant regarding a “right to farm,” for adjacent property owners. Such agreement shall be disclosed to all future home buyers.

17. Maximum building (main structure) height shall not exceed thirty-five (35) feet.

18. Garages shall be a minimum dimension of 20’ x 22’ (interior clear).

19. Landscape plans shall be reviewed and approved separately by the landscape review committee for tree and landscape type and location.

20. Prior to the submittal of civil plan review, the applicant shall submit a tree plan showing all existing trees with their variety. A tree remove/protection plan shall be reviewed and approved by the Director. Trees shall not be removed without approval from the Director.

21. Teague Avenue shall have a 14-foot landscape/pedestrian setback, with a 4-foot parkway, 5-foot sidewalk, and 5-foot landscape setback.

22. Upon final recordation of this vesting tentative tract map, it shall be the applicant’s responsibility to furnish to the Planning Department an electronic (PDF) copy of the original map obtained from the Fresno County Recorder’s Office.

23. The applicant shall relay all conditions of approval for Vesting Tentative Tract Map TM6284 to all subsequent purchasers of individual lots, if applicable, and/or to subsequent purchasers of this entire tract map development.

24. The applicant shall record a Notice of Nonconformance dealing with any structure used for model homes where the garage is converted for the use as a sales office.

25. The applicant shall contribute a proportionate share towards the development of a “trail” system as required by the General Plan land use diagram.

26. All lighting shall be screened from direct view from the public right-of-way and adjacent residential properties.

27. All landscaping (open space and private yards) shall conform to the City of Clovis Water Efficient Landscape Ordinance.

28. The developer shall comply with all mitigation measures identified in the initial study mitigated negative declaration prepared for the Project, included as **Attachment 3** to the staff report.

29. This vesting tentative tract map is approved per **Attachment 13** of this report.

Police Department Conditions

(Scott Borsch, Department Representative - 324-3464)

30. Construction work shall be limited to the hours set forth in the Clovis Municipal Code. (CMC § 5.18.15.)

31. It shall be the responsibility of the property owner to maintain the structures and adjoining fences to the project free of graffiti. All forms of graffiti shall be removed within 72 hours. (CMC §§ 5.18.02(r), 5.18.06 (b).)

32. Emergency phone numbers for responsible parties shall be kept current during the building phase of the project.

33. All construction materials shall be located within a secured area or monitored by security staff during non-construction hours.

Fire Department Conditions

(Gary Sawhill, Department Representative - 324-2224)

34. **Street Width:** Fire apparatus access width shall be determined by measuring from “base of curb” to “base of curb” for roadways that have curbs. When roadways do not have curbs, the measurements shall be from the edge of the roadway surface (approved all weather surface).

35. **Street Width for Single Family Residences:** Shall comply with Clovis Fire Standard #1.1.

36. **Street Width for Single Family Residences:** Minimum Access Road Width of 36 feet for Single Family Residences. Roads 36 feet or wider allow for Parking on both sides of street.

37. **Turning Radius:** All access way roads constructed shall be designed with a minimum outside turning radius of forty-five feet (45’).

38. **Electric Gate on Fire Apparatus Access Road at Portland Ave.:** All electric gates shall comply with Clovis Fire Department Gates Standard #1.5. Gates in residential developments shall have Opticom devices installed. Plans shall be submitted for review and permits issued by Fire Department prior to installation.

39. **Temporary Street Signs:** The applicant shall install temporary street signs that meet City Temporary Street Sign Standard #1.9 prior to issuance of building permits within a subdivision.

40. **All Weather Access & Water Supply:** The applicant shall provide all weather access to the site during all phases of construction to the satisfaction of the approved Clovis Fire Department Standard #1.2 or #1.3.

41. **Two Points of Access:** Any development to this parcel will require a minimum of two (2) points of access to be reviewed and approved by the Clovis Fire Department. All required access drives shall remain accessible during all phases of construction which includes paving, concrete work, underground work, landscaping, perimeter walls.

42. **Residential Fire Hydrant:** The applicant shall install _9_ 4 ½" x 2 ½" approved Residential Type fire hydrant(s) and "Blue Dot" hydrant locators, paint fire hydrant(s) yellow with blue top and caps, and paint the curb red as specified by the adopted Clovis Fire Department Standard #1.4. Plans shall be submitted to the Clovis Fire Department for review and approval prior to installation. The hydrant(s) shall be charged and in operation prior to any framing or combustible material being brought onto the site.

43. **Looped Water Main:** The applicant shall install approved looped water main capable of the necessary flow of water for adequate fire protection and approved by the Clovis Fire Department.

44. This project was reviewed by the fire department only for requirements related to water supply, fire hydrants, and fire apparatus access to the building(s) on site.

ENGINEERING / UTILITIES / SOLID WASTE DIVISION CONDITIONS

(Sean Smith, Engineering Division Representative – 324-2363)
(Paul Armendariz, Department Representative – 324-2649)

Maps and Plans

45. The applicant shall have a final tract map prepared, in the form prescribed by the Subdivision Map Act and City of Clovis Municipal Code. The final tract map shall be submitted to the City of Clovis Engineering Division, and should include, but not be limited to, final tract map, the current filing fee, closure calculations, current preliminary title report, legal descriptions and drawings of required dedications.

46. The applicant shall submit separately to the City of Clovis Engineering Division, a set of construction plans on 24" x 36" sheets with City standard title block for all required

improvements and a current preliminary title report. These plans shall be prepared by a registered civil engineer, and shall include a grading plan, landscape plan, a site plan showing trash enclosure locations and an overall site utility plan showing locations and sizes of sewer, water, storm drain, and irrigation mains, laterals, manholes, meters, valves, hydrants, fire sprinkler services, other facilities, etc. Plan check and inspection fees per City of Clovis Resolution No. 18-61 shall be paid with the first submittal of said plans. All plans shall be submitted at or before the time the building plans are submitted to the Building Division and shall be approved by the City and all other involved agencies prior to the release of any development permits.

47. Prior to the initial submittal of the improvement plans, the applicant shall contact Sean Smith at (559) 324-2363 to setup a coordination meeting (Pre-submittal Meeting).

48. Upon approval of improvement plans, the applicant shall provide the City with the appropriate number of copies. After all improvements have been constructed and accepted by the City, the applicant shall submit to the City of Clovis Engineering Division (1) digital copy to the City in PDF format of the approved set of construction plans revised to accurately reflect all field conditions and revisions and marked "AS-BUILT" for review and approval. Upon approval of the AS-BUILTs by the City, and prior to granting of final occupancy or final acceptance, the applicant shall provide (1) digital copy to the City in PDF format.

General Provisions

49. The applicant shall pay all applicable development fees at the rate in effect at the time of payment and prior to final map approval by Council or have the fees payable directly to the City through a separate escrow account at the time of recordation of the map.

50. The applicant is advised that, pursuant to California Government Code, Section 66020, any party may protest the imposition of fees, dedications, reservations, or other exactions imposed on a development project by a local agency. Protests shall be filed in accordance with the provisions of the California Government Code and shall be filed within 90 days after conditional approval of this application is granted. The 90 day protest period for this project shall begin on the “date of approval” as indicated on the “Acknowledgment of Acceptance of Conditions” form.

51. All reimbursement requests shall be prepared and submitted in accordance with the requirements of the current version of the “Developer Reimbursement Procedures” a copy of which may be obtained at the City Engineer’s Office.

52. The applicant shall install all improvements within public right-of-way and easements in accordance with the City of Clovis standards, specifications, master plans, and record drawings in effect at the time of improvement plan approval.

53. The applicant shall address all conditions, and be responsible for obtaining encroachment permits from the City of Clovis for all work performed within the City's right-of-way and easements.

54. The applicant shall submit a soils report or a waiver of soils report to the City of Clovis Engineering Division for approval by the City Engineer.

55. The applicant shall provide and pay for all geotechnical services per City policy.

56. The applicant shall comply with the requirements of the local utility, telephone, and cable companies. It shall be the responsibility of the applicant to notify the local utility, telephone, and cable companies for the removal or relocation of utility poles where necessary. The City shall not accept first submittals without proof that the applicant has provided the improvement plans and documents showing all proposed work to the utility, telephone, and cable companies. All utility vaults in which lids cannot be sloped to match proposed finished grading, local utilities have 5% max slope, shall be located in sidewalk areas with pedestrian lids so the lid slope matches sidewalk cross slope.

57. All existing overhead and new utility facilities located on-site or within the street right-of-way along the streets adjacent to this tract shall be undergrounded unless otherwise approved by the City Engineer.

58. The applicant shall contact and address all requirements of the United States Postal Service Clovis Office for the location and type of mailboxes to be installed. The location of the facilities shall be approved by the City Engineer prior to approval of improvement plans or any construction.

59. The applicant shall contact and address Caltrans requirements. The applicant shall be required to mitigate impacts to State Highway facilities as determined by the City Engineer.

Dedications and Street Improvements

60. The applicant shall provide right-of-way acquisition or dedicate free and clear of all encumbrances and/or improve the following streets to City standards and the Dry Creek Preserve Master Plan. The street improvements shall be in accordance with the City's specific plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the type, location, and grades of existing improvements.

    a. ~~Fowler Avenue – For nonadjacent major street requirements, between the Enterprise Canal and Teague Avenue, dedicate to provide right-of-way acquisition for 30' east centerline and 30' west of centerline, and improve with median island, median island landscaping and irrigation, 32' (16' east + 16' west) permanent paving, permanent paving and overlay as necessary~~

~~to match the existing permanent pavement, 3' paved swale, and transitional paving as needed, or another City approved alternate route.~~

b. Teague Avenue – Along frontage, dedicate to provide right-of-way acquisition for 30' (exist 20') ~~north~~ **south** of centerline, and improve with asphalt dike or other approved drainage system, 5’ asphalt sidewalk, drive approaches, curb return ramps, street lights, landscape strip, 32' (16’ north + 16’ south) permanent paving, and transitional paving as needed. For nonadjacent major street requirements, the applicant shall provide between Tract Map 6284’s western limit and Sunnyside Avenue, ~~32' (16’ north + 16’ south)~~ **24’ (12’ north + 12’ south)** of permanent paving, asphalt dike or other approved drainage system, and all transitional paving as required~~, or another City approved alternate route~~. Street improvements shall **be constructed per City standards and shall** not be reimbursable in areas where underground utilities are not installed but ultimately required.

c. Portland Avenue – Between western limit of TTM 6284 and North Sunnyside Avenue, dedicate to provide right-of-way in fee for 27' (exist 0') north and 15’ (exist 0’) south of centerline, and improve with 26’ (13’ north + 13’ south) of permanent pavement and transitional paving as needed. Additional width may be required for utility cover. This area may be used for an interim period as a Fire Access Apparatus Road and for public maintenance access. Gates per City Fire Department standards shall be required on both ends of this street to restrict access. The applicant shall install a chain link fence on the south side of the street per City standards and as approved by the City Engineer.

d. Sunnyside Avenue – Between Portland Avenue and Nees Avenue, 32' (16’ west + 16’ east’) permanent paving, 3' paved swale, and transitional paving as needed.

e. Interior Streets – Dedicate to provide for 50’ or 54’ of right-of-way in conformance with the City policy on street widths, and improve with curb, gutter, 5’ sidewalk adjacent to the curb, drive approaches, curb return ramps, streetlights, permanent paving, and all transitional paving as needed.

f. Cul-De-Sacs - dedicate to provide for 52' radius and improve with curb, gutter, sidewalk, street lights, 43' permanent paving and all transitional paving as needed.

g. Temporary Turnabouts – Dedicate to provide for a 48' radius and install 45' of permanent/temporary paving plus 3' paved swale at the south end of Purdue Avenue or provide of a garbage covenant for Lots 25 and 50.

61. The applicant shall provide a dedication for a 10' public utility easement, where applicable, along all frontages or alternate widths approved by the utilities companies.

62. The applicant shall not install any fences, temporary or permanent in public right-of-way.

63. The applicant shall provide preliminary title report, legal description and drawings for all dedications required which are not on the site. All contact with owners, appraisers, etc. of the adjacent properties where dedication is needed shall be made only by the City. The City will prepare an estimate of acquisition costs including but not limited to appraised value, appraisal costs, negotiation costs, and administrative costs. The applicant shall pay such estimated costs as soon as they are determined by the City.

64. The sideyard side of all corner lots shall have full width sidewalk except where planter strips or meandering sidewalk is proposed.

65. The applicant shall obtain "R Value" tests in quantity sufficient to represent all street areas, and have street structural sections designed by a registered civil engineer based on these "R Value" tests.

66. The applicant shall, at the ends of any permanent pavement abutting undeveloped property, install 2" x 6" redwood header boards that shall be placed prior to the street surfacing.

67. Standard barricades with reflectors shall be installed at ends of streets abutting undeveloped property and any other locations to be specified by the City Engineer.

68. The applicant shall provide to the City for recording a reciprocal access agreement to maintain and provide vehicular, pedestrian and public access, prior to obtaining building permits.

Sewer

69. The applicant shall identify and abandon all septic systems to City standards.

70. The applicant shall install sanitary sewer mains of the size and in the locations indicated below, prior to occupancy. The sewer improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.
    a. Teague Avenue – Install 10" main along frontage between the eastern limit and North Purdue Avenue.
    b. Teague Avenue – Install 8" main between North Purdue Avenue and the western limit.

c. North Purdue Avenue – Install 10" main between Teague Avenue and Heritage Avenue.
d. Heritage Avenue – Install 10" main between North Miami Avenue and North Purdue Avenue.
e. North Miami Avenue – Install 12" main between Portland Avenue and Heritage Avenue.
f. Portland Avenue – Install 12" main between North Miami Avenue and North Sunnyside Avenue.
g. North Sunnyside Avenue – Install 12" main between Portland Avenue and Nees Avenue.
h. Nees Avenue – install 15" main between North Sunnyside Avenue and North Minnewawa Avenue.
i. Interior Streets – install 8" mains, except where noted.

71. The applicant has proposed a temporary pump station and force main. If the alternative temporary system is implemented by the applicant, all costs for installation and maintenance shall be borne by the applicant until the gravity system is available. The applicant shall be responsible for all costs associated with removal of the temporary system. The applicant shall work with staff to provide a funding mechanism for long term maintenance.

72. The applicant shall provide dedication of a 15' wide utility easement for all on-site sewer mains, not located in otherwise dedicated rights-of-way.

73. The applicant shall install one (1) 4" sewer service house branch to each lot within the tentative tract.

74. The applicant shall notify all property owners annexed to the City and along streets where a new sewer main will be constructed to determine if they wish to be connected to City sewer. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that sewer connection fees are required if they choose to connect.

~~75. The City cannot guarantee at this time that sewer capacity will be available for this development when site construction occurs. The applicant, therefore, waives any claim or demand against the City for any delay in availability of sewer capacity for this subdivision.~~

~~76. The applicant acknowledges that sewage collection and treatment capacity for the area within which the proposed subdivision is located is extremely limited, and that capacity may not be available to provide service for the proposed subdivision at such time as the applicant is ready to seek approval of a final map. The applicant agrees that if such sewage collection and treatment capacity is not available to serve the proposed subdivision, as determined in the sole and absolute discretion of the City of Clovis, the final map shall not be approved. Notwithstanding this knowledge and agreement, the applicant has freely and voluntarily chosen to proceed with the~~

~~submittal and processing of the tentative map, intends to expend money, time and effort in connection therewith, and accepts the risks that the final map may not be approved if such capacity is unavailable. The applicant agrees to hold harmless and indemnify the City of Clovis from any and all claims, costs, expenses, and damages incurred or suffered by the applicant, its principals, officers, employees, agents, or contractors, caused by, in connection with, or arising out of the unavailability of sewage collection or treatment capacity to serve the proposed subdivision, or the City's refusal or failure to approve a final map for the proposed subdivision because of the unavailability of sewage collection or treatment capacity.~~

Water

77. The applicant shall identify and abandon all water wells to City standards.

78. The applicant shall install water mains of the sizes and in the locations indicated below, and provide an adequately looped water system prior to occupancy. The water improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.
    a. Teague Avenue – install 16" main between Fowler Avenue and the western property line.
    b. North Sunnyside Avenue – install 12" main between Portland Avenue and Nees Avenue.
    c. Interior Streets – install 8" mains.

79. The applicant shall provide dedication of 15-foot wide utility easements for all on-site water mains, hydrants, blow-offs, and water meters not located in otherwise dedicated rights-of-way.

80. The applicant shall install a City standard water service to each lot of the proposed subdivision. Water services shall be grouped at property lines to accommodate automatic meter reading system, including installation of connecting conduit. The water meter shall be placed in the sidewalk and not in planters or driveways.

81. The applicant shall notify all property owners' annexed to the City and along streets where a new water main will be constructed to determine if they wish to be connected to City water. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that water connection fees are required if they choose to connect.

82. The applicant shall install a City standard water service connection or connections of the necessary size to all parcels along the new water main where new pavement will be installed.

83. Prior to recording a final map of any phase, the applicant shall demonstrate to the satisfaction of the City Fire Chief and City Engineer that there is adequate water pressure to serve the units to be constructed. The applicant shall work with the City Engineer to determine the adequacy of water supply/pressure for the proposed development.

Grading and Drainage

84. The applicant shall contact the Fresno Metropolitan Flood Control District (FMFCD) and address all requirements, pay all applicable fees required, obtain any required NPDES permit, and implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate storm water pollution. Plans for these requirements shall be included in the previously required set of construction plans, and shall be submitted to and approved by FMFCD prior to the release of any development permits.

85. In the event permanent storm drainage facilities are not available, the applicant shall provide temporary on-site retention basins for storm water disposal and provide a cash deposit for each basin to offset the City's cost of maintaining the basins. The size and design shall be in accordance with the requirements of the City Engineer and may change based on design calculations and access requirements for maintenance. The temporary pond maintenance deposit shall be based on size, depth, expected maintenance schedule, etc. However, the property owner shall be responsible for periodic cleaning of toxic material. The temporary basin is solely for the convenience of the subdivision.

86. The owner of the property on which the temporary basin(s) are located shall backfilled said basin(s) within ninety (90) days after notice is given by the City that the basin(s) are no longer needed. In the event the owner fails to backfill said basin(s) within said 90 days, the City may cause the basin to be backfilled. A lien to cover the cost of the work will be placed on the property, including the costs to prepare and enforce the lien. A covenant shall be prepared and recorded on the lot on which the basin(s) is/are located.

87. Grade differentials between lots and adjacent properties shall be adequately shown on the grading plan and shall be treated in a manner in conformance with City of Clovis Standard Drawing No. M-4 as modified by the City Council. Any retaining walls required on-site or in public right of way shall be masonry construction. All retaining walls shall be designed by a registered civil engineer.

Irrigation and Landscaping Facilities

88. The applicant, as a portion of the required tract improvements, shall provide landscaping and irrigation as required herein. The landscaping and irrigation shall be installed in public right-of-way and the area reserved for landscaping. The irrigation and landscape improvements shall be in accordance with the City's master plans and

shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Plans for the required landscaping and irrigation systems shall be prepared by an appropriately registered professional at the applicant's expense and shall be approved by the City of Clovis Planning and Development Services Department and Public Utilities Department prior to the beginning of construction or the recording of the final tract map, whichever occurs first. Landscape and irrigation facilities that the City Landscape Maintenance District shall maintain: landscape strip along Teague Avenue **frontage**.

89. The owner shall request annexation to and provide a covenant for the Landscape Maintenance District. The property owner acknowledges and agrees that such request serves as a petition pursuant to California State Proposition 218 and no further election shall be required for the establishment of the initial assessment. The assessment for each lot shall be obtained from the City for the tax year following the recordation of the final map. The estimated annual assessment per average sized lot is $183.00, which is subject to change prior to issuance of building permit or final tract map approval and is subject to an annual change in the range of the assessment in the amount of the Consumer Price Index, U.S. City Average, All Urban Consumers (CPI Index), plus two percent (2%). The owner/developer shall notify all potential lot buyers before they actually purchase a lot that this tract is a part of a Landscape Maintenance District and shall inform potential buyers of the assessment amount. Said notification shall be in a manner approved by the City. The owner/developer shall supply all pertinent materials for the Landscape Maintenance District.

90. The applicant shall comply with the City of Clovis Water Efficient Landscape Requirements Ordinance.

91. The applicant shall apply to the Fresno Irrigation District (FID) for transfer of irrigation water rights to the City of Clovis, if the property has not already been removed from FID and transferred to the City. The applicant shall execute a "Request for Change of Relative Value" that can be obtained and processed through FID. The applicant shall provide a copy of the completed form to the City.

92. All existing agricultural irrigation systems either on-site or in public right of way, whether FID or privately owned, shall be identified prior to any construction activity on the site. Service to all downstream users of irrigation water shall be maintained at all times through preservation of existing facilities or, if the existing facilities are required to be relocated, the relocation and replacement of the existing facilities. It is the intent that downstream users not bear any burden as a result of development of the site. Therefore, the applicant shall pay all costs related to modification, relocation, or repair of any existing irrigation facilities resulting from or necessitated by the development of the site. The applicant shall identify on site plans and construction plans, all existing irrigation systems and their disposition (abandonment, repair, relocation, and/or piping). The applicant shall consult with the Fresno Irrigation District for any additional requirements for lines to be abandoned, relocated, or piped. The applicant shall

provide waivers from all users in order to abandon or modify any irrigation pipelines or for any service interruptions resulting from development activities.

Miscellaneous

93. The applicant shall install street lights along the major streets to local utility provider's standards at the locations designated by the City Engineer. Street light locations shall be shown on the utility plans submitted with the final map for approval. Street lights along the major streets shall be owned and maintained by local utility providers. Proof of local utility provider's approval shall be provided. The applicant may install thematic lighting, as approved by the City Engineer. If the applicant chooses to install thematic lighting, the applicant shall provide a conceptual lighting plan identifying adjacent properties that may be incorporated with thematic lights to create a neighborhood effect. Thematic lighting shall be maintained by an additional landscape maintenance assessment.

94. The applicant shall install all major street monumentation and section corner monumentation within the limits of the project work in accordance with City Standard ST-32 prior to final acceptance of the project. Monumentation shall include all section corners, all street centerline intersection points, angle points and beginning and end of curves (E.C.'s & B.C.'s). The applicant/contractor shall furnish brass caps. Any existing section corner or property corner monuments damaged by this development shall be reset to the satisfaction of the City Engineer. A licensed land surveyor or civil engineer licensed to perform land surveying shall certify the placement of all required monumentation prior to final acceptance. Brass caps required for installation of new monuments or replacement of existing monuments shall be provided by the contractor/the applicant and approved by City prior to installation. Within five days after the final setting of all monuments has been completed, the engineer or surveyor shall give written notice to the City Engineer that the final monuments have been set. Upon payment to the engineer or surveyor for setting the final monuments, the applicant shall present to the City Engineer evidence of the payment and receipt thereof by the engineer or surveyor.

95. A deferment, modification, or waiver of any engineering conditions shall require the express written approval of the City Engineer.

96. The conditions given herein are for the entire development. Additional requirements for individual phases may be necessary pending review by the City Engineer.

Fresno Irrigation District

(Laurence Kimura, FID Representative – 233-7161)

97. The applicant shall refer to the attached Fresno Irrigation District correspondence. If the list is not attached, please contact the FID for the list of requirements.

County of Fresno Health Department Conditions

(Kevin Tsuda, County of Fresno Health Department Representative – 600-3271)

98. The applicant shall refer to the attached Fresno County Health Department correspondence. If the list is not attached, please contact the Health Department for the list of requirements.

Caltrans

(Jamaica Gentry, Caltrans Representative – 488-7307)

99. The applicant shall refer to the attached Caltrans correspondence. If the list is not attached, please contact the Caltrans for the list of requirements.

Clovis Unified School District

(Michael Johnston, CUSD Representative – 327-9000)

100. The applicant shall refer to the attached CUSD correspondence. If the list is not attached, please contact the CUSD for the list of requirements.

San Joaquin Valley Air Pollution Control District

(Brian Clements, SJVAPCD Representative – 230-6000)

101. The applicant shall refer to the attached SJVAPCD correspondence. If the list is not attached, please contact the SJVAPCD for the list of requirements.

Fresno Metropolitan Flood Control District

(Peter Sanchez or Michael Maxwell, FMFCD Representative – 456-3292)

102. The applicant shall refer to the attached FMFCD correspondence. If the list is not attached, please contact the FMFCD for the list of requirements.

Administration Department Conditions

(John Holt, Department Representative – 324-2072)

103. Prior to approval, recordation or filing of an annexation, final map, or site plan, the property covered by the Project shall be included within or annexed to a Community Facilities District (CFD), established by the City for the provision of public facilities and services, for which proceedings have been consummated, and shall be subject to the special tax approved with the formation or annexation to the CFD. The CFD applies only to residential projects.

104. The applicant and the property owner acknowledge and agree that if the Project were not part of a CFD, the City might lack the financial resources to operate facilities and

provide public services, such as police protection, fire protection, emergency medical services, park and recreation services, street maintenance and public transit. Absent the requirement for inclusion of the Project within a CFD, the City might not be able to make the finding that the Project is consistent with the General Plan and relevant specific plans and might not be able to make the findings supporting approval of the Project as required by the Subdivision Map Act and the California Environmental Quality Act, and the City might be required to deny the application for the Project.

105. The owner/developer shall notify all potential lot buyers prior to sale that this Project is a part of a Community Facilities District and shall inform potential buyers of the special tax amount. Said notification shall be in a manner approved by the City. This requirement may be waived at the discretion of the City Council if, at the time of the approval, recordation or filing of the Project, the City Council has determined that it is not necessary that the Project be included in the CFD.

106. The applicants shall reimburse the City for any expense associated with the transition agreement for fire services with the Fresno County Fire Protection District that would apply to this proposal.

Woodside Homes of Fresno, LP

GPA2019-006, R2019-007, R2020-002, TM6284, & RO301

Initial Study and Mitigated Negative Declaration

February 2020

PREPARED BY:

George González, MPA
Associate Planner
Planning & Development Services
(559) 324-2383
georgeg@cityofclovis.com

CITY of CLOVIS

PLANNING & DEVELOPMENT

1033 FIFTH STREET • CLOVIS, CA 93612

INITIAL STUDY

This Initial Study was prepared pursuant to the California Environmental Quality Act (CEQA) Public Resources Code Sections 21000 *et seq*., CEQA Guidelines Title 14, Section 15000 et seq. of the California Code of Regulations.

PROJECT TITLE:	Woodside 06N, LP (GPA2019-006, R2019-007, R2020-002, TM6284, & RO301)
LEAD AGENCY NAME AND ADDRESS:	City of Clovis Planning & Development Services 1033 Fifth Street Clovis, CA 93612
CONTACT PERSON AND PHONE NUMBER:	George González, MPA, Associate Planer (559) 324-2383 georgeg@cityofclovis.com
PROJECT LOCATION:	Southwest area of Teague and N. Fowler Avenues in the County of Fresno, California APN(s): 559-021-03S, 04, 5, 6, 7, 8, 37, 69 (Partial), 57, 58, 59, 60, & 64
PROJECT SPONSOR'S NAME AND ADDRESS:	Matt Smith Woodside 06N, LP 9 River Park Place, Suite 430 Fresno, CA 93720
LAND USE DESIGNATION:	See page 7 of this Initial Study
ZONING DESIGNATION:	See page 7 of this Initial Study
PROJECT DESCRIPTION	See page 7 of this Initial Study
SURROUNDING LAND USES AND SETTING:	See page 6 of this Initial Study
REQUIRED APPROVALS:	See page 8 of this Initial Study
HAVE CALIFORNIA NATIVE AMERICAN TRIBES REQUESTED CONSULTATION? IF SO, HAS CONSULTATION BEGUN?	No.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

A. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and corresponding discussion in this Initial Study.

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

Determination

On the basis of this initial evaluation:

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

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

☐ I find that the proposed Project MAY have a significant effect on the environmental, and an ENVIRONMENTAL IMPACT REPORT (EIR) will be prepared.

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

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

Prepared By:

George González, MPA, Associate Planner
City of Clovis Planning & Development Services

2/6/2020
Date

Approved By:

Dwight Kroll, AICP, Director
City of Clovis Planning & Development Services

2.7.2020
Date

B. PROJECT OVERVIEW

Woodside Homes of Fresno proposes the construction a 74-lot single-family residential development on approximately 32.19 acres of land located on the south side of Teague Avenue, between Sunnyside and Fowler Avenues in the County of Fresno, California, herein referred to throughout the document as "proposed Project" and/or "Project." The project includes a General Plan Amendment to re-designate approximately 34.3 acres from the Rural Residential classification to Low Residential classification and prezone approximately 50.8 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

Additionally, the Project includes an Annexation request to annex approximately 50.8 acre to the City of Clovis and detach from the Fresno County Fire Protection District and the Kings River Conservation District. The entire project area includes vacant land and rural residential uses. Furthermore, the Project includes the Fresno Local Agency Formation Commission (LAFCo) as a responsible agency.

C. PROJECT LOCATION

As shown in Figure 1 below, the Project is located in the southwest area of Teague and N. Fowler Avenues and consists of Thirteen (13) parcels totaling approximately 50.8 acres. Assessor's Parcel Number (APN) 559-021-03S is approximately 20 acres; APN 559-021-04 is approximately 5 acres; APN 559-021-05 is approximately 0.94 acres; APN 559-021-06 is approximately 1.55 acres; APN 559-021-07 is approximately 2.23 acres; APN 559-021-08 is approximately 1 acre; APN 559-021-57 is approximately 1.81 acres; APN 559-021-58 is approximately 1.79 acres; APN 559-021-59 is approximately 2.36 acres; APN 559-021-60 is approximately 2.36 acres; APN 559-021-64 is approximately 2.44 acres; APN 559-021-37 is approximately 4.88 acres; and APN 559-021-69 (Partial) is approximately 5 acres. The Project site is bound by the City of Clovis limit lines and County rural residential parcels to the north and County rural residential parcels to the west, east and south.

D. EXISTING SETTING

This section describes the existing conditions, surrounding conditions, as well as the General Plan land use and zoning designations.

1. EXISTING CONDITIONS

As shown in Figure 2 below, the existing Project area has vacant land and rural residential uses, including homes, accessory structures, weeds, shrubs and trees. Currently, the project area does not have any vehicle circulation infrastructure per City standards and a portion of the Nees #2 No. 541 Private Pipeline is located within the boundaries of the proposed 74-lot single-family residential development. The project area has grade differences throughout the 50.8-acre Project.

2. SURROUNDING CONDITIONS

As referenced in Table 1 below, and shown on Figure 2, the Project site is surrounded by the City of Clovis limits and rural residential uses to the north and rural residential uses to the west, south and east.

Table 1: Surrounding Land Uses

	Land Use Designation*	Zoning**	Existing Land Use
North	Low Density Residential & Rural Residential	R-1 & County R-R	Rural Residential homes and vacant land
East	Rural Residential	County R-R	Rural Residential homes and vacant land
South	Rural Residential	County R-R	Rural Residential homes and vacant land
West	Rural Residential	County R-R	Rural Residential homes

Notes:
*Low Density Residential (2.1 – 4.0 DU/Ac) and Rural Residential (1 DU/Ac - Clovis)
**R-1 (Single-Family Residential) and R-R (Rural Residential)

3. LAND USE DESIGNATION

As shown on Figure 3, the Project area has an existing General Plan Land Use designation of Rural Residential, which allows for one dwelling unit per 2-acres of land. According to the 2014 Clovis General Plan, the Rural Residential designation is intended for very low density residential uses and small scale agricultural operations.

4. ZONING DESIGNATION

As shown on Figure 4, the Project area is currently zoned County R-R (Rural Residential) Zone District. The project area is part of the Dry Creek Preserve Master Plan and within the boundaries of the Herndon-Shepherd Specific Plan area.

E. PROJECT DESCRIPTION

This section describes the components of the proposed Project in more detail, including site preparation, proposed structures, and on- and off-site improvements.

1. PROJECT CONSTRUCTION

The Project is anticipated to begin construction March 2022, with full buildout by July 2024. Furthermore, the building occupancy is expected to occur in August 2022. This schedule is an estimation only and is contingent upon entitlements, and the market, among other factors.

2. SITE PREPARATION

Site preparation would include typical grading activities to ensure a level surface. Part of the preparation would include the removal of a homes, accessory structures, trees, shrubs, and weeds. Other site preparation activities would include minor excavation for the installation of utility infrastructure, for coneyance of water, sewer, stormwater, and irrigation.

3. PROJECT COMPONENTS

This section describes the overall components of the Project, such as the proposed building(s), landscape, vehicle and pedestrian circulation, and utilities.

DEMOLITION

Since the Project site has existing homes and accessory structures, a demolition permit will be required through the Clovis Building Division.

SITE LAYOUT AND CIRCULATION

As shown in Figure 5, the Project proposes a 74-lot single-family residential development with standard local streets and sidewalks within the interior of the subdivision. The lot sizes within the residential development will range from approximately 11,375 square-feet to 38,163 square-feet, with an average lot size of approximately 15,611 square-feet. The Project will have 6 lots fronting Teague Avenue and will have a lot depth of approximately 214-feet. Additionally, the Project will improvement a portion of Teague Avenue per City standards and Dry Creek Preserve Master Plan. All vehicular access will be provided from Teague Avenue and a paved EVA (Emergency Vehicle Access) will be provided on the west side of the project, connecting to Sunnyside Avenue. The EVA will be equipped with two electric gates complying with Clovis Fire Department standards and will have Opticom devices installed per Fire Department requirements. Infrastructure to be provided along the EVA will include sewer, water and storm-drain.

DRY CREEK PRESERVE

The Project area is part of the Dry Creek Preserve Master Plan Area. This master plan established goals and guidelines for the residential development of the area. The master plan also established standards for protecting farming operations and rural residential uses, including permissible uses and maximum density allowances for new housing developments.

PARKING
Per the Development Code, the proposed 74-lot single-family residential development will be required to provide a minimum of two (2) covered spaces for each dwelling unit and have interior dimensions of 20-feet by 22-feet.

PROJECT DESIGN
Conceptual design elevations of the homes will occur later on in the project review process. The applicant will typically provide these designs during the Building Division review process to ensure compliance with Building Code Requirements.

LANDSCAPE
The Project area will include landscaping in the front yard setback of reach home and along the street side yard setback. The proposed landscaping will be required to comply with the City's water efficient landscape requirements and guidelines.

UTILITIES
Utilities for the site would consist of water, sewer, electric, cable, gas, and storm water infrastructure. Trenching and digging activities would be required for the installation of necessary pipelines typical of residential developments. All utility plans would be required to be reviewed and approved by the appropriate agency, and/or department to ensure that installation occurs to pertinent codes and regulations. Other infrastructure would include new fire hydrants as required by the City of Clovis Fire Department.

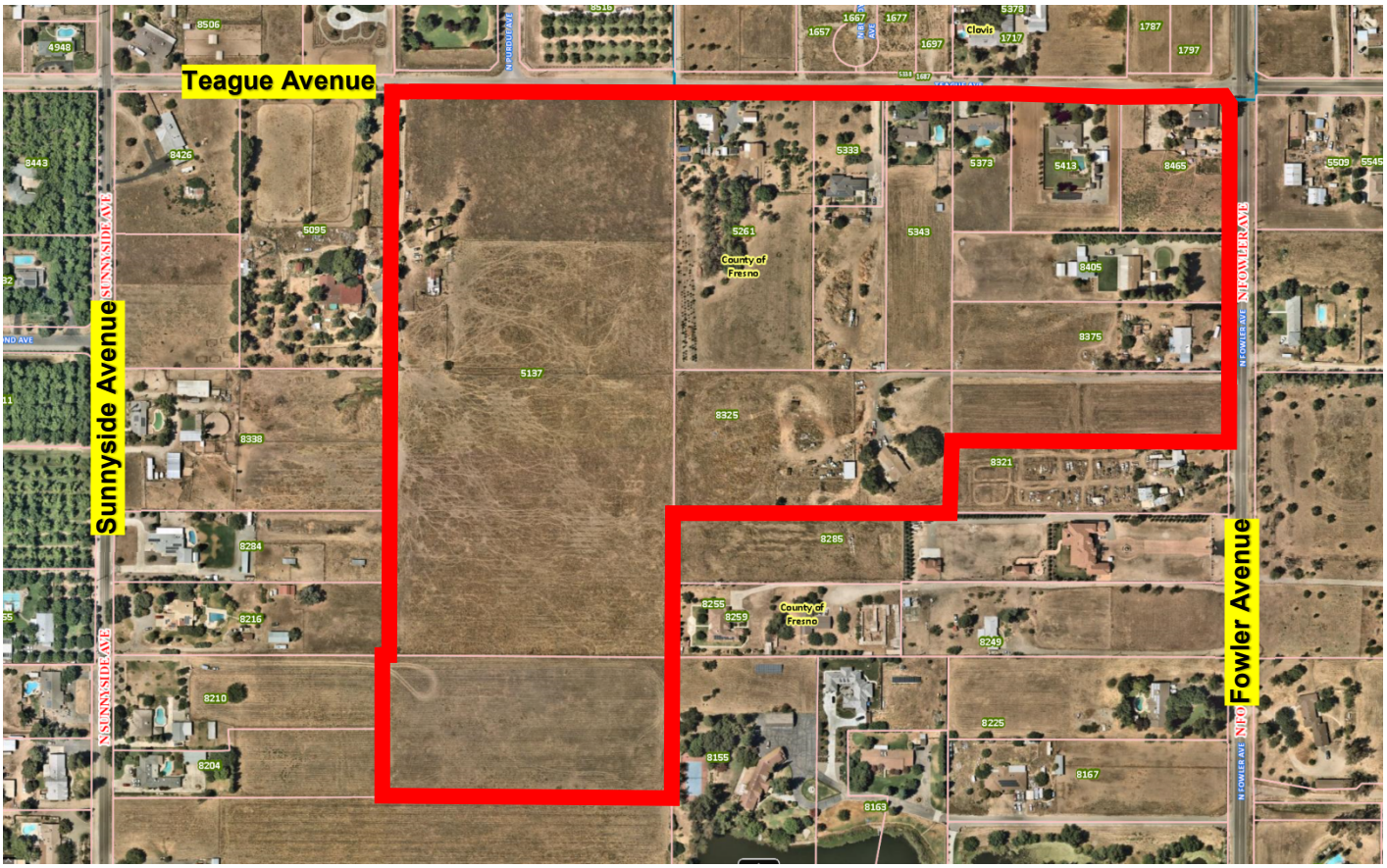
Utilities are provided by and managed from a combination of agencies, including FID which provides the City's water supply, Fresno Metropolitan Flood Control District (FMFCD) which has responsibility for storm water management, and the City's public utilities department which provides for solid waste collection, and sewer collection services. Pacific Gas & Electric (PG&E) provides electricity and natural gas within the City of Clovis.

F. REQUIRED PROJECT APPROVALS

The City of Clovis requires the following review, permits, and/or approvals for the proposed Project; however, other approvals not listed below may be required as identified throughout the entitlement process:

- General Plan Amendment
- Rezone
- Vesting Tentative Tract Map
- Annexation/Reorganization
- Grading Permit(s)
- Building Permit(s)

Figure 1: Project Location



= Project Site (approximate limits)

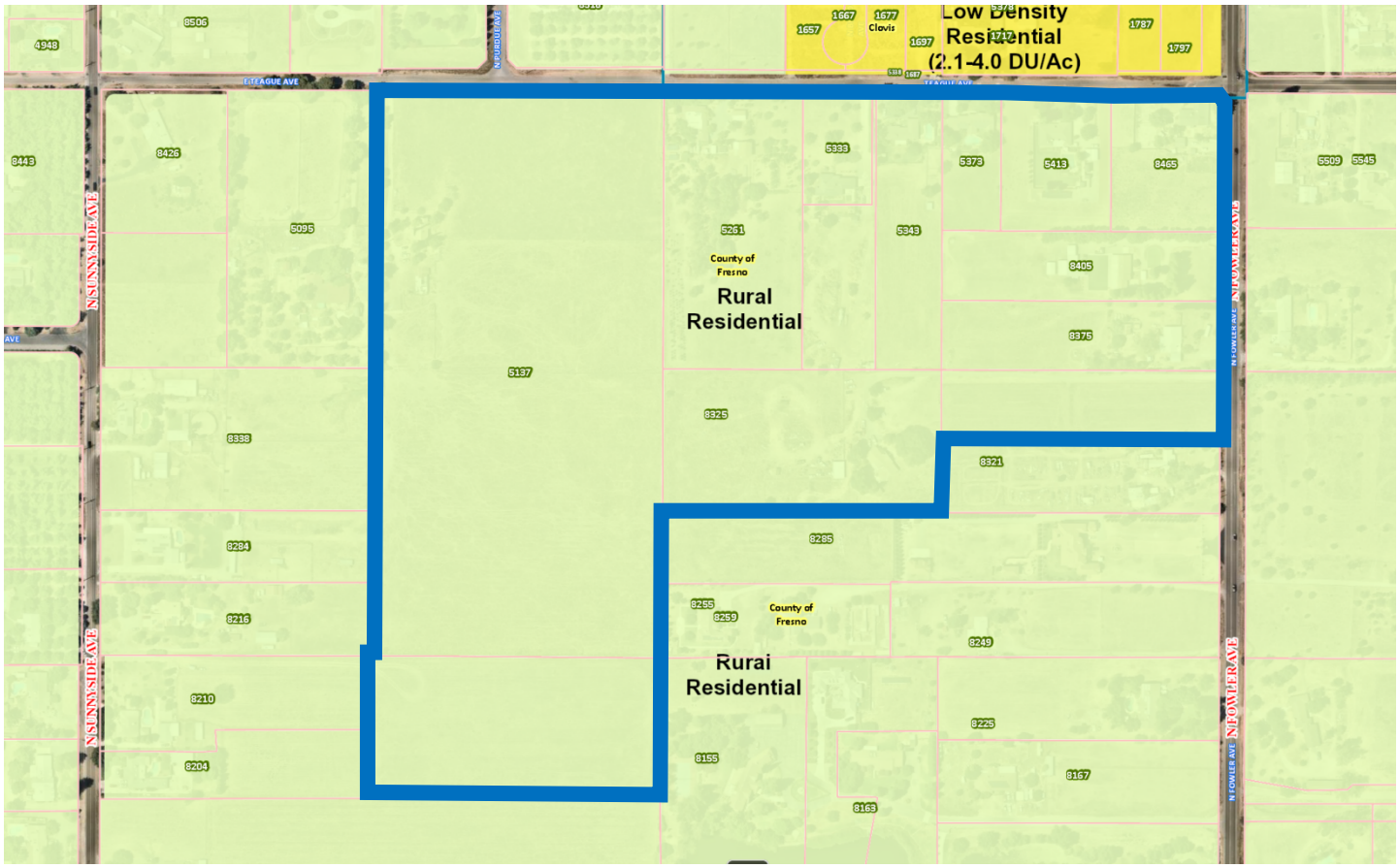
N

Figure 2: Aerial of Project Site

= Project Site (approximate limits)

N

Figure 3: Land Use Designation

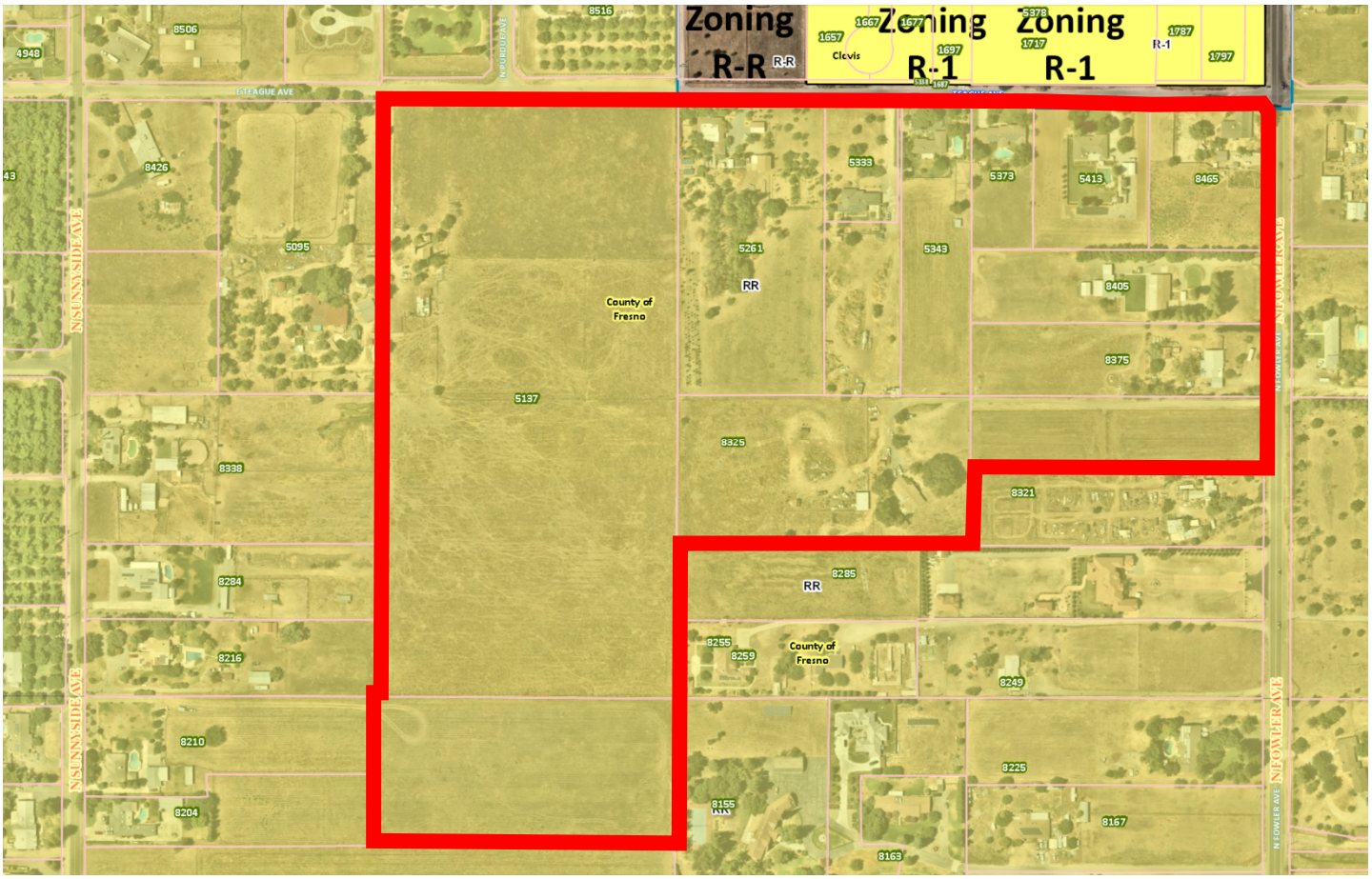


= Project Site (approximate limits)

N

EXISTING LAND USE:
RR – Rural Residential

Figure 4: Zoning District

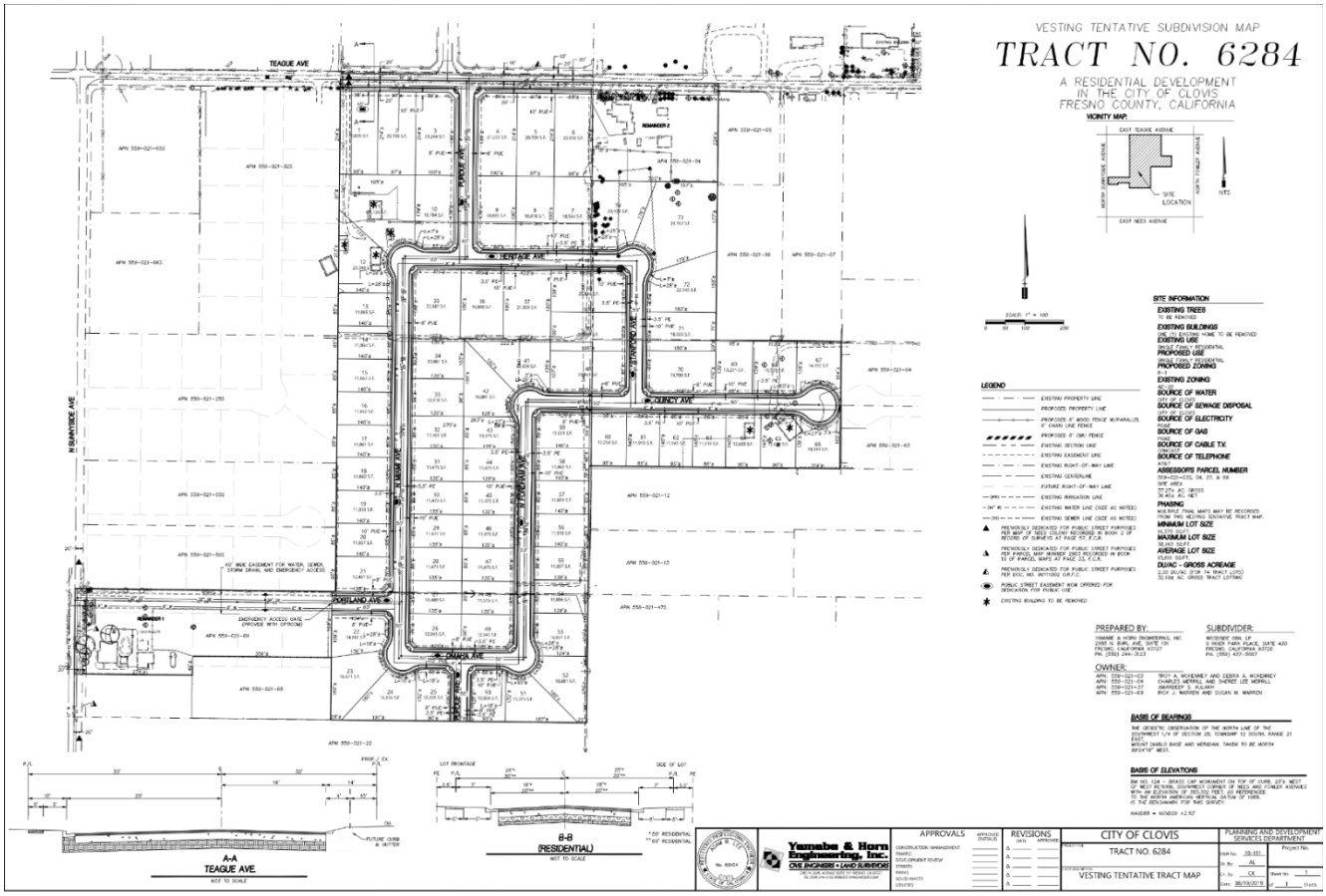


= Project Site (approximate limits)

N

EXISTING ZONING:
County R-R (Rural Residential)

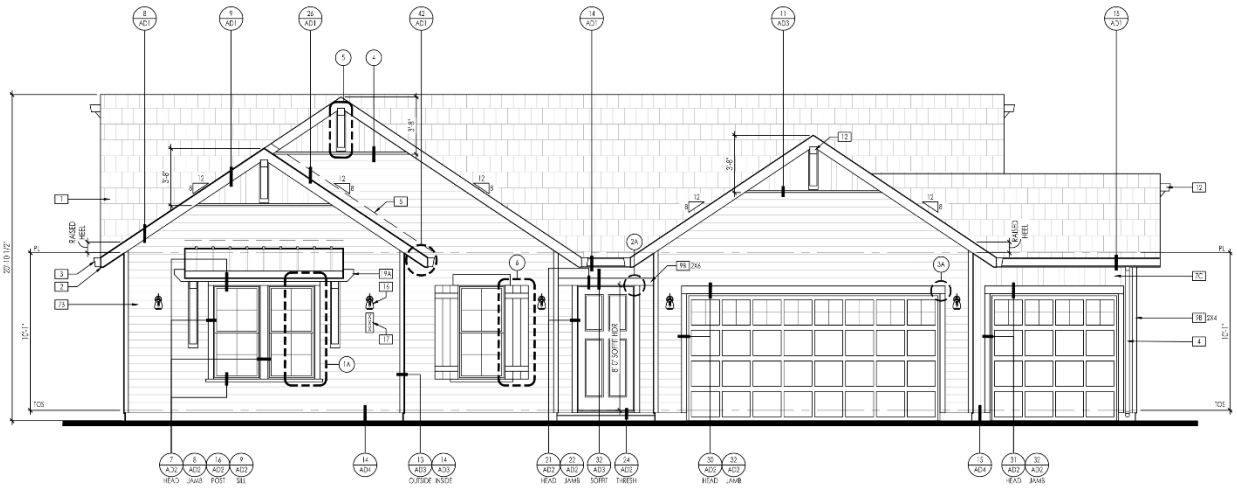
Figure 5: Proposed Site Plan



Approximate layout

Figure 6: Conceptual Elevations

'MODERN FARMHOUSE' (COMPOSITION SHINGLE)
FRONT ELEVATION "B"
1/4" = 1'-0"



'CLASSIC FARMHOUSE' (COMPOSITION SHINGLE)
FRONT ELEVATION "A"
1/4" = 1'-0"

Conceptual elevations only. Final product may change during the review process.

G. ENVIRONMENTAL CHECKLIST

This section provides an evaluation of the potential environmental impacts of the proposed project and are based on CEQA Guidelines Appendix G. For each issue area, one of four conclusions is made:

- **No Impact**: No project-related impact to the environment would occur with project development.
- **Less Than Significant Impact:** The proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.
- **Less Than Significant with Mitigation Incorporated**: The proposed project would result in an environmental impact or effect that is potentially significant, but the incorporation of mitigation measure(s) would reduce the project-related impact to a less than significant level.
- **Potentially Significant Impact**: The proposed project would result in an environmental impact or effect that is potentially significant, and no mitigation can be identified that would reduce the impact to a less than significant level**.**

1. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial effect on a scenic vista?			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?		X		

ENVIRONMENTAL SETTING

The City of Clovis is located within the San Joaquin Valley. Thus, much of the City and its surrounding areas are predominately flat. As a result, on clear days, the Sierra Nevada Mountains are visible to the east depending on your location.

Aside from Sierra Nevada, there are no officially designated focal points or viewsheds within the City. However, Policy 2.3, Visual Resources, of the Open Space Element of the 2014 Clovis General Plan, requires maintaining

public views of open spaces, parks, and natural features and to preserve Clovis' viewshed of the surrounding foothills.

As indicated above in the Project Description, the project area is located in the southwest area of Teague and N. Fowler Avenues. The Project area will be primarily surrounded by rural residential uses to the west, east and south; and rural residential and a portion of Vesting Tentative Tract Map TM6154 to the north.

DISCUSSION

a) *Would the project have a substantial effect on a scenic vista?*

Less-Than-Significant Impact. As mentioned above, there are no officially designated scenic vistas or focal points in the City of Clovis or Dry Creek Preserve Area. While the Sierra Nevada Mountains can be viewed on clear days, the Project would allow structures to be constructed at a maximum height of 35 feet. Further, General Plan Policy 2.3 requires that public views of open spaces, parks, and natural features be maintained. Therefore, because there are no officially designated scenic vistas in the area, a **less-than-significant impact** would occur with regards to the project having a substantial effect on a scenic vista. As a result, no mitigation measures are required.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

No Impact. As stated in the 2014 Clovis General Plan Environmental Impact Report (EIR), there are no Caltrans-designated scenic highways within the City of Clovis.[1] Further, there are no existing historical structures or rock outcroppings located on or within the immediate vicinity of the project area, Therefore, the Project would result in **no impact** with regards to substantially damaging scenic resources within a State scenic highway, and no mitigation measures are required.

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

Less-Than-Significant Impact. The existing Project area is surrounded by rural residential uses, including low density residential to the north. Thus, as a proposed low density residential project consistent with the Dry Creek Preserve Master Plan, the homes would fit within the character of the surrounding area. Furthermore, the Project proposes a General Plan Amendment and Prezone, and if approved, would be consistent with the applicable Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

Further, the Project would undergo Plan Review which would ensure that the overall design and character is consistent with the Dry Creek Preserve Master Plan. The Plan Review process will ensure the Project complies with relevant design policies, such as in the Dry Creek Preserve Master Plan, the Clovis Development Code, and the General Plan. During the review, the height, architecture, color and materials are reviewed for consistency with these plans and guidelines. Consequently, a **less-than-significant** impact would occur with regards to substantially degrading the existing visual character of the site and its surroundings, and no mitigation measures are required.

1 2014 Clovis General Plan EIR, June 2014, Page 5.1-1.

d) *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Less-Than-Significant With Mitigation Incorporated. The Project consists of 74 single-family homes within 34.3 acres. As a result of the existing Project area being rural residential and vacant land, the Project would result in new sources of light and glare. Light and glare from the Project would be typical of residential development, including but not limited to, sources such as exterior lighting for safety, light and glare from vehicles or from light reflecting off of surfaces such as windshields. Other sources of light would be the interior lighting of the units at night. These sources of light and glare are not typically associated with causing significant effects on the environment, especially given that the surrounding rural developed area already emits similar sources of light and glare and are part of the existing conditions present in the vicinity. The existing urban development (Whisper Creek TM5550) within the Dry Creek Preserve Area has contributed to the urbanization of the area, therefore, lighting and glare are already being emitted in the vicinity. Sources of existing light and glare are comprised of streetlights, and light and glare from vehicles going to and from home.

Although the Project would introduce new sources of light and glare, the Plan Review process would ensure that the design and placement of lighting is appropriate to minimize potential light and glare impacts to surrounding properties. Further, the Project would be required to comply with Section 9.22.050, Exterior Light and Glare, of the Clovis Municipal Code (CMC or Development Code), which requires light sources to be shielded and that lighting does not spillover to adjacent properties.

Overall, the lighting is necessary to provide enough illumination at night for security and traffic purposes. All lighting will be installed per City and PG&E standards. With the inclusion of the following Mitigation Measure, impacts in this category will be reduced to a less than significant impact.

> Mitigation Measure AES-1d: The developer shall direct all on-site lighting downward and provide physical shields to prevent direct view of the light source from adjacent rural residential properties surrounding the proposed residential development. Street lighting shall be spaced in accordance with City Standards to reduce up-lighting. The applicant shall utilize a PG&E street light which directs light downward.

2. AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.			X	
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)) or timberland (as defined in Public Resources Code section 4526)?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X

ENVIRONMENTAL SETTING

The Project site is located in the southwest area of Teague and N. Fowler Avenues in the County of Fresno. The Project area is within the Dry Creek Preserve Master Plan and surrounded primarily by rural residential uses. A portion of the City limits is located along the north side of the Project site with a land use designation of Low Density Residential.

DISCUSSION

a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

Less-Than-Significant Impact. According to the 2016 Farmland Monitoring and Mapping Program (FMMP) maps from the California Department of Conservation,[2] the Project area is considered Rural Residential Land and a portion is considered Farmland of Local Importance, which is defined by the Department of Conservation as residential areas of one to five structures per ten acres and farmable lands within Fresno County that do not meet the definition of Prime, Statewide, or Unique.

The Project area has not been used for farming activities in recent years, nor is it zoned or designated for farming-related activities under the 2014 Clovis General Plan. Consequently, because the site is not considered Prime, Unique, or Farmland of Statewide Importance, a **less-than-significant** impact would occur, and no mitigation measures are required.

b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?*

No Impact. As shown on Figure 5.2-2 of the Agricultural Resources Chapter of the 2014 Clovis General Plan EIR, the Project area is not under a Williamson Act Contract. Further, as mentioned above, the site is not currently zoned or designated for agricultural use. As a result, the Project would have **no impact** with regards

2 Farmland Mapping and Monitoring Program, California Department of Conservation, 2016 Fresno County Map.

to conflicting with existing zoning for agricultural use or a Williamson Act Contract. No mitigation measures are required.

c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220 (g)) or timberland (as defined in Public Resources Code section 4526)?*

No Impact. The Project area is rural residential uses and vacant land, thus, does not contain forest land. Further, the area is not zoned for forestry or other forestry related uses. As a result, **no impact** would occur with regards to conflicts with existing zoning for, or cause rezoning of, forest land. No mitigation measures are required.

d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

No Impact. See discussion under Section 2c.

e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

No Impact. See discussions under Sections 2a, 2b and 2c.

3. AIR QUALITY

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

ENVIRONMENTAL SETTING

An Air Quality and Greenhouse Gas Analysis Report (AQ/GHG Report) was prepared by Mitchell Air Quality Consulting on August 12, 2019 (see Appendix A). Information in this AQ/GHG Report is used for the analysis included in both the Air Quality and Greenhouse Gas Emissions section of this Initial Study.

San Joaquin Valley Air Basin

The City of Clovis (City) is in the central portion of the San Joaquin Valley Air Basin (SJVAB). SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Strait. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (SJVAPCD 2012a).

Topography[3]

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants, and can channel air from upwind areas that transports pollutants to downwind areas. The San Joaquin Valley Air Pollution Control District (SJVAPCD) covers the entirety of the SJVAB. The SJVAB is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The SJVAB is in a Mediterranean climate zone and is influenced by a subtropical high-pressure cell most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500–3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD 2012a).

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve

3 Air Quality and Greenhouse Gas Analysis Report, Mitchell Air Quality Consulting, August 12, 2019.

and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors," those most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 4, Ambient Air Quality Standards for Criteria Pollutants, these pollutants are ozone (O3), nitrogen dioxide (NO2), carbon monoxide (CO), sulfur dioxide (SO2), coarse inhalable particulate matter (PM10), fine inhalable particulate matter (PM2.5), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to the criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Table 2: Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	-- 0.07 ppm	0.09 ppm 0.07 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.053 ppm 0.100 ppm	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24-Hour 3-Hour 1-Hour	0.03 ppm 0.14 ppm 0.5 ppm 0.075 ppm	-- 0.04 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	-- 150 ug/m^3	20 ug/m^3 50 ug/m^3
$PM_{2.5}$	Annual 24-Hour	12 ug/m^3 35 ug/m^3	12 ug/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 1.5 ug/m^3	1.5 ug/m^3 --

Notes: ppm = parts per million; ug/m3 = micrograms per cubic meter.
Source: California Air Resources Board, 2008. Ambient Air Quality Standards (4/01/08), http://www.arb.ca.gov.aqs/aaqs2.pdf.

Attainment Status

The air quality management plans prepared by SJVAPCD provide the framework for SJVAB to achieve attainment of the state and federal AAQS through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet the ambient air quality standards. Severity

classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

At the federal level, the SJVAPCD is designated as extreme nonattainment for the 8-hour ozone standard, attainment for PM_{10} and CO, and nonattainment for $PM_{2.5}$. At the state level, the SJVAB is designated nonattainment for the 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards. The SJVAB has not attained the federal 1-hour ozone, although this standard was revoked in 2005.

DISCUSSION

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

Less-Than-Significant Impact. Although the CEQA Guidelines indicate that a significant impact would occur if the Project were to conflict with or obstruct implementation of the applicable air quality plan, the SJVAPCDs 2015 Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) does not provide specific guidance on analyzing conformity with the plan. Thus, for purposes of analyzing this potential impact, the AQ/GHG Analysis Report considered impacts based on: (1) whether the Project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards; and (2) whether the Project will comply with applicable control measures in the air quality plan, primarily compliance with Regulation VIII – Fugitive PM_{10} Prohibitions and Rule 9510 – Indirect Source Review.

In general, regional air quality impacts and attainment of standards are the result of the cumulative impacts of all emission sources within the air basin. Thus, individual projects are generally not large enough to contribute measurably to an existing violation or air quality standards alone. Therefore, in order to analyze this threshold, and because the of the region's existing nonattainment status for several pollutants, the Project would be considered to cause significant impacts if it were to generate emissions that would exceed the SJVAPCDs significance thresholds. Based on the AQ/GHG Analysis Report, the Project would not exceed these thresholds from construction and operation of the homes.[4]

The SJVAPCD provided a comment letter, dated September 11, 2019, indicating that the Project would not exceed thresholds for criteria pollutants. However, the Project would be subject to compliance with District Rule 9510 which is intended to mitigate a project's impact through project design elements or payment of off-site fees. The Project applicant would be requires to submit to the SJVAPCD an Air Impact Assessment (AIA). Further, the Project would be required to submit a Dust Control Plan (DCP) to the SJVAPCD for review and approval. Consequently, a **less-than-significant** impact would occur and no mitigation measures are required.

b) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

Less-Than-Significant Impact. See discussion under Section 3a above.

c) *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Less-Than-Significant Impact. Sensitive receptors are generally considered to include children, the elderly, and persons with pre-existing respiratory and cardiovascular illness. The SJVAPCD considers a sensitive receptor a location that houses or attracts children, the elderly, or people with illnesses. Examples of these receptors are considered to be hospitals, residences, schools and school facilities, and convalescent facilities. The nearest sensitive receptors to the Project area would be the existing rural residences adjacent to the site

4 Air Quality and Greenhouse Gas Analysis Report, Mitchell Air Quality Consulting, pages 7 & 8, August 12, 2019.

to the west, south, east, and north. Based the AQ/GHG Analysis Report , the Project would not exceed emission thresholds that would result in a significant impact[5] based on compliance with SJVAPCD regulations and standards for construction and operation of this type of development. Therefore, a **less-than-significant** impact would occur.

d) *Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Less-Than-Significant Impact. Generally, sources considered to emit odors are associated with wastewater treatment facilities, sanitary landfills, petroleum refineries, chemical manufacturing, and other industrial/manufacturing related uses. The Project is a residential use, thus, the odors associated with such use would be similar to that of the surrounding area which includes rural residential uses. Although the Project proposes a trash toter with each unit, the toters are located away from the existing residences, thus, would minimize or eliminate the possibility of odor emitting from the toters. Overall, because the Project is a residential use, similar to existing rural residential uses, the types of odor that could result from the Project would not be considered an objectionable odor source. Thus, a **less-than-significant** impact would occur.

4. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X

5 Air Quality and Greenhouse Gas Analysis Report, Mitchell Air Quality Consulting, August 12, 2019.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d. Interfere substantially with the movement of any 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?				X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

ENVIRONMENTAL SETTING

A Biological Assessment was prepared by Argonaut Ecological Consulting, Inc. on May 29, 2019 (see Appendix B). This Biological Assessment included an investigation of the biotic resources of the Project area, and assessed potential project-related impacts pursuant to the California Environmental Quality Act. As part of the Biological Assessment, the Project area was surveyed on April 18, 2019, to assess the potential presence of sensitive species and associated suitable habitat.

The existing Project area is rural residential uses and vacant land. The area habitat is characteristic of residential landscaping around the homes and non-native grassland. There are eucalyptus trees, palm trees, old orchard trees, landscaping scrubs, and mowed landscaped areas.

The following analysis is based in part on information provided by the Biological Assessment prepared by Argonaut Ecological Consulting, Inc.

DISCUSSION

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

Less-Than-Significant Impact With Mitigation. As described in the Biological Assessment, a pedestrian survey of the Project area was conducted on April 18, 2019, by Argonaut Ecological Consulting, Inc. The survey found that the site does not contain suitable habitat for special status species within the Project area. A summary of the potential special status species impacts are shown in Table 2 of the report. Nevertheless, implementation of mitigation measures BIO-1 and BIO-2 would ensure that a **less-than-significant impact with mitigation** occurs.

Mitigation Measure BIO-1: **Western Burrowing Owl.** A preconstruction survey for potential occupation of the site by Western burrowing owl and nesting Swainson's hawk is recommended if ground disturbing activities are scheduled during the nesting period (Feb – August). This species, although not observed during the field review, could occupy the site in the near future. The survey should be performed within 30-45 days prior to construction (ground disturbance).

Mitigation Measure BIO-2: **Swainson's Hawk.** The only suitable nesting habitat for Swainson's hawk is in the northeast portion near Teague Avenue and on properties adjacent to the Study Area. No active nests were found. A nest survey should be conducted prior to removal (if needed) of the eucalyptus/pine stand or individual trees in the northeast corner of the Study Area if tree removal is to occur during the nesting season of February 1 – August 31).

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

No Impact. According to the Biological Assessment, the pedestrian survey found that the site does not contain critical habitat for any listed species.[6] Therefore, the Project would not result in a substantial adverse effect with respect to this threshold, and **no impact** would occur. No mitigation measures are required.

c) *Would the project have a substantial adverse effect on state or federally protected wetlands as (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. See discussion under Section 4b.

d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

No Impact. See discussion under Section 4b.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less-Than-Significant Impact. The site does not indicate the presence of any suitable habitat features that would be significantly impacted. Although Policy 2.6 of the Open Space and Conservation Element of the General Plan calls for the protection of biological resources, the Biological Assessment did not identify any such resources at the site due to its location and continuous development as rural residential for several decades. Further, the Clovis Development Code does include tree protection standards which would ensure the appropriate replacement of any trees removed during construction in compliance with this standard.

6 Biological Assessment prepared by Argonaut Ecological Consulting, Inc., page 15, May 29, 2019.

Consequently, due to the lack of any identified sensitive species, and because compliance with existing City codes for the removal of any existing trees would ensure trees are replaced or in-lieu fee is assessed for the replacement of trees, the impact would be **less-than-significant** as the Project would not conflict with local policies or ordinances for protection biological resources.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No Impact. The Project site is not located within an adopted or approved Habitat Conservation Plan (HCP) or other conservation plan. Therefore, **no impact** would occur and no mitigation measures are required.

5. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?				X
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c. Disturb any human remains, including those interred outside of formal cemeteries?		X		

ENVIRONMENTAL SETTING

The Project area is located in the southwest area of Teague and N. Fowler Avenues in the County of Fresno. The Project area is within the Dry Creek Preserve Master Plan and surrounded primarily by rural residential uses. A portion of the City limits is located along the north side of the Project site with a land use designation of Low Density Residential. The Project area is currently rural residential uses and vacant land.

A Cultural Resources Assessment was prepared by Peak & Associates, Inc., dated May 17, 2019 (see Appendix C). This Cultural Resources Assessment included a records search at the Southern San Joaquin Valley Archaeological Information Center (SSJVIC) and a formal request submittal to the Native American Heritage Commission to review their Sacred Lands Files.

In addition to the Cultural Resources Assessment, City staff conducted Native American Consultation in compliance with Senate Bill 18 (SB18) and Assembly Bill 52 (AB52). In compliance with AB52, invitations for consultation were mailed on June 4, 2019, which affords Native tribes thirty (30) days to respond and to request consultation. During this timeframe, no requests for consultations were received. In compliance with SB18, invitations for consultation were mailed on June 4, 2019, which affords Native tribes ninety (90) days to request consultation.

During that time, one (1) tribe requested consultation. On July 31, 2019, representatives from Table Mountain Rancheria provided a letter to the City requesting to coordinate a meeting date to discuss the proposed project. On Wednesday, February 5, 2020, City staff forwarded the Cultural Resources Assessment prepared by Peak & Associates, Inc. to the representative from Table Mountain Rancheria for review.

Mitigation measures are included in the following analysis to ensure protection of such resources if any are discovered inadvertently.

DISCUSSION

a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

No Impact. As part of the Cultural Resources Assessment, the survey found no evidence of prehistoric period cultural resources within the Project area. Additionally, there are no resources eligible for the California Register of Historical Resources within the Project area. Further, compliance with Policy 2.9 of the General Plan, which calls for the preservation of historical sites and buildings of state or national significance, would ensure that if there were historical resources present, they would be protected. Therefore, **no impact** would occur with regard to the Project causing a substantial adverse change in the significance of a historical resource and no mitigation measures are required.

b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

Less-Than-Significant Impact With Mitigation. The site is currently rural residential uses and vacant land. Per the Cultural Resources Assessment, the land is currently used as pasturage for horses and soils range from yellow sand to tan loamy sand to light brown loam. Furthermore, the Cultural Resources Assessment found the site negative for prehistoric period cultural resources.[7]

Because there is the slight possibility for the accidental or inadvertent uncovering of archaeological resources during construction, Mitigation Measure CULT-1 would serve to reduce those potential impacts by requiring the stopping of any work until any found artifacts can be properly removed and inventoried by a qualified archaeologist. Therefore, the Project would result in a **less-than-significant impact with mitigation**.

> Mitigation Measure CULT-1: Although no prehistoric sites were found during the survey, there is a slight possibility that a site may exist and be totally obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for on-the-spot evaluation of the findings.

c) *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Less-Than-Significant Impact With Mitigation. The site is currently rural residential uses and vacant land. The Project area shows long-term agricultural use with leveling, irrigation, fencing and general agricultural use evident. However, the potential remains that human remains could be inadvertently or accidentally uncovered during ground-disturbing activities such as trenching, digging, and the installation of utilities and other infrastructure.

7 Cultural Resources Assessment prepared by Peak & Associates, Inc., page 14, May 17, 2019.

Because there is the slight possibility for the accidental or inadvertent uncovering of human remains during construction, Mitigation Measure CULT-2 would serve to reduce those potential impacts by requiring the stopping of any work until any found human remains can be properly removed by the Fresno County coroner and/or tribes. Therefore, the Project would result in a **less-than-significant impact with mitigation**.

> Mitigation Measure CULT-2: The possibility of encountering human remains cannot be entirely discounted. If human graves are encountered, work should halt, and the Fresno County Coroner should be notified. The California Health and Safety Code Section 7050.5 states it is a misdemeanor to knowingly disturb a human grave. Upon discovery, the Project owner should contact a qualified archaeologist to evaluate the historical significance of the remains. If human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of the identification.

6. ENERGY

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

ENVIRONMENTAL SETTING

The Project area is located within the Dry Creek Preserve Master Plan and surrounded by existing rural residential uses.

DISCUSSION

a) *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

Less-Than-Significant Impact. The Project proposes the construction of 74 single-family homes on approximately 34.3 acres, along with associated landscaping, hardscape and infrastructure (i.e. drive aisles, utilities, etc.). The Project would include construction activities typical of residential development, thus, is not generally considered the type of use or intensity that would result in the unnecessary consumption of energy. The homes would comply with Title 24 Green Building Standards for energy efficiency, as well as be required to comply with the latest water efficient landscape policy regulations, and California Building Code. Further, the Project would be required to comply with Clovis General Plan Policy 3.4, and 3.7 of the Open Space and Conservation, which call for the use of water conserving and drought tolerant landscape, as well as energy efficient buildings. Consequently, compliance with these measures would ensure that the Project does not result

in a significant impact due to the unnecessary consumption of energy and **less-than-significant** impact would occur.

b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

Less-Than-Significant Impact. See discussion under Section 6a above.

7. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b. Result in substantial soil erosion or the loss of topsoil?			X	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e. Have soils incapable of adequately supporting the use of septic tanks or				X

	alternative waste disposal systems where sewers are not available for the disposal of wastewater?				
f.	Directly or indirectly destroy a unique paleontological resource or unique geologic feature?		X		

ENVIRONMENTAL SETTING

The 2014 Clovis General Plan EIR identified no geologic hazards or unstable soil conditions known to exist in the Project area. Although Figure 5.6-2 of the Geology and Soils Chapter of the General Plan EIR does show a fault, the fault is located northeast of the Project site.

DISCUSSION

a) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?; ii) Strong seismic ground shaking?; iii) Seismic-related ground failure, including liquefaction?; iv) Landslides?*

Less-Than-Significant Impact. Although the Project site does not have any known faults on the site, the potential remains that seismic ground-shaking could occur from the fault located northeast of the Project. However, adherence to the most current California Building Codes would ensure that the structures are constructed safely and in compliance with the appropriate Building Codes. With regards to liquefaction, the 2014 General Plan EIR states that the soil types in the area are not considered conducive to liquefaction due to their high clay content or from being too coarse.[8] Further, the site is generally flat and therefore landslides would not occur at the Project site. Overall, due to the location away from a known fault, adherence to the most recent California Building Codes, and the flat topography, a **less-than-significant impact** would occur with regards to potential impacts from seismic activity.

b) *Would the project result in substantial soil erosion or the loss of topsoil?*

Less-Than-Significant Impact. Grading activities would be required to ensure a flat and graded surface prior to construction, which may result in the soil erosion and loss of topsoil. However, as part of the Project, grading plans are required to be submitted and approved by the City Engineer Division to ensure appropriate grading of the site. Thus, this review and approval process would ensure that a **less-than-significant** impact occur and no mitigation measures are required.

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

Less-Than-Significant Impact. See discussion under Section 7a.

8 2014 Clovis General Plan EIR, Chapter 5: Geology and Soils, page 5.6-3.

d) *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating direct or indirect substantial risks to life or property?*

No Impact. According to the 2014 Clovis General Plan EIR, expansive soils are mostly present in areas along the northern edge of the non-Sphere of Influence (SOI) and the easternmost part of the Clovis non-SOI plan area. Because the Project is not within the vicinity of these areas, there would be no potential for creating direct or indirect substantial risks to life or property with regards to expansive soils. As a result, **no impact** would occur and no mitigation measures are required.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater?*

No Impact. The proposed 74-lot single-family development does not propose the use of septic tanks, therefore, **no impact** would occur.

f) *Would the project directly or indirectly destroy a unique paleontological resource or unique geologic feature?*

Less-Than-Significant Impact With Mitigation. The Project site has been previously disturbed, as well as the immediately surrounding areas with no known occurrences of the discovery of paleontological resources. In addition, the Cultural Resource Assessment found the site negative for prehistoric period cultural resources. Nevertheless, the possibility remains that the inadvertent or accidental discovery could occur during ground disturbing construction activities. However, Mitigation Measure GEO-1, below, would serve to protect the accidental discovery of paleontological resources. As such, a **less-than-significant with mitigation** impact would occur.

> Mitigation Measure GEO-1: If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified professional archaeologist and/or paleontologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, can evaluate the significance of the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants.
>
> If the qualified professional determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation.
>
> If a potentially-eligible resource is encountered, then the qualified professional archaeologist and/or paleontologist, the Lead Agency, and the project proponent shall arrange for either 1) total avoidance of the resource or 2) test excavations to evaluate eligibility and, if eligible, total data recovery. The determination shall be formally documented in writing and submitted to the Lead Agency as verification that the provisions for managing unanticipated discoveries have been met.

8. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?			X	

ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG's has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities which alter the composition of the global atmosphere.

Individual Projects contribute to the cumulative effects of climate change by emitting GHGs during construction and operational phases. The principal GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Carbon dioxide is the "reference gas" for climate change, meaning that emissions of GHGs are typically reported in "carbon dioxide-equivalent" measures. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs, with much greater heat-absorption potential than carbon dioxide, include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of greenhouse gases (GHG) would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32),

which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions).

In April 2009, the California Office of Planning and Research published proposed revisions to the California Environmental Quality Act to address GHG emissions. The amendments to CEQA indicate the following:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.

- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.

- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.

- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”

- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.

- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

On December 30, 2009, the Natural Resources Agency adopted the proposed amendments to the CEQA Guidelines in the California Code of Regulations.

In December 2009, the San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted guidance for addressing GHG impacts in its *Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects under CEQA*. The guidance relies on performance-based standards, otherwise known as Best Performance Standards (BPS), to assess significance of project-specific GHG emissions on global climate change during the environmental review process.

Projects can reduce their GHG emission impacts to a less than significant level by implementing BPS. Projects can also demonstrate compliance with the requirements of AB 32 by demonstrating that their emissions achieve a 29% reduction below “business as usual” (BAU) levels. BAU is a projected GHG emissions inventory assuming no change in existing business practices and without considering implementation of any GHG emission reduction measures.

Significance Criteria

The SJVAPCDs *Guidance for Valley Land Use Agencies in Addressing GHG Impacts for New Projects under CEQA* provides initial screening criteria for climate change analyses, as well as draft guidance for the determination of significance.

The effects of project-specific GHG emissions are cumulative, and therefore climate change impacts are addressed as a cumulative, rather than a direct impact. The guidance for determining significance of impacts has been developed from the requirements of AB 32. The guideline addresses the potential cumulative impacts that a project's GHG emissions could have on climate change. Since climate change is a global phenomenon, no direct impact would be identified for an individual land development project. The following criteria are used to evaluate whether a project would result in a significant impact for climate change impacts:

- Does the project comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions? If no, then
- Does the project achieve 29% GHG reductions by using approved Best Performance Standards? If no, then
- Does the project achieve AB 32 targeted 29% GHG emission reductions compared with BAU?

Projects that meet one of these guidelines would have less than significant impact on the global climate.

Because BPS have not yet been adopted and identified for specific development projects, and because neither the ARB nor the City of Clovis has not yet adopted a plan for reduction of GHG with which the Project can demonstrate compliance, the goal of 29% below BAU for emissions of GHG has been used as a threshold of significance for this analysis.

DISCUSSION

a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less-Than-Significant Impact. The Project would include the construction and operation of 74 single-family homes and associated infrastructure (i.e. sewer and water infrastructure, roadways, sidewalks, etc.). As such, GHG emissions would be produced through the construction and operational phases of the Project. However, the SJVAPCD includes regulations to reduce GHG emissions such as standards for medium and heavy duty engines and vehicles (i.e. tractors and construction equipment) that would apply to buildout of the Project. Further, compliance with Title 24 energy efficient building codes would apply, which also help to reduce GHG emissions during operation of the Project, by requiring minimum standards for insulation, energy efficiency, and window glazing, etc., which serve to maximize efficiency of new construction. Further, the Project would comply with the latest water efficient landscape standards which help to reduce energy usage. Overall, the AQ/GHG Report concluded that the Project, with implementation of required energy efficient standards, would reduce emissions versus business as usual scenarios and would exceed the minimum percentage reduction of emissions required by the State, SJVAPCD, and the Clovis General Plan EIR. Therefore, a **less-than-significant** impact would occur.

b) *Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

Less-Than-Significant Impact. Based on the AQ/GHG Analysis,[9] the Project would include several features that would minimize GHG emissions, which are consistent with project-level strategies identified by the Air Resources Board Scoping Plan and the Clovis General Plan. As indicated in the discussion above under Section 8a, the Project would result in GHG reductions that meet or exceed minimum targets by complying with the latest energy efficient standards, and water conservation. Consequently, the AQ/GHG Analysis Report found this potential impact to be **less than significant**.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a				X

9 Air Quality and Greenhouse Gas Analysis Report, Mitchell Air Quality Consulting, page 125, August 12, 2019.

safety hazard or excessive noise for people residing or working in the project area?				
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

ENVIRONMENTAL SETTING

For purposes of this chapter, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations (CFR) as "substance or material that is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

"Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. "Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:
…because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause or significantly contribute to an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

The nearest school to the Project site is Woods Elementary School, located approximately 0.64 miles west of the Project area at its closest point.

DISCUSSION

a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Less-Than-Significant Impact. The Project consists of the construction of 74 single-family homes on approximately 34.3 acres. The type of hazardous materials that would be associated with the Project are those typical of residential uses, such as the use of household cleaners, landscape maintenance products, and potential pesticides (for pest control). These materials, when used and applied properly, would not necessarily create a significant hazard to the public or the environment. Further, these materials are not anticipated to be stored in large quantities that could pose a threat. Overall, the Project would not routinely transport, use, or dispose of hazardous materials other than those typical of residential development, which are not generally considered of the type or quantity that would pose a significant hazard to the public when used as directed.

During construction, typical equipment and materials would be used that are associated with residential construction; however, any chemicals or materials would be handled, stored, disposed of, and/or transported according to applicable laws. Consequently, because the Project is not of the type of use that would routinely transport, use, or dispose of hazardous materials a **less-than-significant** impact would occur.

b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less-Than-Significant Impact. See discussion above under Section 9a.

c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Less-Than-Significant Impact. As mentioned above, the Project site is located approximately 0.64 miles from the nearest school, which is Woods Elementary School. Further, the Project is not of the type of use typically associated with emitting hazardous emissions or handling the type or quantity of hazardous materials such that it would pose a risk or threat to the school, or surrounding area. Therefore, a **less-than-significant** impact would occur.

d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. According the California Department of Toxic Substance Control EnviroStor Database, the Project site is not located on or within the immediate vicinity of a hazardous materials site.[10] Therefore, **no impact** would occur.

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

No Impact. The Project is not within an airport land use plan nor is the site within two miles of a public airport. Therefore, **no impact** would occur.

f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less-Than-Significant Impact. The Project is located at a site that is surrounded by existing rural residential developments. Further, the road network is already in place from previous developments. Although the Project could result in temporary traffic detouring or closures during buildout, these delays would be temporary and would be coordinated with the City engineering department and other departments to ensure safe access to and from the area is maintained. Further, the site itself would be reviewed by City departments to ensure adequate site access and circulation is provided in the event of an emergency. Overall, a **less-than-significant** impact would occur.

10 California Department of Toxic Substance Control, EnviroStor Database, https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Clovis, accessed on October 30, 2019.

g) *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Less-Than-Significant Impact. The site is surrounded by rural residential uses. Therefore, it is not in a location typically associated with wildfires. Although urban fires could occur, the Project would be constructed to the latest fire code standards, which would include fire sprinklers in each unit, as well as the installation of several fire hydrants throughout the site as required by the Clovis Fire Department. Further, other life safety features would be required such as smoke detectors, which would be reviewed and checked by the Fire Department to ensure proper operation prior to occupancy. Ultimately, a **less-than-significant** impact would occur.

10. HYDROLOGY AND WATER QUALITY

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

which would result in flooding on- or offsite?				
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
iv) Impede or redirect flood flows?			X	
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

ENVIRONMENTAL SETTING

The Plan Area is within the drainages of three streams: Dry Creek, Dog Creek, and Redbank Slough. On the north, Dry Creek discharges into the Herndon Canal in the City of Fresno west of Clovis. South of Dry Creek, Dog Creek is a tributary of Redbank Slough, which discharges into Mill Ditch south of Clovis (USGS 2012). A network of storm drains in the City and the Plan Area discharges into 31 retention basins, most of which provide drainage for a one- to two-square-mile area. Most of the Plan Area east and northeast of the City is not in drainage areas served by retention basins. Those areas drain to streams that discharge into reservoirs, including Big Dry Creek Reservoir in the north-central part of the Plan Area and Redbank Creek Dam and Reservoir in the southeast part of the Plan Area. Fancher Creek Dam and Reservoir are near the east Plan Area boundary.

The Project is located within the Fresno Metropolitan Flood Control District (FMFCD) boundary, and subject to its standards and regulations. Detention and retention basins in the FMFCD's flood control system are sized to accommodate storm water from each basin's drainage area in builtout condition. The current capacity standard for FMFCD basins is to contain runoff from six inches of rainfall during a ten-day period and to infiltrate about 75 to 80 percent of annual rainfall into the groundwater basin (Rourke 2014). Basins are highly effective at reducing average concentrations of a broad range of contaminants, including several polyaromatic hydrocarbons, total suspended solids, and most metals (FMFCD 2013). Pollutants are removed by filtration through soil, and thus don't reach the groundwater aquifer (FMFCD 2014). Basins are built to design criteria exceeding statewide Standard Urban Storm Water Mitigation Plan (SUSMP) standards (FMFCD 2013). The urban flood control system provides treatment for all types of development—not just the specific categories of development defined in a SUSMP—thus providing greater water quality protection for surface water and groundwater than does a SUSMP.

In addition to their flood control and water quality functions, many FMFCD basins are used for groundwater recharge with imported surface water during the dry season through contracts with the Fresno Irrigation District (FID) and the cities of Fresno and Clovis; such recharge totaled 29,575 acre feet during calendar year 2012 (FMFCD 2013).

The pipeline collection system in the urban flood control system is designed to convey the peak flow rate from a two-year storm.

Most drainage areas in the urban flood control system do not discharge to other water bodies, and drain mostly through infiltration into groundwater. When necessary, FMFCD can move water from a basin in one such drainage area to a second such basin by pumping water into a street and letting water flow in curb and gutter to a storm drain inlet in an adjoining drainage area (Rourke 2014). Two FMFCD drainage areas discharge directly to the San Joaquin River, and three to an irrigation canal, without storage in a basin. Six drainage areas containing basins discharge to the San Joaquin River, and another 39 basins discharge to canals (FMFCD 2013).

A proposed development that would construct more impervious area on its project site than the affected detention/retention basin is sized to accommodate is required to infiltrate some storm water onsite, such as through an onsite detention basin or drainage swales (Rourke 2014).

The Big Dry Creek Reservoir has a total storage capacity of about 30 thousand acre-feet (taf) and controls up to 230-year flood flows. Fancher Creek Dam and Reservoir hold up to 9.7 taf and controls up to 200-year flood flows. Redbank Creek Dam and Reservoir hold up to 1 taf and controls up to 200-year flood flows.

Groundwater

Clovis is underlain by the Kings Groundwater Basin that spans 1,530 square miles of central Fresno County and small areas of northern Kings and Tulare counties. Figure 5.9-4, Kings Groundwater Basin, shows that the basin is bounded on the north by the San Joaquin River, on the west by the Delta-Mendota and Westside Subbasins, the south by the Kings River South Fork and the Empire West Side Irrigation District, and on the east by the Sierra Nevada foothills. Depth to groundwater in 2016 ranged from 196.5 feet at the northwest City boundary to 69.5 feet at the southeast City boundary (Clovis 2016), 25 feet at the southeast SOI boundary, and about 20 feet at the eastern Plan Area boundary (FID 2013). The Kings Subbasin has been identified as critically overdrafted (Provost & Pritchard 2011).

In the Plan Area, groundwater levels are monitored by the City of Clovis and FID. The overall area has not experienced land subsidence due to groundwater pumping since the early 1900s (FID 2006). Subsidence occurs when underground water or natural resources (e.g., oil) are pumped to the extent that the ground elevation lowers. No significant land subsidence is known to have occurred in the last 50 years as a result of land development, water resources development, groundwater pumping, or oil drilling (FID 2006). The City has identified a localized area of subsidence of 0.6 feet in the vicinity of Minnewawa and Herndon Avenues within the last 14 years (Clovis 2016). Regional ground subsidence in the Plan Area was mapped as less than one foot by the US Geological Survey in 1999 (Galloway and Riley 1999). Groundwater levels in the San Joaquin Valley are forecast to hit an all-time low in 2014 (UCCHM 2014).

New development in accordance with the General Plan Update would increase the amount of impervious surface in the Plan Area, potentially affecting the amount of surface water that filters into the groundwater supply. Groundwater levels are monitored in the Plan Area by the FID and the City of Clovis. As described in the 2015 City of Clovis Urban Water Management Plan (UWMP), groundwater recharge occurs both naturally and artificially throughout the City. The Kings Groundwater Basin area is recharged through a joint effort between the Cities of Clovis and Fresno and the FID (CDWR 2006). Approximately 8,400 acre-feet per year (afy) of water are intentionally recharged into the Kings Groundwater Basin by the City of Clovis, and approximately 7,700 afy of water naturally flow into groundwater in the City's boundaries (Clovis 2011).

The FMFCD urban storm water drainage system would provide groundwater infiltration for runoff from developed land uses in detention basins in the drainage system service area.

Projects pursuant to the proposed General Plan Update and developed outside of the FMFCD urban storm water drainage system would be required to meet the requirements of NPDES regulations, including the implementation of BMPs to improve water retention and vegetation on project sites.

DISCUSSION

a) *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less-Than-Significant Impact. The Project is located on a site that was previously anticipated for rural residential use. As with any development, existing policies and standards are required to be complied with, which are assessed during review of the entitlements. As such, the engineering department, as well as outside agencies such as the Fresno Metropolitan Flood Control District (FMFCD) review all plans to ensure that none of the water quality standards are violated and that waste discharge requirements are adhered to during construction and operation of the Project. Consequently, this process of Project review and approval would ensure that a **less-than-significant** impact occur.

b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less-Than-Significant Impact. The Project would not deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level due to the Project. The General Plan EIR identified a net decrease in ground water aquifer throughout the region, however, because the City's domestic water system is primarily served through surface water via existing water entitlements, the loss of aquifer is less than significant. The City has developed a surface water treatment plant (opened in June, 2004) that reduces the need for pumped groundwater, and has also expanded the municipal groundwater recharge facility. The Projects impacts to groundwater are **less than significant**.

c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?*

Less-Than-Significant Impact. The Project site is located on a site that has slight grade differences and mostly surrounded by existing rural residential uses. There are no streams or rivers on the site that would be altered as a result of the Project. The Project area is mostly pervious since it is currently rural residential and vacant land, and as a result, the Project would increase the amount of impervious surfaces by installing paving for roadways and sidewalks. However, the drainage pattern would be constructed per existing policies and regulations through review of the plans by the City engineering department and the FMFCD to ensure the site is properly and adequately drained such that the stormdrain system is maintained and so that no flooding occurs. Consequently, this review and approval by City engineers and FMFCD would mean that the Project result in a **less-than-significant** impact.

d) *Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

Less-Than-Significant Impact. The Project site is located on a site substantially surrounded by existing rural residential uses. Due to the Central Valley's location away from the ocean, an impact from a tsunami is unlikely. Furthermore, the Project site is not located in or adjacent to a flood zone per figure 5.9-5 of the Clovis General Plan Environmental Impact Report. The nearest flood zone is located approximately 370 feet away from the Project area boundaries (southeast area). Consequently, this is a low-risk area and as a result a **less-than-significant** impact would occur.

e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less-Than-Significant Impact. The City of Clovis is within the North Kings County Groundwater Sustainability Agency (GSA). Pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), certain regions in California are required to develop and implement a groundwater management plan that sustainably manages groundwater resources. As of the writing of this Initial Study, the North Kings County GSA has an adopted groundwater management plan, as of November 22, 2019, according to the North Kings GSA website. The Project would derive its water from surface water sources and does not propose or include plans for groundwater use. With regards to water quality control, the Project would be required to adhere to appropriate storm drain conveyance and the protection of water resources which would include the installation of backflow preventers. Consequently, the Project would result in a **less-than-significant** impact.

11. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an existing community?			X	
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

ENVIRONMENTAL SETTING

As described above in the Project Description, the Project site is surrounded by existing rural residential development.

The Project requests a General Plan Amendment, Prezone and Vesting Tentative Tract Map to be able to construct 74 single-family homes. The General Plan Amendment is required to increase the density, and the Prezone is to allow the change in zoning development standards to the Clovis R-1 (single-family residential) and Clovis R-R (Rural Residential) Zone Districts. If approved, the Project would comply with the land use and zoning designated for the Project site.

DISCUSSION

a) *Would the project physically divide an existing community?*

Less-Than-Significant Impact. Although the site is currently rural residential and vacant land, the general area is urbanized with rural residential and agricultural uses. Typically, physically dividing existing communities is associated with the construction of a new road intersecting an established area or introducing uses that are not necessarily in line with the existing uses and planned land uses of the area. However, the Project site has been previously designated in the Clovis General Plan and Dry Creek Preserve Master Plan and zoned for rural residential use. Also, the Project site would provide for greater pedestrian connectivity between the proposed residential project and Teague Avenue to the north by installing new sidewalks and roadways throughout the site consistent with the development standards of the Dry Creek Preserve Master Plan.

Consequently, because the proposed Project is the type of use previously planned for this site and properties within the Dry Creek Preserve Master Plan, it would not physically divide an existing community. Rather, it seeks to complement and enhance the connectivity of the area with installation of a new public sidewalk and roadway infrastructure within TM6284 and a portion of Teague Avenue. Therefore, a **less-than-significant** impact would occur and no mitigation measures are required.

b) *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

Less-Than-Significant Impact. As mentioned, the Project site is currently zoned County R-R (Rural Residential) and includes a general plan amendment and a request to prezone to the Clovis R-1 (single-family residential) and Clovis R-R (Rural Residential) Zone Districts, which would allow for the proposed Project. Further, through the review and entitlement process, the Project is reviewed for compliance with applicable regulations, including those intended for avoiding or mitigating an environmental effect. The Project would be required to comply applicable lighting, landscape, and noise standards, which are regulated through the Clovis Municipal Code to ensure minimal impacts to the environment as well as to neighboring properties.

As a result of the Project in complying with the land use and zoning designation upon approval, as well as the review process ensuring General Plan and other applicable policies are adhered to, the Project would result in a **less-than-significant** impact with regards to conflicting with a land use plan.

12. MINERAL RESOURCES

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

ENVIRONMENTAL SETTING

The City of Clovis 2014 General Plan EIR defines minerals as any naturally occurring chemical elements or compounds formed from inorganic processes and organic substances.[11] The 2014 General Plan EIR indicates that there are no active mines or inactive mines within the Plan Area of the City of Clovis.

DISCUSSION

a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

No Impact. As stated above, the City of Clovis does not have any active mines or inactive mines. Furthermore, the Project site is located within the City's Sphere of Influence and is not zoned, designated, or otherwise mapped for mineral resource extraction, or for having mineral resources of value to the region present on or below the surface of the site. Therefore, **no impact** would occur and no mitigation measures are required.

b) *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

No Impact. Please refer to the discussion under Section 12.a.

13. NOISE

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

11 2014 Clovis General Plan EIR, Chapter 5: Mineral Resources, page 5.11-1.

ENVIRONMENTAL SETTING

The Project site is located on rural residential parcels and vacant land surrounded by existing rural residential development. Further, the Project area is generally bounded by Teague Avenue to the north, Fowler Avenue to the east, Sunnyside Avenue approximately 640 feet to the west, and Nees Avenue approximately 975 feet to the south. As such, existing ambient noise levels are typical of those associated with residential development, such as the sound of vehicles passing by and recreating. As a result of construction activity associated with Tentative Tract Map TM6154 at the northwest corner of Teague and Fowler Avenues, existing ambient noise levels may be slightly elevated as a result of the use of construction equipment, such as large trucks, tractors, and other construction tools associated with residential development. These increases would be temporary, however, and would cease upon completion of the subdivision.

DISCUSSION

a) *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less-Than-Significant Impact With Mitigation. The Project would include development of 74 single-family homes on approximately 34.3 acres of land. Thus, the Project would result in a temporary and permanent increase in ambient noise levels as a result of construction and operation. However, as mentioned above, the Project site is already surrounded by existing rural residential uses. Therefore, while the Project would introduce new ambient noise from the construction and operation of the homes, these noises would be typical of that of the surrounding area and would not represent the type of noise levels that would drastically differ from what already exists. Also, while increases in ambient noise would increase due to the construction of the Project, this increase would be temporary and would be required to adhere to local regulations limiting the hours of construction.

The City of Clovis Municipal Code Section 9.22.080, Noise, sets forth noise standards for development which would need to be complied with. For example, construction would only be permitted between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, and between 9 a.m. and 5:00 p.m. on weekends. However, between June 1 and September 15, construction may begin at 6 a.m. on weekdays.

The mitigation measures below would reduce these impacts to the extent feasible. Consequently, a **less-than-significant impact with mitigation** would occur.

> Mitigation Measure NOISE-1a: The Project contractor shall locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.
>
> Mitigation Measure NOISE-1b: The Project contractor shall ensure that all general construction related activities are restricted to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturday and Sunday.

b) *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Less-Than Significant Impact. The Project includes development of 74 single-family homes and associated infrastructure (i.e. sidewalks, roadways, curb, gutter, stormdrains, etc.). Therefore, construction equipment typical of the development of residential homes would be utilized temporarily. This equipment could include the use of heavy tractors, trucks, and other equipment, however, this type of equipment isn't typically associated

with excessive ground-borne vibration. If any vibration were to occur, it's likely that it would be temporary in nature and not at levels that would significantly impact the surrounding area. Further, the Project would be required to comply with the provisions of Section 9.22.090 of the Clovis Municipal Code which requires that vibration not be perceptible along property lines and that it shall not interfere with operations or facilities on adjoining parcels. It's important to note also that temporary construction vibration and noise is exempt from these provisions due to the fact that construction is temporary. Overall, because the type of equipment likely to be used in the development of the Project is not considered to be of the type and intensity to result in substantial vibration or ground-borne noise, the impact would be **less than significant** and no mitigation measures are required.

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

No Impact. The Project is not located within the vicinity of a private airstrip or within an airport land use plan nor is the site within two miles a public airport. Therefore, **no impact** would occur.

14. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?			X	
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			X	

ENVIRONMENTAL SETTING

The Project is located on a site that has been previously planned for rural residential use in the 2014 Clovis General Plan. As mentioned in the Project Description above, the Project proposes a general plan amendment from Rural Residential (1 DU/2 Ac) to Low Density Residential (2.1 – 4.0 DU/Ac), rezone request from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and Clovis R-R (Rural Residential) Zone Districts. The Project proposes a 74-lot single-family residential development on approximately 34.3 acres of land at a density of 2.3 DU/Ac. The total project area encompasses approximately 50.8 acres of land, which includes nine (9) rural residential properties not part of TM6284.

DISCUSSION

a) *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example through extension of roads or other infrastructure)?*

Less-Than-Significant Impact. As mentioned, the Project would result in a density of 2.3 DU/Ac which would be within the planned density range of the Low Density land use designation, with approval of a general plan amendment. Further, the Project includes residential uses consistent with the Dry Creek Preserve Master Plan, including the proposed density for TM6284. Unplanned population growth is typically associated with providing new services in remote areas of the City or other infrastructure that was not previously identified in the General Plan. The major infrastructure (i.e. road network, utilities, sidewalks, etc.) within the project boundaries and a portion of Teague Avenue will be provided, as planned for in the Dry Creek Preserve Master Plan. Thus, a **less-than-significant** impact would occur and no mitigation measures are required.

b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

Less-Than-Significant Impact. The Project area currently has rural residential uses, vacant land, trees, and landscaping. Although construction of the Project would require the removal of two homes and associated structures, this would not represent a substantial displacement of people or housing. Furthermore, the Project itself would include the construction of 74 homes, therefore, construction of housing would occur in place of the removal of the existing homes. Consequently, a **less-than-significant** impact would occur and no mitigation measure are required.

15. PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a. Fire protection?			X	
b. Police protection?			X	
c. Schools?			X	
d. Parks?			X	
e. Other public facilities?			X	

ENVIRONMENTAL SETTING

The Project site is located within the City's Sphere of Influence, surrounded by existing rural residential uses. The Project would be served by the Clovis Fire Department, Clovis Police Department, with mutual aid from the City of Fresno, when needed. The Project site would also be within the Clovis Unified School District.

The nearest fire station is Fire Station #5, located a short distance (approximately 1.31 miles) southeast of the site. The other closest fire station is Fire Station #3, located approximately 1.5 miles southwest of the site.

DISCUSSION

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 fire protection services?*

Less-Than-Significant Impact. Although the Project would result in 74 new residential units, the site is located in a planned area of the City's Sphere of Influence and will be served by the Clovis Fire Department. Also, the site itself is in close proximity to Fire Station's #5 and #3, which would mean that response times should be able to be maintained during calls for service. As part of the entitlement process for the Project, the Clovis Fire Department will review the design and site layout to ensure adequate fire safety measures and site circulation are achieved. This would include placement of new fire hydrants in certain locations throughout the site, adequate drive widths for fire truck and emergency vehicle access, and the appropriate application of fire codes, such as installation of sprinkler systems, fire alarms, and smoke detectors. Overall, with the Project site in close proximity to numerous fire stations, construction that would meet the latest fire code standards, and review by the Clovis Fire Department, impacts related to effects on the performance of the Fire Department would be **less-than-significant** and no mitigation measures are required.

b) *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 police protection services?*

Less-Than-Significant Impact. Although the Project would result in 74 new residential units, the site is located within a planned area in the City's Sphere of Influence and will be served by the Clovis Police Department. The Clovis Police Department headquarters are located at 1233 Fifth Street, which is approximately 2.05 miles from the site. As part of the entitlement process for the Project, the Clovis Police Department will review the design and site layout to ensure adequate safety measures are achieved. Also, the Project will provide City Standard improvements to a portion of Teague Avenue and within TM6284, thus access to and from the site would be similar to existing local-street conditions when responding to calls for services. Consequently, a **less-than-significant** impact would occur and no mitigation measures are required.

c) *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 schools?*

Less-Than-Significant Impact. Although the Project would result in 74 new residential units, the site is located within a planned area in the City's Sphere of Influence and within the Clovis Unified School District (CUSD). As part of the review process, CUSD is provided the opportunity to comment and work closely with the City as development is proposed. As mentioned previously, the Project site was previously planned for residential development, as indicated in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan. As such, the CUSD has been aware of the potential for this type of development at this location. As part of the process, the Project would be required to pay school fees which typically go towards the improvement and/or construction of new schools or expanding existing schools if and when needed, as determined by the CUSD. Therefore, because the Project is consistent with what was previously planned for at this site in addition to payment of

appropriate school fees set by the CUSD, a **less-than-significant** impact would occur and no mitigation measures are required.

d) *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 parks?*

Less-Than-Significant Impact. See discussion under Section 16, Recreation for the analysis related to parks.

e) *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 other public facilities?*

Less-Than-Significant Impact. Although the Project would result in 74 new residential units, residential uses have been previously planned for in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan in this area. Also, through the entitlement process, the Project would undergo review by several departments and agencies for compliance with appropriate regulations and policies. This could result in various impact fees that are intended to maintain and enhance public facilities as appropriate to be able to accommodate the Project. As such, payment of the typical development fees, as well as project review by the different department and agencies, would result in the Project having a **less-than-significant** impact to public facilities. No mitigation measures are required.

16. RECREATION

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

ENVIRONMENTAL SETTING

The proposed Project area is located on a site surrounded by existing rural residential development. Teague Avenue is located to the north of the Project. The nearest recreational park is Century Park, located at the southwest corner of El Paso and N. Stanford Avenues (ease of Century Elementary School), which is approximately 0.44 miles from the Project site.

DISCUSSION

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?*

Less-Than-Significant Impact. As mentioned in the Population and Housing section of this Initial Study, the Project is of the type previously planned and accounted for in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan. This growth was planned for with regards to park usage throughout the City. Furthermore, the Project itself would include landscaped and private open space areas for each unit. The Project would also be required to comply with General Plan Policy 2.2 of the Open Space and Conservation Element which encourages the incorporation of on-site natural resources.

Overall, the Project is not likely to increase the use of existing parks such that physical deterioration would occur. Therefore, the impact would be **less-than-significant** and no mitigation measures are required.

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

Less-Than-Significant Impact. The Project would not create new demand for any type of recreational facilities that were not already identified in the parks and recreation Element of the General Plan. The General Plan requires that all development contribute a proportionate share toward the development of parks throughout the community. As such, a **less-than-significant** impact would occur and no mitigation measures are required.

17. TRANSPORTATION

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

ENVIRONMENTAL SETTING

The Project site is located in an area previously planned for residential development in the City's Sphere of Influence, surrounded by existing rural residential development. The site is bounded by Teague Avenue to the north, rural residential uses and Fowler Avenue to the east, rural residential uses and Sunnyside Avenue to the west, and rural residential uses and Nees Avenue to the south. As an already planned area of the City's Sphere of Influence, the circulation network serving the site and its vicinity is already in place, with the exception of internal site circulation which will be constructed as part of the Project. If approved, the Project will improve a portion of Teague Avenue on the north side of the Project frontages.

According to the 2014 Clovis General Plan Circulation Diagram in the Circulation Element (Figure C-1 of the Circulation Element), Teague Avenue is classified as a "Collector." Fowler Avenue, located on the east side of the Project area, is classified as an "Arterial." Collectors and arterials are streets generally intended to provide for relatively short distance travel between and within neighborhoods and that serve longer through trips. Local streets are intended to provide direct access to abutting land uses and serve short distance trips within neighborhoods.

A Traffic Impact Study (TIS) was prepared by Peters Engineering Group, on February 4, 2020 (included as Appendix D of this Initial Study). The information and analysis in the following sections is based in part on the results of the TIS.

DISCUSSION

a) *Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

Less-Than-Significant Impact With Mitigation. As mentioned above, the Project site is within a planned area of the City's Sphere of Influence for residential uses in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan. New traffic will be introduced to the area as a result of the project. As described in the Project Description above, the Project proposes a general plan and prezone to increase the density from Rural Residential to Low Density Residential (within the boundaries of TM6284).

The TIS studied four (4) intersections: 1) Teague Avenue/Sunnyside Avenue; 2) Teague Avenue/Fowler Avenue; 3) Nees Avenue/Sunnyside Avenue; and 4) Nees Avenue/Fowler Avenue for existing conditions, existing-plus-project conditions, near term with project conditions, and cumulative year 2040 with-project conditions. A discussion of each of these scenarios is included below. Each scenario is based on the Projects a.m. and p.m. peak hour trips as determined in the TIS. According to the TIS, the Project would result in 56 trips in the a.m. peak hours of between 7 a.m. and 9 a.m. and 74 trips in the p.m. peak hours between 4 p.m. and 6 p.m., as well as a total of 700 daily vehicle trips.

Existing Traffic Conditions

Based on the TIS,[12] existing traffic volumes were determined during morning peak hours of 7 a.m. to 9 a.m., and between evening peak hours of 4 p.m. and 6 p.m. on a weekday. Long queues have been observed, primarily at the Nees Avenue/Sunnyside Avenue intersection, and are often on a single approach during school peaks. However, according to the TIS, all intersections are operating at an acceptable Level of Service (LOS) based on City of Clovis standards.[13]

12 Traffic Impact Study, Vesting Tentative Tract No. 6284, Peters Engineering Group, February 4, 2020, page 3 of PDF.
13 Traffic Impact Study, Vesting Tentative Tract No. 6284, Peters Engineering Group, February 4, 2020, page 3 of PDF.

Existing-Plus-Project Conditions

Existing-Plus-Project conditions represent existing conditions plus buildout of the Project. According to the TIS, all intersections would operate at an acceptable LOS.[14] The study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable level of service.

Near-Term-With-Project Conditions

These conditions are based on buildout of the Project plus the near term planned or entitled projects that are reasonably foreseeable. For a list of the projects considered under this scenario, please refer to Table 2 on page 4 of the TIS (page 9 of PDF). Under this scenario, the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. peak hours. The other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable LOS thresholds per City standards.[15]

Cumulative 2040 With-Project Conditions

These conditions represent anticipated traffic volumes for the year 2040. As described in the TIS, three study intersections would operate at below (i.e., worse than) the target levels of service, with excessive queues that accompany the long delays. However, implementation of Mitigation Measures TRAF-1 and TRAF-2 were found to adequately mitigate this potential impact.

In the case of the Project, development of the 74-lot single-family development at a low density (2.3 DU/Ac) would provide a public benefit by improving a portion of Teague Avenue, along the street frontage of TM6284. Consequently, Mitigation Measures TRAF-1 and TRAF-2, would ensure that a **less-than-significant with mitigation** impact would occur.

> Mitigation Measure TRAF-1: The Project proponent and/or applicant shall contribute their proportional share of traffic impact fees (street fees) for the future complete signalization of following three (3) intersections: (1) signalization at the intersection of Teague and Fowler Avenues; (2) signalization at the intersection of Nees and Sunnyside Avenues; and (3) signalization at the intersection of Nees and Fowler Avenues.
>
> Mitigation Measure TRAF-2: The Project proponent and/or applicant shall improve ¾ of Teague Avenue from the western boundaries of TM6284 and Fowler Avenue per the City standards and the Dry Creek Preserve Master Plan circulation design.

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

Less-Than-Significant Impact. Under Senate Bill 743 (SB743), starting July 2020, projects will be required to assess traffic impacts based on Vehicle Miles Traveled (VMT), which is the amount and distance of automobile travel attributable to a project, as opposed to the existing Level of Service (LOS) method, which measures vehicle delays. As such, VMT is not required to be assessed until July 2020. The City Engineer analyzed the project and concluded that the current and proposed improvements with the project can accommodate the additional traffic. Overall, the Project would result in a **less-than-significant** impact.

14 Traffic Impact Study, Vesting Tentative Tract No. 6284, Peters Engineering Group, February 4, 2020, page 3 of PDF.
15 Traffic Impact Study, Vesting Tentative Tract No. 6284, Peters Engineering Group, February 4, 2020, page 3 of PDF.

c) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Less-Than-Significant Impact. The Project would result in a significant impact if it would include features that would create a hazard such as a sharp curve in a new roadway, or create a blind corner or result in sight distance issues from entryways. Through the entitlement process, the Project would undergo review by multiple City departments, such as planning and engineering, to ensure that the site layout conforms to existing regulations, such as the City Development Code, and other applicable codes, such as the fire code and building code. During this review, the Project would need to make the necessary corrections to ensure that no hazardous design features would result from the Project. Further, the main roadway network within the current boundaries of the Dry Creek Preserve Area (i.e. Teague Avenue, Fowler Avenue, and Sunnyside Avenue) was previously constructed to County roadway standards. Therefore, because the Project would undergo site plan and design review to ensure consistency and adherence to applicable design and site layout guidelines, a **less-than-significant** impact would occur.

d) *Would the project result in inadequate emergency access?*

Less-Than-Significant Impact. The Project would include one ingress/egress access point from Teague Avenue to the proposed development. The project will also provide an Emergency Vehicle Access (EVA) point in the southwest area of TM6284 to Sunnyside Avenue. This EVA will be utilized by Clovis emergency vehicles when necessary to access TM6284 from Sunnyside Avenue. As part of the Project review, the Clovis Fire Department would review all plans to ensure adequate emergency access is provided. This review includes review for adequate roadway widths, turning radius, as well as adequate access to homes and accessibility to water. Consequently, because the Project plans would be required by the Clovis Municipal Code to be reviewed and approved by Clovis Fire Department and Police Department prior to construction, this impact would be **less than significant** and no mitigation measures are required.

18. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?				X
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance		X		

of the resource to a California Native American Tribe?				

ENVIRONMENTAL SETTING

On September 25, 2014, Governor Jerry Brown signed Assembly Bill AB52, which intends to protect a new class of recourse under CEQA. This new class is Tribal Cultural Resources and provides an avenue to identify Tribal Cultural resources through a consultation process, similar to SB18. However, unlike SB18, where consultation is required for all General Plan and Specific Plan Amendments, AB52, applies to all projects where a Notice of Determination is filed. Furthermore, the consultation process is required to be complete prior to filing a Notice of Intent.

City staff conducted Native American Consultation in compliance with Senate Bill 18 (SB18) and Assembly Bill 52 (AB52). In compliance with AB52, invitations for consultation were mailed on June 4, 2019 which affords Native tribes thirty (30) days to respond and to request consultation. During this timeframe, no requests for consultations were received. In compliance with SB18, invitations for consultation were mailed on June 4, 2019, which affords Native tribes ninety (90) days to request consultation.

During that time, one (1) tribe requested consultation. On July 31, 2019, representatives from Table Mountain Rancheria mailed a letter to City staff requesting to schedule a meeting and discuss the proposed Project. On February 4, 2020, planning staff emailed the representative from Table Mountain to verify/confirm if a consultation meeting is still necessary. On February 5, 2020, planning staff emailed the Cultural Resources Assessment to the representative from Table Mountain Rancheria. As of February 6, 2020, planning staff has not received a reply back from the Table Mountain Rancheria representative. However, mitigation measures are included in the following analysis to ensure protection of such resources if any are discovered inadvertently.

A Cultural Resources Assessment was prepared by Peak & Associates, Inc., dated May 17, 2019 (see Appendix C). This Cultural Resources Assessment included a records search at the Southern San Joaquin Valley Archaeological Information Center (SSJVIC).

DISCUSSION

a) *Would the project cause a substantial adverse change to a listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

No Impact. See discussion under Section 5a.

b) *Would the project cause a substantial adverse change to a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe?*

Less-Than-Significant Impact With Mitigation. The site's ground shows its long-term agricultural use with leveling, irrigation, fencing and general agricultural use. The land is currently used as pasturage for horses. Furthermore, the Cultural Resources Assessment concluded that the pedestrian survey of the site conducted by the Archaeologist found it negative for prehistoric period cultural resources.[16] Although no resources were

16 Cultural Resources Assessment by Peak & Associates, In., page 14, May 17, 2019.

identified, tribal cultural resources could be inadvertently or accidentally uncovered during ground-disturbing activities such as trenching, digging, and the installation of utilities and other infrastructure.

Because there is the slight possibility for the accidental or inadvertent uncovering of tribal cultural resources during construction, Mitigation Measures TCR-1 and TCR-2 would serve to reduce those potential impacts by requiring the stopping of any work until any found artifacts can be properly removed and inventoried by a qualified archaeologist. Therefore, the Project would result in a **less-than-significant impact with mitigation**.

Mitigation Measure TCR-1: There is a possibility that subsurface cultural resources exist in the study area, as archaeological sites may be buried with no surface manifestation. If concentrations of prehistoric or historic-period materials are encouraged during ground disturbing activities, all work in the immediate vicinity shall halt until a qualified professional/archaeologist can evaluate the finds and make specific recommendations. Examples of prehistoric materials include obsidian and chert flake stone tools (e.g. projectile points, knives, scrapers) or toolmaking debitage, cultural darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains, and stone milling equipment (e.g. mortars, pestles, handstones). Examples of historical materials include stone, concrete, or adobe footings and walls, filled wells or privies, and deposits of metal, grass, and/or ceramic refuse.

Mitigation Measure TCR-2: If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County coroner. All reports, correspondence, and determinations regarding the discovery of human remains on the project site shall be submitted to the Lead Agency.

19. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the			X	

project's projected demand in addition to the provider's existing commitments?				
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e. Comply with federal, state, and local management reduction statutes and regulations related to solid waste?			X	

ENVIRONMENTAL SETTING

Pacific Gas & Electric (PG&E) provides electricity and natural gas services in the City of Clovis. AT&T/SBC provides telephone service to the City.

The City's water supply sources include groundwater drawn from the Kings Sub-basin of the San Joaquin Valley Groundwater Basin and treated surface water from the Fresno Irrigation District (FID). Surface water is treated at the City of Clovis Surface Water Treatment Facility.

The City of Clovis provides sewer collection service to its residents and businesses. Treatment of wastewater occurs at the Fresno-Clovis Regional Wastewater Treatment Plant (RWTP). The Fresno-Clovis RWTP is operated and maintained by the City of Fresno and operates under a waste discharge requirement issued by the Central Valley Regional Water Quality Control Board. Additionally, the City of Clovis has completed a 2.8 mgd wastewater treatment/water reuse facility, which will service the City's new growth areas.

The Fresno Metropolitan Flood Control District (FMFCD) has the responsibility for storm water management within the Fresno-Clovis metropolitan area of the Project site. Storm water runoff that is generated by land development is controlled through a system of pipelines and storm drainage detention basins.

DISCUSSION

a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less-Than-Significant Impact. The Project includes construction of 74 residential units and associated infrastructure. As mentioned above, the proposed residential site is a use previously accounted for in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan. Furthermore, as part of the review process for the Project, the wastewater impacts will be evaluated by the City Engineer to ensure compliance with the City's Waste Water Master Plan, as well as FMFCD, so that the Project would not exceed wastewater treatment requirements such that a new facility would be required nor would the existing treatment facility need to be expanded. While the Project would introduce a new units at this site, the type of development would be consistent with the land use designation and Zone District upon approval of the general plan amendment and prezone request. Upon review and approval by the City Engineer, the Project would result in a **less-than-significant** impact.

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less-Than-Significant Impact. The Project is of the type of development previously accounted for in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan, and is a site surrounded with existing rural residential uses. The Project is anticipated to be adequately served by City water. Further, the Project would comply with current Green Building Codes, as well as the water efficient landscape policies with regards to water conserving features. Lastly, the Project would be required to comply several water conserving policies, such as Policy 3.4 and 3.5 of the Open Space and Conservation Element. Overall, a **less-than-significant** impact would occur.

c) *Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Less-Than-Significant Impact. Because the Project is of the type previously planned and accounted for in the 2014 Clovis General Plan and Dry Creek Preserve Master Plan, it is not likely that the Project would result in a demand that would exceed the capacity of the wastewater treatment facility. Further, the Project is reviewed by the appropriate departments and agencies to ensure compliance and adequate capacity with regard to infrastructure, such as the ability to provide adequate wastewater treatment. Consequently, the impact would be **less than significant**.

d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less-Than-Significant. The Project would introduce new solid waste throughout construction and operation of the Project. However, the Project would be required to comply with Chapter 6.3.1, Recycling and Diversion of Construction and Demolition Debris, of the Clovis Municipal Code during construction. This section of the Clovis Municipal Code requires that a minimum of fifty percent (50%) of waste tonnage from a project be diverted from disposal, and that all new residential (and commercial) construction within the City shall submit and obtain approval for a waste management plan prior to construction activities. Compliance with these measures would ensure that the Project does not result in a significant impact during the construction phase of the Project. Further, compliance with policies in the General Plan for the reduction and recycling of solid waste would serve to reduce impacts of solid waste by promoting and encouraging the recycling of materials. Lastly, according to the California Department of Resources Recycling and Recovery (CalRecycle, the City of Clovis has exceeded their target per resident disposal rate of 4.7 pounds per day per resident, meaning that Clovis residents are actually producing less solid waste than the target set by the State.[17] Consequently, a **less-than-significant** impact would occur.

e) *Would the project comply with federal, state, and local management reduction statutes and regulations related to solid waste?*

Less-Than-Significant. See discussion 19d above.

17 Calrecycle, City of Clovis, https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006, accessed June 17, 2019.

20. WILDFIRE

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

ENVIRONMENTAL SETTING

The Project site is located on a site surrounded by existing rural residential uses and vacant land. The site's topography has slight grade differences and characterized primarily by low lying weeds, trees, homes, and accessory structures.

DISCUSSION

a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

Less-Than-Significant Impact. The Project is located at a site that is surrounded by existing rural residential development. Further, the major road network (within Dry Creek Preserve Master Plan area) is already in place from previous County projects. Although the Project could result in temporary traffic detouring or closures during buildout, these delays would be temporary and would be coordinated with the City engineering department and other departments to ensure safe access to and from the area is maintained. Further, the site itself would be reviewed by City departments to ensure adequate site access and circulation is provided in the event of an emergency. Overall, a **less-than-significant** impact would occur.

b) *Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

Less-Than-Significant Impact. The Project site has a slight grade difference, rural residential homes, and vacant land and located on a site surrounded by existing rural residential uses. The general vicinity of the site is not of the type of topography nor in a location likely to exacerbate wildfire risks. Further, the Project would be required to comply with the latest fire codes and would be required to include sprinklers on the interior of the homes and require installation of several hydrants throughout the Project site. Lastly, the site plans would undergo review by the Clovis Fire Department to ensure that all fire safety regulations are met. Therefore, a **less-than-significant** impact would occur.

c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

Less-Than-Significant Impact. The site is located in an area previously developed with rural residential uses. As a new development, installation of a public roadway network, water lines, and power lines would be required; however, these utilities and infrastructure are typical of residential development and would be constructed to standards of the respective agencies and departments which oversee them, as well as be required to comply all necessary plan review and permitting requirements of such departments and agencies. As such, a **less-than-significant** impact would occur.

d) *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

No Impact. The City of Clovis (including Dry Creek Preserve Area) is generally flat topography, and the Project site itself is in an area that is not in close proximity to hillsides such that it would expose people or structures to significant risks associates with downstream flooding or landslides as a result of runoff or post-fire slope instability. As such, **no impact** would occur.

21. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

ENVIRONMENTAL SETTING

The Project is located on a site within the City of Clovis' Sphere of Influence, substantially surrounded by existing development consisting of rural residential uses.

DISCUSSION

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

Less-Than-Significant Impact. As discussed above throughout the Initial Study, the Project would not result in any significant impacts with implementation of mitigation measures prescribed above. Therefore, the Project would have a **less-than-significant** impact as it would not substantially degrade the quality of the environment.

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

Less-Than-Significant Impact. The Project includes mitigation measures in certain topic areas identified throughout this Initial Study which would reduce potential impacts to a less-than-significant level. None of these impacts would be cumulatively considerable since most are either temporary impacts from construction or site specific. With the exception of air quality that is generally considered measurable cumulatively, the Project was found to have a less-than-significant impact through compliance with existing regulations from the SJVPACD. As such, future Projects in Clovis would be required to comply with those same regulations, ensuring adequate mitigation as development occurs. Lastly, while the Project would introduce 74 new residential homes to an existing rural residential and vacant Project site, the type of use was previously accounted for in the 2014 Clovis General Plan buildout and Dry Creek Preserve Master Plan. Thus, a **less-than-significant** impact would occur.

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

Less-Than-Significant Impact. As discussed throughout the document, the Project would not result in an impact that could not be mitigated to a less-than-significant level. Therefore, a **less-than-significant** impact would occur.

H. Report Preparation

LEAD AGENCY

George González, MPA
Associate Planner
City of Clovis
Planning & Development Services

TECHNICAL STUDIES

Air Quality and Greenhouse Gas Analysis Report
Woodside Homes Tract No. 6284
Dave Mitchell, Senior Air Quality Scientist
Mitchell Air Quality Consulting

Biological Assessment
Woodside Homes
Argonaut Ecological Consulting, Inc.

Cultural Resources Assessment
Yamabe & Horn
Melinda A. Peak
Peak & Associates, Inc.

Traffic Impact Study
Woodside 06N, LP
John Rowland, PE, TE
Peters Engineering Group

Mitchell Air Quality Consulting

Air Quality and Greenhouse Gas Analysis Report
Woodside Homes Tract No. 6284
City of Clovis, California

Prepared for:
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559.437.5007
Contact: Matt Smith,
Land Acquisition Manager

Prepared by:
Mitchell Air Quality Consulting
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559.246.3732
Contact: Dave Mitchell,
Senior Air Quality Scientist

August 12, 2019

APPENDIX A

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Table of Contents

List of Tables

List of Figures

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BAU	Business as Usual
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2	carbon dioxide
District	San Joaquin Valley Air Pollution Control District
DPM	diesel particulate matter
EMFAC	EMission FACtors Model
EPA	United States Environmental Protection Agency
Fresno COG	Fresno Council of Governments
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG Rx	Greenhouse Gas Reduction Exchange
GHG(s)	greenhouse gas(es)
HAP	hazardous air pollutant
HRA	health risk assessment
IPCC	United Nations Intergovernmental Panel on Climate Change
MAQC	Mitchell Air Quality Consulting
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	metric tons of carbon dioxide equivalent
NO_X	nitrogen oxides
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppb	parts per billion
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_X	sulfur oxides
VOC	volatile organic compounds

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SECTION 1: EXECUTIVE SUMMARY

1.1—Purpose and Methods of Analysis

The following air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria air pollutants, toxic air contaminants (TACs), and GHG emissions generated from the development of Tract No. 6284 (project) would cause significant impacts to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD or District) for quantification of emissions and evaluation of potential impacts to air resources (SJVAPCD 2015a) and the SJVAPCD's Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009).

1.2—Project Description

The project includes the construction and development of a 74-lot tentative subdivision (single-family homes) on a 37.27-acre gross (36.45-acre net) site. The project is located on the south side of East Teague Avenue between North Sunnyside Avenue and North Fowler Avenue in Clovis, California. The Assessor's Parcel Numbers are 559-021-03, 559-021-04, 559-021-37, and 559-021-69. The overall project density is 2.2 dwelling units (DU) per acre. The project site is located in unincorporated Fresno County, within the City of Clovis Sphere of Influence (SOI). The project site would be annexed to become part of the City of Clovis. The project requires a General Plan Amendment and pre-zoning. The current zoning is AE-20. The proposed zoning is R-1. The project will require the removal of one house and existing trees.

The project's regional vicinity location is shown in Figure 1; an aerial view of the local vicinity is provided in Figure 2; and the Tentative Tract Map is provided in Figure 3.

1.3—Summary of Analysis Results

The following is a summary of the analysis results. As shown below, the project would result in less than significant impacts for all air quality and GHG impact criteria analyzed.

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant impact.**

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). **Less than significant impact.**

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant impact.**

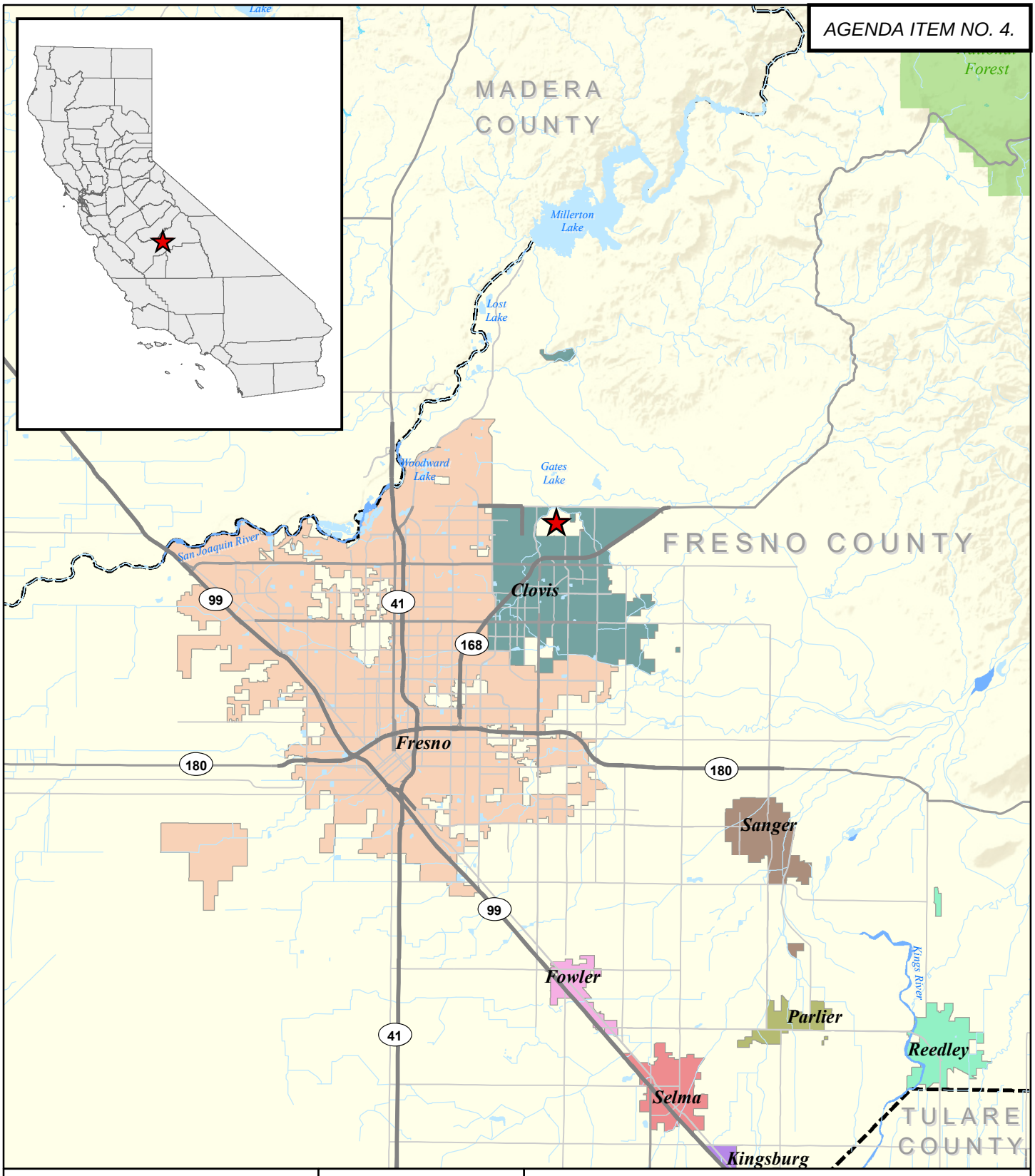
Impact AIR-4: The project would not create objectionable odors affecting a substantial number of people. **Less than significant impact.**

Impact GHG-1: The project would not generate direct or indirect greenhouse gas emissions that would result in a significant impact on the environment. **Less than significant impact.**

Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases. **Less than significant impact**.

1.4—Standard Conditions and Mitigation Measures Applied to the Project

No mitigation measures beyond compliance with mandatory regulations were required to demonstrate that the project would have less than significant for air quality, health risk, and GHG impacts.



Legend

- Project Location
- County Boundary

0 2 4
Miles

Sources: Fresno County GIS; Open StreetMap; CalAtlas. USFS. Map date: August 9, 2019.

WOODSIDE HOMES
AIR QUALITY AND GREENHOUSE GAS ANALYSIS REPORT
TRACT 6284

Figure 1. Regional Location Map

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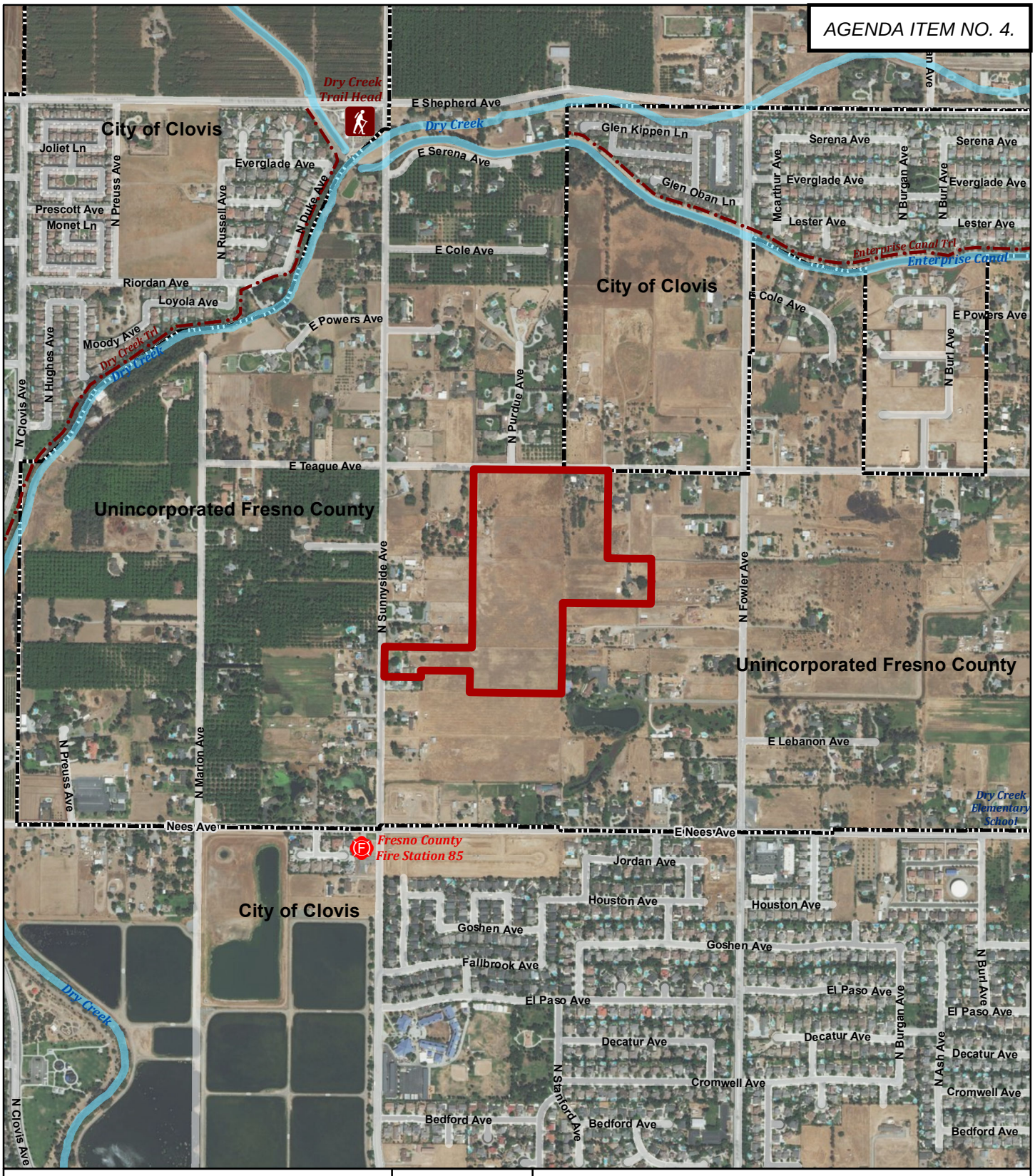

Legend

- Project Boundary
- Clovis City Limits
- Trails
- Waterways

Source: ArcGIS Online World Imagery Map Service; Fresno County; Goole Maps. Map date: August 9, 2019.

0 250 500
Feet

1:12,000

WOODSIDE HOMES
AIR QUALITY AND GREENHOUSE GAS ANALYSIS REPORT
TRACT 6284

Figure 2. Local Vicinity Map

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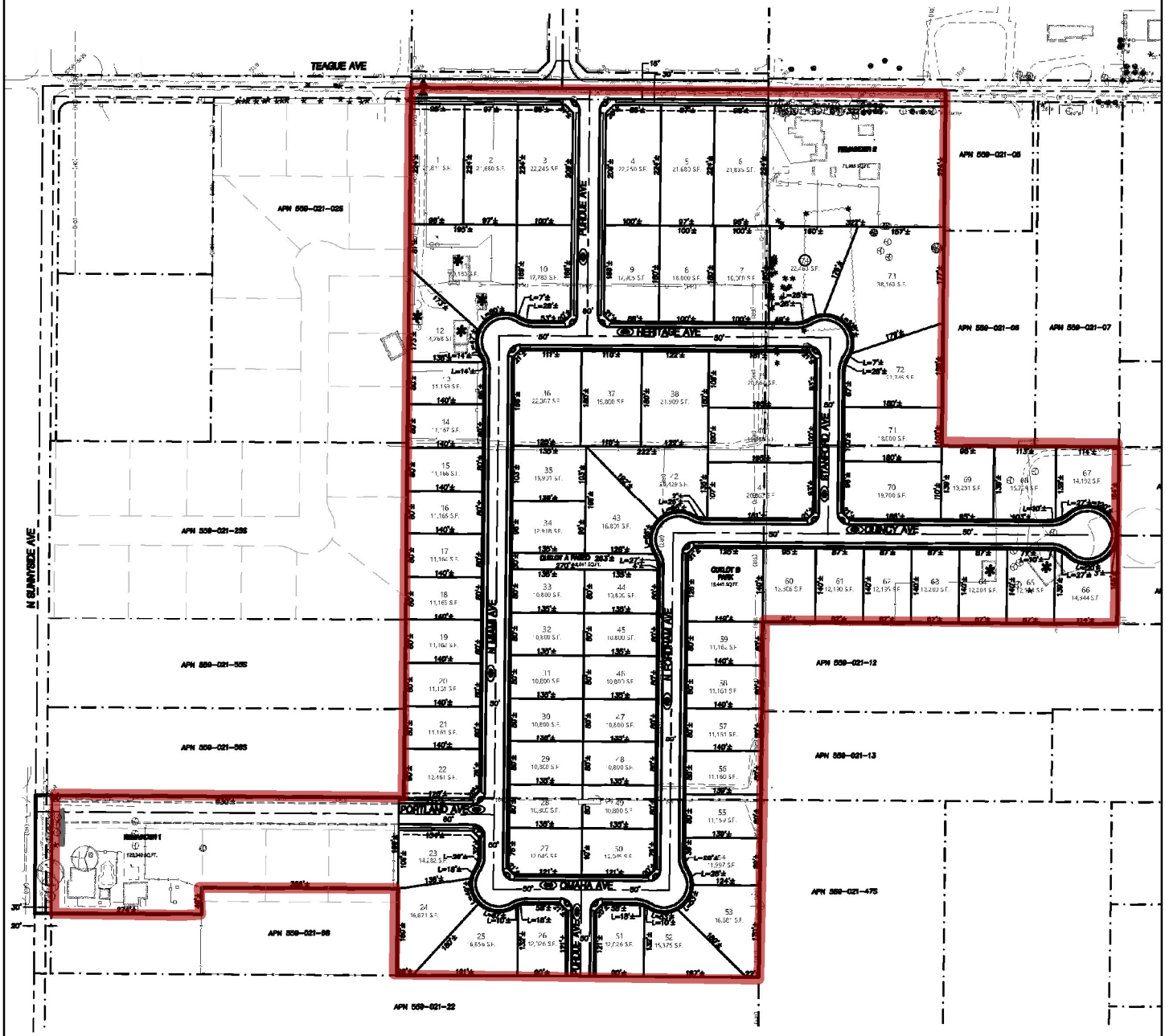

Legend

Project Boundary

0 100 200

Feet

1:3,400

Source: Yamabe & Horn Engineering, Inc., 8/5/2019.
Map date: August 9, 2019.

WOODSIDE HOMES
AIR QUALITY AND GREENHOUSE GAS ANALYSIS REPORT
TRACT 6284

Figure 3. Tract Map

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SECTION 2: AIR QUALITY SETTING

2.1—Environmental Setting

Air quality impacts are both local and regional. Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The project is located in the San Joaquin Valley Air Basin (Air Basin), which experiences some of the most challenging environmental conditions for air quality in the nation. The following section describes these conditions as they pertain to the Air Basin. The information in this section is primarily from the SJVAPCD's GAMAQI (SJVAPCD 2015a).

2.1.1 - San Joaquin Valley Air Basin

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants, and can channel air from upwind areas that transports pollutants to downwind areas. The SJVAPCD covers the entirety of the Air Basin. The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The climate is important for air quality because of differences in the atmosphere's ability to trap pollutants close to the ground, which creates adverse air quality; inversely, the atmosphere's ability to rapidly disperse pollutants over a wide area prevents high concentrations from accumulating under different climatic conditions. The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Mojave Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the San Joaquin Valley floor. This creates strong, low-

level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of $PM_{2.5}$ and PM_{10}.

2.2—Regulatory Setting

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards, which are in some cases more stringent than federal standards, in addition to addressing additional pollutants. The following section describes these federal and state standards and the health effects of the regulated pollutants.

2.2.1 - Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA: particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The EPA labels these pollutants as criteria air pollutants because they are regulated by developing human health-based and/or environmentally based criteria (science-based guidelines), which sets permissible levels. The set of limits based on human health are called primary standards. Another set of limits intended to prevent environmental and property damage are called secondary standards (EPA 2014). The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide (NO_2)
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2016).

2.2.2 - California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation, and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less

stringent than the federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

2.2.3 - Toxic Air Contaminants

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants (HAP). Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. ARB and local air districts regulate TACs and HAPs in California.

2.2.4 - Air Pollutant Description and Health Effects

The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 1.

Table 1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NO_X, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_X) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.070 ppm[f]			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_X (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_X is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_X can react with compounds to form nitric acid and related small particles and result in PM-related health effects.	NO_X is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO_2) forms quickly from NO_X emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_X) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human-caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravates existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal; and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12.0 µg/m^3			
Visibility-reducing particles	8 Hour	See note below[d]				

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQ.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide.

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
				headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.		Anthropogenic sources include the combustion of sulfur-containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no state or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources

Notes:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98^{th} percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb) (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[d] Visibility-reducing particles: In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

[e] The ARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015.

Source of effects, properties, and sources: South Coast Air Quality Management District 2007; California Environmental Protection Agency 2002; California Air Resources Board 2009a; U.S. Environmental Protection Agency 2003, 2009a, 2009b, 2010, 2011, 2012a and 2012b; National Toxicology Program 2011 and 2016.
Source of standards: California Air Resources Board 2013a.

Several pollutants listed in Table 1 are not addressed in this analysis. Analysis of lead, hydrogen sulfide, sulfates, and vinyl chloride are not included in this report because no new sources of these pollutant emissions are anticipated with the project. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed as PM_{10} and $PM_{2.5}$.

Toxic Air Contaminants Health Effects

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants. Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to individual states. ARB and local air districts regulate TACs and hazardous air pollutants in California.

Exposures to TACs emissions can have both chronic long-term (over a year or longer) and acute short-term (over a period of hours) health impacts. The TACs of greatest concern are those that cause serious health problems or affect many people. Health problems can include cancer, respiratory irritation, nervous system problems, and birth defects. Some health problems occur very soon after a person inhales a TAC. These immediate effects may be minor, such as watery eyes, or they may be serious, such as life-threatening lung damage. Other health problems may not appear until many months or years after a person's first exposure to the TAC. Cancer is one example of a delayed health problem.

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality—2009 Edition (ARB 2009b) presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increased risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause a cough, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on: engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Health risks attributable to the top 10 TACs listed above are available from the ARB as part of its California Almanac of Emissions and Air Quality. As shown therein for data collected at the First Street air monitoring station in Fresno, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007. Risks associated with DPM emissions are provided only for the year 2000 and have not been updated in the Almanac. Although more recent editions of the Almanac do not provide estimated risk, they do provide emission inventories for DPM for later years. The 2013 Almanac provides emission inventory trends for DPM from 2000 through 2035. The same Almanac reports that DPM emissions were reduced in the SJVAB from 16 tons per day in 2000 to 11 tons per day in 2010, a 31 percent decrease. DPM emissions in the San Joaquin Valley are projected to decrease to 6 tons per day by 2015, a 62 percent reduction from year 2000 levels. ARB predicts a reduction to three tons per day by 2035, which would be an 81 percent reduction from year 2000 levels. Continued implementation of the ARB's Diesel Risk Reduction Plan is expected to provide continued reductions in DPM through 2020 and beyond through regulations on this source (ARB 2013b).

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present. No naturally occurring asbestos is located near the project site.

2.3—Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 2 summarizes 2015 through 2017 published monitoring data, which is the most recent three-year period available. Data was obtained from the closest air monitoring station with data available. The table displays data from the Clovis-North Villa Avenue monitoring station (located approximately 2.7 miles southeast of the project site), which is the closest monitoring station to the

project site. The data show that during the past few years, the project area has exceeded the standards for ozone (state and national), PM_{10} (state), and $PM_{2.5}$ (national). The data in the table reflect the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Fresno County or the San Joaquin Valley Air Basin was available for CO or SO_2. Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 2: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2015	2016	2017
Ozone[1]	1 Hour	Max 1 Hour (ppm)	**0.116**	**0.113**	**0.138**
		Days > State Standard (0.09 ppm)	18	26	13
Ozone[1]	8 Hour	Max 8 Hour (ppm)	**0.098**	**0.095**	**0.100**
		Days > State Standard (0.07 ppm)	51	63	50
		Days > National Standard (0.070 ppm)	50	62	47
Carbon monoxide (CO)	8 Hour	Max 8 Hour (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO_2)[1]	Annual	Annual Average (ppm)	0.010	ID	0.010
	1 Hour	Max 1 Hour (ppm)	0.0590	0.0498	0.0588
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10})[1]	Annual	Annual Average (µg/m^3)	**33.7**	**32.7**	**36.2**
	24 hour	24 Hour (µg/m^3)	**101.3**	**74.9**	**99.4**
		Days > State Standard (50 µg/m^3)	50.3	61.3	ID
		Days > National Standard (150 µg/m^3)	0	0	0
Fine particulate matter ($PM_{2.5}$)[1]	Annual	Annual Average (µg/m^3)	**13.0**	11.6	**13.2**
	24 Hour	24 Hour (µg/m^3)	**80.7**	**50.4**	**69.5**
		Days > National Standard (35 µg/m^3)	15.4	8.2	19.2

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum
Bold = exceedance
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] Clovis-North Villa Avenue
[2] Source: California Air Resources Board 2017a: Clovis-N. Villa Avenue Station.

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest of these is comparable with the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount by which the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 3 provides a description of the health impacts of ozone at different concentrations.

Table 3: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI 51–100—Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 55–70 ppb	**Health Effects Statements**: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101–150—Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 71–85 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151–200—Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 86–105 ppb	**Health Effects Statements**: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201–300—Very Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 106–200 ppb	**Health Effects Statements**: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Source: Air Now 2016.	

The AQI for the 8-hour ozone standard is based on the current NAAQS of 70 parts per billion (ppb). Based on the AQI scale for the 8-hour ozone standard, the project area experienced no days in the last three years that would be categorized as very unhealthy (AQI 201–250), and as many as 159 days that were unhealthy (AQI 151–200) or unhealthy for sensitive groups (AQI 101–150), violating the 70-ppb standard as measured at the Clovis-North Villa Avenue monitoring station. The highest reading was 100 parts per billion (ppb) in 2017 (AQI 187), compared with the 105-ppb cutoff point for unhealthy (AQI 200). The most days over the standard were 62 days in 2016.

The other nonattainment pollutant of concern is $PM_{2.5}$. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 12.1 to 35.4 µg/m^3. An AQI of 101 to 105 or 35.5-55.4 µg/m^3 is considered unhealthful for sensitive groups. When concentrations reach this amount, it is considered an exceedance of the federal $PM_{2.5}$ standard. The monitoring station nearest the project exceeded the standard on approximately 43 days in the three-year period spanning from 2015 to 2017. People with respiratory or heart disease, the elderly and children are the groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion. The AQI of 151 to 200 is classified as unhealthy for everyone. This AQI classification is triggered when $PM_{2.5}$ concentration ranges from 55.4 to 150.4 µg/m^3. At this concentration, there is increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and in the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. Everyone else should reduce prolonged or heavy exertion. The highest concentration recorded at the Clovis-North Villa Avenue monitoring station in the last three years was 80.7 µg/m^3 (AQI 164) in 2015. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly, and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level. The relationship of the AQI to health effects in shown Table 4.

Table 4: Air Quality Index and Health Effects of Particulate Pollution

Air Quality Index/ $PM_{2.5}$ Concentration	Health Effects Description
AQI 51–100—Moderate Concentration 12.1–35.4 µg/m^3	**Sensitive Groups**: Some people who may be unusually sensitive to particle.
	Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
	Cautionary Statements: Unusually sensitive people: Consider reducing prolonged or heavy exertion. Watch for symptoms such as coughing or shortness of breath. These are signs to take it easier.
AQI 101–150—Unhealthy for Sensitive Groups Concentration 35.5–55.4 µg/m^2	**Sensitive Groups**: Sensitive groups include people with heart or lung disease, older adults, children, and teenagers.
	Health Effects Statements: Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and the elderly.

Table 4 (cont.): Air Quality Index and Health Effects of Particulate Pollution

Air Quality Index/ $PM_{2.5}$ Concentration	Health Effects Description
	If you have heart disease: Symptoms such as palpitations, shortness of breath, or unusual fatigue may indicate a serious problem. If you have any of these, contact your health care provider.
AQI 151–200—Unhealthy Concentration 55.5–150.4 µg/m^3	**Sensitive Groups**: Everyone
	Health Effects Statements: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in general population.
	Cautionary Statements: Sensitive groups: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling. Everyone else: Reduce prolonged or heavy exertion. Take more breaks during outdoor activities.
AQI 201–300—Very Unhealthy Concentration 150.5–250.4 µg/m^3	**Sensitive Groups**: Everyone
	Health Effects Statements: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant increase in respiratory effects in general population.
	Cautionary Statements: Sensitive groups: Avoid all physical activity outdoors. Move activities indoors or reschedule to a time when air quality is better. Everyone else: Avoid prolonged or heavy exertion. Consider moving activities indoors or rescheduling to a time when air quality is better.
Source: Air Now 2016.	

2.3.1 - Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the Air Basin are shown in Table 5. The Air Basin is designated nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 5: San Joaquin Valley Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone—One Hour	Nonattainment/Severe	No Standard
Ozone—Eight Hour	Nonattainment	Nonattainment/Extreme
Carbon monoxide	Attainment/Unclassified	Merced, Madera, and Kings Counties are unclassified; others are in Attainment
Nitrogen dioxide	Attainment	Attainment/Unclassified
Sulfur dioxide	Attainment	Attainment/Unclassified
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	No Designation/Classification
Source of State status: California Air Resources Board (ARB 2013c). Source of National status: U.S. Environmental Protection Agency (EPA 2016a). Source of additional status information (SJVAPCD 2017a).		

2.4—Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level, and each agency has a different level of regulatory responsibility: the EPA regulates at the national level, the ARB at the state level, and the SJVAPCD at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards—also known as the federal standards described earlier.

A State Implementation Plan (SIP) is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts; specifically, an air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The ARB then submits the SIP to the EPA for approval. After reviewing submitted SIPs, the EPA proposes to approve or disapprove all or part of each plan. The public has an opportunity to comment on the EPA's proposed action. The EPA considers public input before taking final action on a state's plan. If EPA approves all or part of a SIP, those control measures are enforceable in federal court. If a state fails to submit an approvable plan or if the EPA disapproves a plan, the EPA is required to develop a federal implementation plan (FIP). The SIP approval process often takes several years. The most recent federally approved attainment plans for the SJVAPCD are the 2007 8-Hour Ozone Attainment Plan and the 2012 $PM_{2.5}$ Plan for the 2006 $PM_{2.5}$ standard.

Areas designated nonattainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

2.4.1 - California Regulations

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and GHGs for new passenger vehicles (ARB 2012a).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, as well as test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013b).

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low-use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks (ARB 2015b).

ARB Truck and Bus Regulation

The latest amendments to the Truck and Bus regulation became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than

14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low-use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks (ARB 2015a).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and nitrous oxide (NO_X) emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_X emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501–5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

ARB Regulation for Consumer Products

The ARB Consumer Products Regulation was last amended in January 2015. The ARB regulates the VOC content of a wide variety of consumer products sold and manufactured in California. The purpose of the regulation is to reduce the emission of ozone precursors, TACs, and GHG emissions in products that are used by homes and businesses. The regulated products include but are not limited to solvents, adhesives, air fresheners, soaps, aromatic compounds, windshield cleaners, charcoal lighter, dry cleaning fluids, floor polishes, and general cleaners and degreasers (ARB 2015b)

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. The project includes no demolition. Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the southeast Fresno area.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020 (ARB 2000).

2.4.2 - San Joaquin Valley Air Pollution Control District

The District is responsible for controlling emissions primarily from stationary sources. The District, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the Air Basin. The District also has roles under CEQA.

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although the EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. On March 8, 2010, the EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29 million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards. On July 18, 2016, the EPA published in the Federal Register a final action determining that the San Joaquin Valley has attained the 1-hour ozone national ambient air quality standard. This determination is based on the most recent three-year period (2012-2014) of sufficient, quality-assured, and certified data. The penalty fees remain in place pending submittal of a demonstration that the San Joaquin Valley will maintain the 1-hour standard for 10 years (EPA 2016b).

The EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and the EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

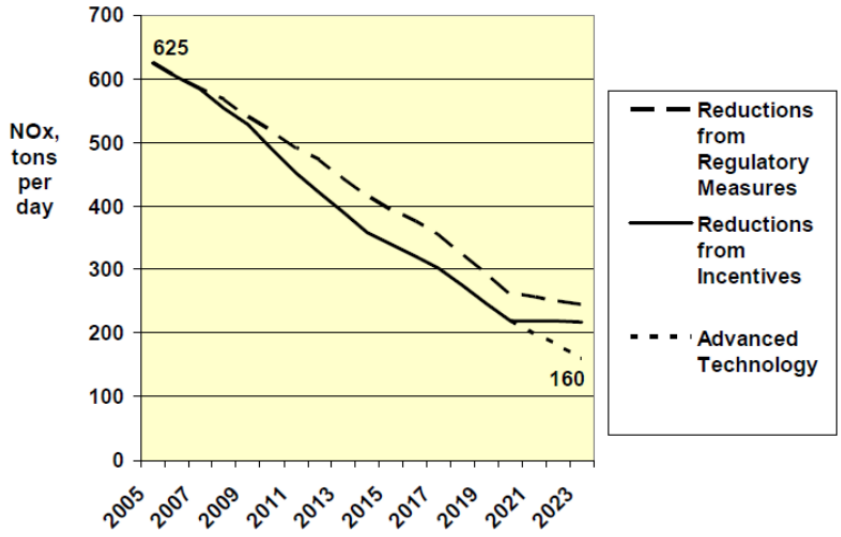
The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75 percent reduction of NO_X and a 25 percent reduction of reactive organic gases (ROG). Figure 4 displays the anticipated NO_X reductions attributed in the 2007 Ozone Plan (Source: 2007 Ozone Plan). The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Air Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021, in order to attain the standard at all monitoring stations in the Air Basin by 2024 as allowed for areas designated extreme nonattainment by the federal Clean Air Act.

The Air Basin is designated an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The District's Governing Board approved the 2016 Plan for the 2008 8-Hour Ozone Standard on June 16, 2016. The ARB approved the attainment demonstration plan for the San Joaquin Valley on July 21, 2016 and transmitted the plan to EPA on August 24, 2016. The comprehensive strategy in this plan will reduce NO_X emissions by over 60 percent between 2012 and 2031, and will bring the San Joaquin Valley into attainment of the EPA's 2008 8-hour ozone standard as expeditiously as practicable, no later than December 31, 2031. The 2016 Ozone Plan predicts attainment of the 2008 standard by 2031 (SJVAPCD 2018a). To ensure that the plan is approvable with the necessary contingencies, the plan includes a "Black Box" that will require implementation of new advanced technologies and controls prior to the 2031 deadline.

The EPA Administrator signed the Final Rule revising the 8-hour ozone standard to 70 ppm on October 1, 2015. The new standard will require the SJVAPCD to prepare a new attainment to achieve the more stringent emission level within 20 years from the effective date of designation (EPA 2018).

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Figure 4: San Joaquin Valley NO_X Emissions Forecast



Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. The Air Basin is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet Clean Air Act requirements for the PM_{10} standard, the District adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010. The District adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Air Basin into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified NO_X and SO_2as precursors that must be addressed in air quality plans for the 1997 $PM_{2.5}$ standards. The 2008 $PM_{2.5}$ Plan is a continuation of the District's strategy to improve the air quality in the Air Basin. The EPA issued final approval of the 2008 $PM_{2.5}$ Plan on November 9, 2011, which became effective on January 9, 2012. The EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. The EPA also granted California's request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the State Implementation Plan's contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$. The ARB approved the District's 2012 $PM_{2.5}$ Plan for the 2006 standard at a public hearing on January 24, 2013 (SJVAPCD 2012). This

plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

The 2015 Plan for the 1997 $PM_{2.5}$ Standard approved by the District Governing Board on April 16, 2015—will bring the Valley into attainment of the EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than December 31, 2020. The plan was required to request reclassification to Serious nonattainment and to extend the attainment date from 2018 to 2020 (SJVAPCD 2015b).

The 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard was adopted on September 15, 2016. This plan includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment (SJVAPCD 2017b).

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018. This plan provides a combined strategy to address the EPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable (SJVAPCD 2018b).

SJVAPCD Rules and Regulations

The SJVAPCD rules and regulations that may apply to projects that will occur during buildout of the project include but are not limited to the following:

Rule 4102—Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials. This rule is enforced on a complaint basis.

Rule 4601—Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling. Only compliant components are available for purchase in the San Joaquin Valley.

Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641. This regulation is enforced on the asphalt provider

Rule 4901—Wood-Burning Fireplaces and Wood-Burning Heaters. The purposes of this rule are to limit emissions of carbon monoxide and particulate matter from wood-burning fireplaces, wood-burning heaters, and outdoor wood-burning devices, and to establish a public education program to reduce wood-burning emissions. All development that includes wood-burning devices are subject to this rule.

Rule 4902—Residential Water Heaters. In 2009, the District amended Rule 4902 to strengthen the rule by lowering the limit to 10 nanograms per joule (ng/J) for new or replacement water heaters, and to a limit of 14 ng/J for instantaneous water heaters. Retailer compliance dates ranged from 2010 to 2012, depending on the unit type.

Regulation VIII—Fugitive PM_{10} Prohibitions. Rules 8011–8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510—Indirect Source Review. This rule reduces the impact of NO_X and PM_{10} emissions from growth within the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two. This project is subject to Rule 9510 because it would develop more than 50 residential dwelling units.

CEQA

The District has three roles under CEQA:

1. **Lead Agency:** Responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the District where the District has primary approval authority over the project.
2. **Responsible Agency:** The discretionary authority of a responsible agency is more limited than a lead agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance. The District defers to the lead agency for preparation of environmental documents for land use projects that also have discretionary air quality permits, unless no document is prepared by the lead agency and potentially significant impacts related to the permit are possible. The District regularly submits comments on documents prepared by lead agencies to ensure that District concerns are addressed.
3. **Commenting Agency:** The District reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The District also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance, as well as state regulations to control air pollution, is an overall improvement in the Air Basin. In particular, the District's 2015 GAMAQI states the following:

1. The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long-range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.
2. The Air Quality Guidelines for General Plans (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities

and counties may want to incorporate into their General Plans to satisfy Section 65302.1. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by adopting the suggested policies and programs.

2.4.3 - Local

The City of Clovis adopted its 2014 General Plan in August 2014 (City of Clovis 2015a). The City's applicable air quality goals and policies from the Air Quality Element and Circulation Element are listed below.

City of Clovis Air Quality Goals and Policies

Air Quality Element

- **Goal 1:** A local environment that is protected from air pollution and emissions.
  - **Policy 1.1: Land use and transportation.** Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
  - **Policy 1.2: Sensitive land uses.** Prohibit the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board, without sufficient mitigation.
  - **Policy 1.3: Construction activities.** Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).
  - **Policy 1.6: Alternative fuel infrastructure.** Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
  - **Policy 1.8: Trees.** Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- **Goal 2:** A region with healthy air quality and lower greenhouse gas emissions.
  - **Policy 2.1: Regional coordination.** Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
  - **Policy 2.2: Cross-jurisdictional issues.** Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
  - **Policy 2.6: Innovative mitigation.** Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

Circulation Element

- **Goal 1:** A context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
  - **Policy 1.1: Multimodal network.** The City shall plan, design, and maintain the transportation network to promote safe and convenient travel for all users: pedestrian, bicyclists, transit riders, freight, and motorists.

  - **Policy 1.2: Transportation decisions.** Decisions should balance the comfort, convenience, and safety of pedestrian, bicyclists, and motorists.
  - **Policy 1.4: Jobs and housing.** Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles traveled and effectively utilize the existing transportation infrastructure.
  - **Policy 1.5: Neighborhood connectivity.** The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
- **Goal 3:** A multimodal transportation network that is safe and comfortable in the context of adjacent neighborhoods.
  - **Policy 3.11: Right-of-way design.** Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.
- **Goal 5:** A complete system of trails and pathways accessible to all residents.
  - **Policy 5.1: Complete street amenities.** Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety (consistent with the Bicycle Transportation Master Plan and other master plans).
  - **Development-funded facilities.** Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
  - **Policy 5.3: Pathways.** Encourage pathways and other pedestrian amenities in Urban Centers and new development 10 acres or larger.
  - **Policy 5.5: Pedestrian access.** Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers to provide general pedestrian connectivity throughout the city.

Land Use Element

- **Goal 3:** Orderly and sustainable outward growth into three urban centers with neighborhoods that provide a balanced mix of land uses and development types to support a community lifestyle and small-town character.
  - **Policy 3.9: Connected development.** New development in Urban Centers must fully improve roadway, pedestrian, and bicycle systems within and adjacent to the proposed project and connect to existing urbanized development.

Open Space and Conservation Element

- **Goal 3:** A built environment that conserves and protects the use and quality of water and energy resources.
  - **Policy 3.5: Energy and water conservation.** Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.

City of Clovis General Plan Program EIR

The General Plan Program Environmental Impact Report (PEIR) (City of Clovis 2015b) includes the following mitigation measures and standard condition to reduce significant air quality impacts:

- **SC-1:** Prior to project approval, each applicant for individual, site-specific developments under the General Plan shall comply with the San Joaquin Valley Air Pollution Control District rules and regulations, including, without limitation, Indirect Source Rule 9510. The applicant shall document, to the City's reasonable satisfaction, its compliance with this standard condition.

Mitigation Measures

3-1: Prior to issuance of any construction permits, development project applicants shall prepare and submit to the City of Clovis Planning Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SJVAPCD adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Clovis Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Division.

3-2: Prior to discretionary approval, applicants for phased development projects (i.e., construction would overlap operation/opening of the project) involving residential land uses shall coordinate with the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Clovis in conjunction with the SJVAPCD in preparation of a health risk assessment (HRA) for construction activities. If the HRA identifies risk impacts that exceed the standards as determined by the SVJAPCD at the time the project is considered, it shall identify measures to reduce these impacts to below these standards. Recommended measures may include those identified in Mitigation Measure 3-1. The recommendations of the HRA shall be incorporated into all construction management plans which shall be submitted to the City and verified by the City's Planning Division.

3-3: Prior to project approval, development project applicants shall prepare and submit to the City of Clovis Planning Division a technical assessment evaluating potential project operation phase-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If operational-related criteria air pollutants are determined to have the potential to exceed the SJVAPCD adopted thresholds of significance—as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI)—the City of Clovis Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the Standard Conditions of Approval.

3-4: Prior to project approval, the City of Clovis Planning Division shall require applicants for individual, site-specific developments to consider establishing a Voluntary Emission Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District. Under this agreement, project proponents may enter into an agreement where funds are used to develop and implement emission reduction projects.

3-5: Prior to discretionary project approval, the City of Clovis shall evaluate new development proposals for sensitive land uses (e.g., residential, schools, day care centers) within the City for potential incompatibilities with regard to the California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective (April 2005). Applicants for sensitive land uses that are within the recommended buffer distances shall submit a health risk assessment (HRA) to the City of Clovis prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the San Joaquin Valley Air Pollution Control District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children age 0 to 6 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), the appropriate noncancer hazard index exceeds 1.0, or if the PM_{10} or $PM_{2.5}$ ambient air quality standard increment exceeds 2.5 $\mu g/m^3$, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms.

3-6: Prior to discretionary project approval, applicants for industrial or warehousing land uses shall coordinate with the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Clovis in conjunction with the SJVAPCD to determine the appropriate level of health risk assessment (HRA) required. All HRAs shall be submitted to the City of Clovis.

2.4.4 - Existing Sources of Toxic Emissions

No existing sources were identified that exceed ARB recommendations in its Air Quality Land Use Handbook for siting sensitive land uses impact the project.

2.4.5 - ARB Air Quality Land Use Handbook

Table 6 lists the following ARB advisory recommendations that address the issue of siting "sensitive land uses" near specific sources of air pollution (ARB 2005):

- High traffic freeways and roads
- Distribution centers
- Rail yards
- Ports
- Refineries
- Chrome plating facilities
- Dry cleaners
- Large gas dispensing facilities

The analysis examines the area around the site to determine if potential sources of TAC emissions may impact the project, based on the ARB recommended screening distances.

Table 6: Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.
Note: These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.	

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SECTION 3: CLIMATE CHANGE SETTING

3.1—Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007a). The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

An individual project cannot generate enough GHG emissions to cause a discernible change in global climate. However, the project participates in the potential for global climate change by its incremental contribution of GHGs—and when combined with the cumulative increase of all other sources of GHGs—constitute potential influences on global climate change.

3.1.1 - Consequences of Climate Change in California

In California, climate change may result in consequences such as the following (from CCCC 2006 and Moser et al. 2009):

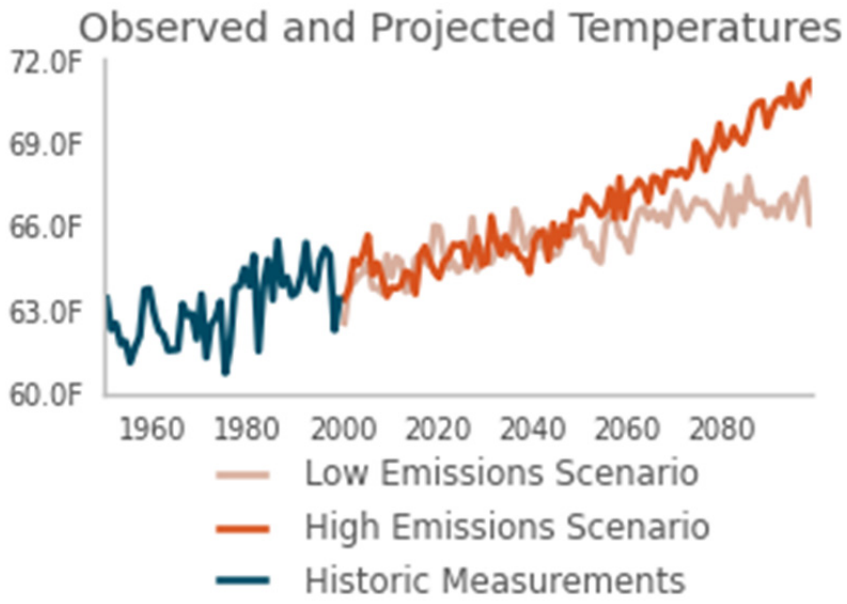
- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase in temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Consequences of Climate Change in the Fresno Area

Figure 5 displays a chart of measured historical and projected annual average temperatures in the City of Clovis area. As shown in the figure, temperatures are expected to rise in the low and high GHG emissions scenarios. The results indicate that temperatures are predicted to increase by 3.7 degrees Fahrenheit (°F) under the low emission scenario and 6.5°F under the high emissions scenario (CalAdapt 2019).

Figure 5: Observed and Projected Temperatures for Climate Change in the Clovis Area



Source: CalAdapt 2019

Water Supply

The City of Clovis Public Utilities Department would provide water for the project. The City relies on groundwater and treated surface water for potable water supplies. The availability of surface water and the rate of groundwater recharge could decline if climate change were to result in reduced snowpack in the Sierra Nevada.

Wildfires

The project site is within an urbanizing area with limited fuels that would be subject to a wildfire. Foothill and mountain areas located to the north and east of the Clovis area subject to wildfire. The potential for increased temperatures and drought conditions due to climate change would result in increased risk from wildfire in those areas.

Human Health Effects of GHG Emissions

GHG emissions from development projects would not result in concentrations that would directly impact public health. However, the cumulative effects of GHG emissions on climate change have the potential to cause adverse effects to human health.

In its report, Global Climate Change Impacts in the U.S. (2009), the U.S. Global Change Research Program has analyzed the degree to which impacts on human health are expected to impact the United States.

Potential effects of climate change on public health include:

- Direct Temperature Effects: Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- Extreme Events: Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- Climate-Sensitive Diseases: Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- Air Quality: Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution (EPA 2009a).

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (CDC 2010 and OSHA 2003).

3.2—Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as GHGs. The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, NO_X, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, CO_2.

Individual GHG compounds have varying global warming potential and atmospheric lifetimes. CO_2, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. GHGs defined by Assembly Bill (AB) 32 (see the Climate Change Regulatory Environment section for a description) include CO_2, CH_4, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 7. A seventh GHG, nitrogen trifluoride, was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. The global warming potential amounts are from IPCC Fourth Assessment Report (AR4). The new amounts have been incorporated into the CalEEMod 2016.3.2 used in this analysis.

Table 7: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Table 7 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 124 to 14,800.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 7,390 to 12,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential of 22,800.	This gas is man-made and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

The State has begun addressing pollutants referred to as short-lived climate pollutants. Senate Bill (SB) 605, approved by the governor on September 14, 2014 required the ARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. ARB was required to complete an emission inventory of these pollutants, identify research needs, identify existing and potential new control measures that offer co-benefits, and coordinated with other state agencies and districts to develop measures. The Short-Lived Climate Pollutant Strategy was approved by the ARB on March 24, 2017. The strategy calls for reductions of 50 percent from black carbon, 40 percent from methane, and 40 percent from HFCs from the 2030 Business as Usual (BAU) inventory for these pollutants (ARB 2017b).

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 7 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, ARB will include it in its comprehensive strategy (ARB 2015c).

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted, so its precursor emissions, volatile organic compounds (VOC) and oxides of nitrogen (NO_X) on a regional scale and CH_4 on a hemispheric scale will be subject of the strategy (ARB 2015c).

Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, whereas other GHGs can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

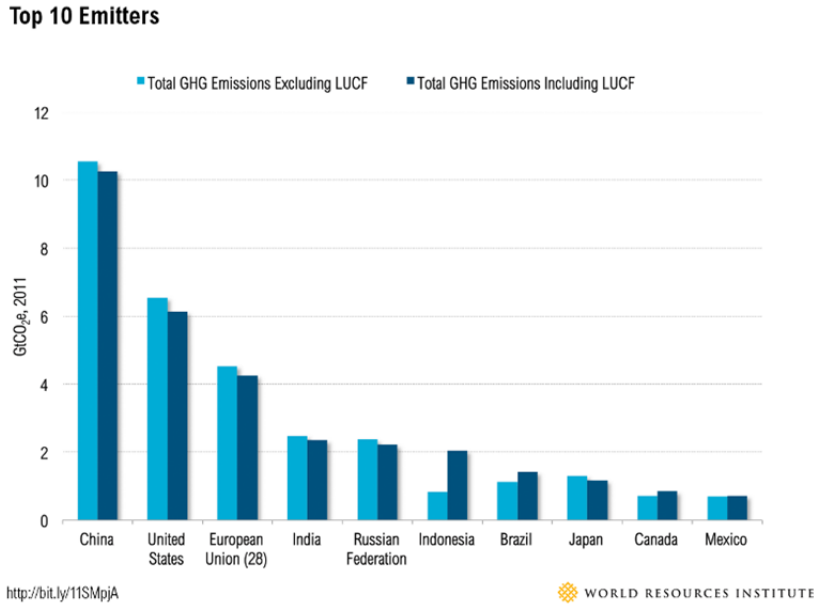
Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015d). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other GHGs, such that the warming brought about by increased carbon dioxide allows more water vapor to enter the atmosphere (NASA 2015b).

3.2.1 - Emissions Inventories

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 43,286 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2012. As shown in Figure 6, China was the largest GHG emitter with over 10 billion metric tons of CO_2e, and the United States was the second-largest GHG emitter with over 6 billion metric tons of CO_2e (WRI 2014).

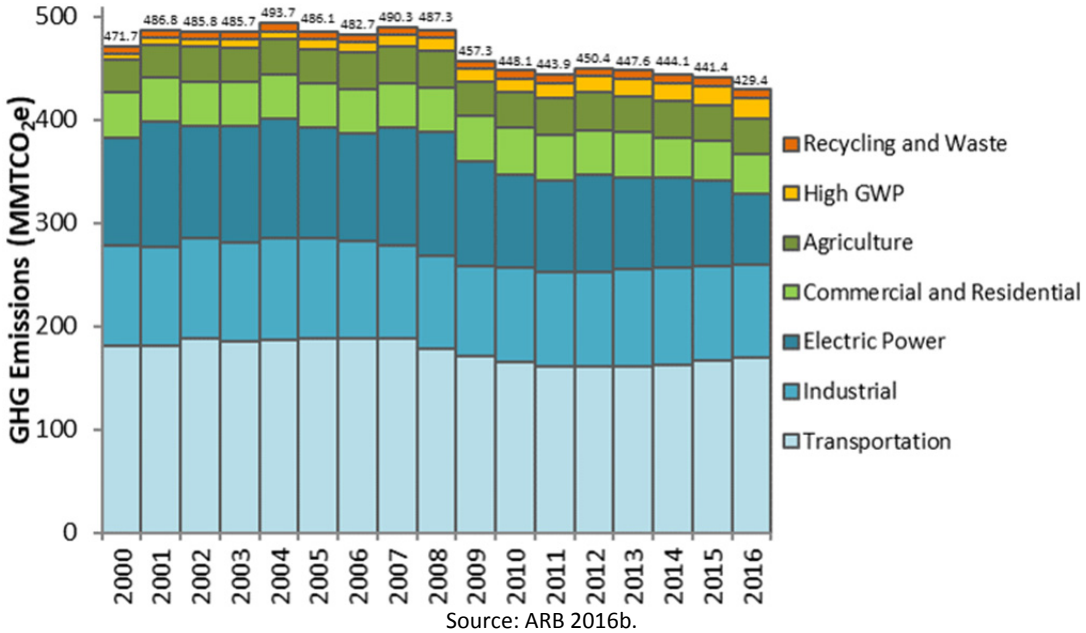
Figure 6: Greenhouse Gas Emissions by Geographic Area



Source: WRI 2014.

Figure 7 shows the contributors of GHG emissions in California between years 2000 and 2016 by Scoping Plan category. The main contributor was transportation. The second highest sector was industrial, which includes sources from refineries, general fuel use, oil and gas extraction, cement plants, and cogeneration heat output. ARB reported that California's GHG emissions inventory was 429.4 $MMTCO_2e$ in 2016 (ARB 2016b).

Figure 7: Greenhouse Gas Emission Trends by Scoping Plan Category in California



Source: ARB 2016b.

3.3—Regulatory Environment

3.3.1 - International

International organizations, such as the ones discussed below, have made substantial efforts to reduce GHGs. Preventing human-induced climate change will require the participation of all nations in solutions to address the issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change. The panel was tasked with assessing the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at average of five percent against 1990 levels over the five-year period from 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 heads of state and government, along with leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business, and civil society announced actions in areas that would have the greatest impact on reducing emissions, including: climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Paris Agreement. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating in a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen those efforts in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or COP 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a).

On June 1, 2017, President Trump announced the decision for the United States to withdraw from the Paris Climate Accord (White House 2017). The earliest possible effective withdrawal date by the United States cannot be before November 4, 2020. California remains committed to combating climate change through programs designed to reduce GHGs.

3.3.2 - Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Greenhouse Gas Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulate four GHGs, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States Supreme Court declined to review an Appeals Court ruling upholding the EPA Administrator findings (EPA 2009c).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon; that is, if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012b). The new standards for model years

2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20-percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles, and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10-percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs, which will define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology. President Trump signed the Executive Order on Energy Independence (E.O. 13783), which calls for a review of the Clean Power Plan. On October 16, 2017, the EPA issued the proposed rule Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units an Energy Independence (EPA 2017).

Cap-and-Trade. Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the cap-and-trade program (C2ES 2015).

3.3.3 - California

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh

chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a BAU scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (ARB 2008a). At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010a).

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is evident in updated emission inventories prepared by ARB, which showed that the State inventory dropped below 1990 levels for the first time in 2016 (ARB 2018a). The 2017 Scoping Plan Update includes projections indicating that the State will meet or exceed the 2020 target with adopted regulations (ARB 2017).

ARB 2008 Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;

- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (ARB 2008).

Cap-and-Trade Program. The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's cap-and-trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015 (ARB 2015d).

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are guaranteed only on an accumulative basis. As summarized by ARB in the First Update:

> The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (ARB 2014b).

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures (ARB 2014b).

AB 398. The Governor signed AB 398 on July 25, 2017 to extend the Cap-and-Trade Program to 2030. The legislation includes provisions to ensure that offsets used by sources are limited to 4 percent of their compliance obligation from 2021 through 2025 and 6 percent from 2026 through 2030. AB 398 also prevents Air Districts from adopting or implementing emission reduction rules from stationary sources that are also subject to the Cap-and-Trade Program (CAR 2017).

SB 32. The Governor signed SB 32 on September 8, 2016. SB 32 now gives ARB the statutory responsibility to include the 2030 target previously contained in Executive Order B-30-15 in the 2017 Scoping Plan Update. SB 32 states that "In adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by this division, the state [air resources] board shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. The major elements of the framework proposed to achieve the 2030 target are as follows:

1. SB 350
   - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
   - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant (SLCP) Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
   - ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
8. 20 percent reduction in greenhouse gas emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink (ARB 2017c).

SB 375—The Sustainable Communities and Climate Protection Act of 2008. SB 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375—as codified in Public Resources Code Section 21159.28—states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth-inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved Sustainable Communities Strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

The ARB has prepared the Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. The update includes an increase in the 2035 target for Fresno County from 10 percent to 13 percent (ARB 2018).

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011 (ARB 2013d).

The standards were phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards resulted in an approximately 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards resulted in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation, rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant (ARB 2013e).

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles, and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California (ARB 2017).

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard

because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 lbs. CO_2 per megawatt-hour (MWh).

SB 1078—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020 The ARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. In 2011, the state legislature adopted this higher standard in SB X1-2. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas.

SB 350—Clean Energy and Pollution Reduction Act of 2015. The legislature approved and the governor then signed SB 350 on October 7, 2015, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

SB 100- California Renewables Portfolio Standard Program. The Governor approved SB 100 on September 10, 2018. The legislation revised the Renewable Portfolio Standard goals to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. The bill would require that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030 (California Leginfo 2018).

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05. On June 1, 2005, former California Governor Arnold Schwarzenegger announced through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to provide post-2020 targets was signed by the Governor in 2016. SB 32 includes a 2030 mandate matching the requirements of the Executive Order.

Executive Order S-01-07—Low Carbon Fuel Standard. The governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was subject to legal challenge in 2011. Ultimately, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The Office of Administrative Law (OAL) approved the regulation on November 16, 2015 (ARB 2015e).

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-55-18. Executive Order B-55-18 issued by Governor Brown on September 10, 2018 establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. The executive order directs ARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal (Brown 2018).

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601–1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations including lighting, air conditioning, and most home appliances. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2018a).

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The most current

2016 Building Energy Efficiency Standards went into effect on January 1, 2017 (CEC 2016). The 2019 Building Energy Efficiency Standards are scheduled to go into effect on January 1, 2020 (CEC 2018b).

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for five percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for five percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Designated parking**. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling. (5.410.1).
- **Construction waste**. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
  1. The installation of water-conserving fixtures or
  2. Using nonpotable water systems (5.303.4).
- **Water use savings**. Twenty percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35, and 40 percent reductions (5.303.2, A5303.2.3 [nonresidential]).

- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).
- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard (5.404).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the ordinance through expedited regulation. The California Water Commission approved the revised ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states: "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)."

Section 21097 was also added to the Public Resources Code. This provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006—in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010. The Natural Resources Agency adopted additional amendments related to greenhouse gases in the 2019 CEQA Guidelines Update adopted on December 28, 2018.

The 2010 CEQA Amendments along with the 2018 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

Section 15064.4(c) states that a lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

The 2018 CEQA Guidelines include the following discussion regarding thresholds of significance.

> (d) Using environmental standards as thresholds of significance promotes consistency in significance determinations and integrates environmental review with other environmental program planning and regulation. Any public agency may adopt or use an environmental standard as a threshold of significance. In adopting or using an environmental standard as a threshold of significance, a public agency shall explain how the particular requirements of that environmental standard reduce project impacts, including cumulative impacts, to a level that is less than significant, and why the environmental standard is relevant to the analysis of the project under consideration. For the purposes of this subdivision, an "environmental standard" is a rule of general application that is adopted by a public agency through a public review process and that is all of the following:

(1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement;
(2) adopted for the purpose of environmental protection;
(3) addresses the environmental effect caused by the project; and,
(4) applies to the project under review.

In addition, the 2018 amendments revised Appendix G Checklist questions to include a new question specifically on energy conservation.

CEQA emphasizes that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

California Supreme Court GHG Ruling

A November 30, 2015 ruling, the *California Supreme Court in Center for Biological Diversity (CBD) v. California Department of Fish and Wildlife (CDFW)* on the Newhall Ranch project, concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The Court offered potential solutions on pages 25 to 27 of the ruling to address this issue summarized below.

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. "A lead agency might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities. (See Final Statement of Reasons, supra, at p. 64 [greenhouse gas emissions 'may be best analyzed and mitigated at a programmatic level.'].) To the extent a project's design features comply with or exceed the regulations outlined in the Scoping Plan and adopted by the Air Resources Board or other state agencies, a lead agency could appropriately rely on their use as showing compliance with 'performance based standards' adopted to fulfill 'a statewide . . . plan for the reduction or mitigation of greenhouse gas emissions.' (CEQA Guidelines § 15064.4(a)(2), (b)(3); see also id., § 15064(h)(3) [determination that impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including 'plans or regulations for the reduction of greenhouse gas emissions'].)" (p. 26).
- **Compliance with GHG Reduction Plans or Climate Action Plans (CAPs)**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (p. 26).

- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (p. 27).

Therefore, consistent with CEQA Guidelines Appendix G, the three factors identified in CEQA Guidelines Section 15064.4 and the recently issued Newhall Ranch opinion, the GHG impacts would be considered significant if the project would:

- Conflict with a compliant GHG Reduction Plan if adopted by the lead agency;
- Exceed the SJVAPCD GHG Reduction Threshold; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.

3.3.4 - San Joaquin Valley Air Pollution Control District

Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.
- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD's existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

The SJVAPCD's approach is intended to streamline the process of determining if project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources, and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as a Best Performance Standard, to reduce GHG emissions. The Best Performance Standards (BPS) have not yet fully been established, though they must be designed to achieve a 29 percent reduction when compared with the BAU projections identified in ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. Thus, these standards would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The SJVAPCD has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction; storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to SJVAPCD guidance, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an environmental impact report is required, regardless of whether the project incorporates BPS. The SJVAPCD has not yet adopted BPS for development projects, so quantification of project emissions is required.

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the SJVAPCD has pursued an alternative strategy

that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. The SJVAPCD is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding (MOU) with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality greenhouse gas exchange for credits created in California. The GHG Rx is intended to help fulfill compliance obligations or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations. The SJVAPCD currently has no credits posted to the GHG Rx website as of this writing (CAPCOA 2018).

Rule 2301

While the Climate Change Action Plan indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301—Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

Fresno Council of Governments

Regional Transportation Plan

The Fresno Council of Governments (Fresno COG) is the Regional Transportation Planning Agency (RTPA) for the Fresno County region. The Fresno COG adopted the 2014 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) that included the County's first Sustainable Community Strategy to comply with SB 375. The RTP is a planning document prepared in cooperation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and other stakeholders, including transportation system users. The SCS is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from autos and light trucks. SB 375 includes the following four primary findings related to the RTP/SCS development process:

- SB 375 required the ARB to develop regional GHG emission reduction targets for cars and light trucks for each of the 18 MPOs in California, including Fresno COG. ARB approved targets for the San Joaquin Valley in January 2013. The target for Fresno is a per capita reduction in GHG emissions from passenger vehicle travel of five percent by 2020 and 10 percent by 2035

relative to 2005 levels. The 2018 RTP indicates that the County continues to pursue the 5 percent reduction by 2020 and 10 percent reduction by 2035 (Fresno COG 2018).

- SB 375 required the preparation of an SCS. Fresno COG included a SCS that specifies how the GHG emission reduction target set by ARB will be achieved in the RTP. If the target cannot be met through the SCS, then an Alternative Planning Strategy (APS) shall be prepared by Fresno COG. Chapter 4 of the 2014 RTP includes the SCS for Fresno COG. Chapter 3 of the 2018 RTP includes the updated SCS.
- SB 375 streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Fresno County SCS or APS (as determined by ARB) to achieve regional GHG emissions reduction target.

The 2018 RTP/SCS was adopted by Fresno COG on July 26, 2018 and reflects its latest per capita GHG reduction targets of 5 percent by 2020, 10 percent by 2035, and 12 percent by 2042 (Fresno COG 2018).

3.3.5 - Local

The City of Clovis does not currently have formal GHG emissions reduction plans or recommended emissions thresholds for determining significance associated with GHG emissions from development projects. However, the General Plan includes goals and policies to reduce GHG emissions that are listed below.

General Plan

The City of Clovis adopted its 2014 General Plan in August 2014 (City of Clovis 2015a). The 2014 General Plan includes the following applicable goals and policies related to improving air quality that may also co-benefit climate change impacts:

Air Quality Element

- **Goal 1:** A local environment that is protected from air pollution and emissions.
  - **Policy 1.1: Land use and transportation**. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.
  - **Policy 1.6: Alternative fuel infrastructure.** Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.
  - **Policy 1.8: Trees.** Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
- **Goal 2:** A region with healthy air quality and lower greenhouse gas emissions.
  - **Policy 2.1: Regional coordination.** Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.
  - **Policy 2.2: Cross-jurisdictional issues.** Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.
  - **Policy 2.6**: **Innovative mitigation.** Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.

Circulation Element

- **Goal 1:** A context-sensitive and "complete streets" transportation network that prioritizes effective connectivity and accommodates a comprehensive range of mobility needs.
  - **Policy 1.1: Multimodal network.** The City shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrian, bicyclists, transit riders, freight, and motorists.
  - **Policy 1.2: Transportation decisions.** Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.
  - **Policy 1.4: Jobs and housing.** Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles traveled and effectively utilize the existing transportation infrastructure.
  - **Policy 1.5: Neighborhood connectivity.** The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).
- **Goal 3:** A multimodal transportation network that is safe and comfortable in the context of adjacent neighborhoods.
  - **Policy 3.11: Right-of-way design.** Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.
- **Goal 5:** A complete system of trails and pathways accessible to all residents.
  - **Policy 5.1: Complete street amenities.** Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety (consistent with the Bicycle Transportation Master Plan and other master plans).
  - **Policy 5.2: Development-funded facilities.** Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.
  - **Policy 5.3: Pathways.** Encourage pathways and other pedestrian amenities in urban centers and new development 10 acres or larger.
  - **Policy 5.4: Homeowner associations.** The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.
  - **Policy 5.5: Pedestrian access.** Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers and to provide general pedestrian connectivity throughout the city.

Land Use Element

- **Goal 3:** Orderly and sustainable outward growth into three urban centers with neighborhoods that provide a balanced mix of land uses and development types to support a community lifestyle and small town character.
  - **Policy 3.9: Connected development**. New development in urban centers must fully improve roadway, pedestrian, and bicycle systems within and adjacent to the proposed project and connect to existing urbanized development.

Open Space and Conservation Element

- **Goal 3:** A built environment that conserves and protects the use and quality of water and energy resources.
  - **Policy 3.4: Drought-tolerant landscaping**. Promote water conservation through use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes.
  - **Policy 3.5: Energy and water conservation**. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.
  - **Policy 3.6: Renewable Energy**. Promote the use of renewable and sustainable energy sources to serve public and private sector development.
  - **Policy 3.7: Construction and design**. Encourage new construction to incorporate energy efficient building and site design strategies.

City of Clovis General Plan Program EIR

The General Plan PEIR (City of Clovis 2015b) includes the following discussion regarding reducing GHG emissions associated with the General Plan Update:

> Prior to issuance of construction permits, the City of Clovis Planning Division shall require that applicants for new development projects submit documentation showing that greenhouse gas (GHG) emissions meet a 29 percent reduction from BAU in accordance with the methodology identified by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The documentation shall identify measures to be incorporated into the considered project that would reduce GHG emissions from BAU. Such measures include but are not limited to the following:
>
> - Provide a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities.
> - Provide the minimum number of parking spaces required.
> - Create a shared parking program, as feasible.
> - Provide bicycle end-of-trip facilities (e.g., bike parking, showers, and lockers).
> - Develop rideshare and ride-matching assistance programs.
> - For planned residential development, design and incorporate a neighborhood electric vehicle system.
> - Design buildings to be electric vehicle charging-station-ready.
> - Coordinate with the City of Clovis and/or the Fresno Area Express to install bus stops at or near the project site.
> - Design buildings to be energy efficient beyond the requirements of Title 24.
> - Design and orient structures to maximize shade in the summer and sun exposure in the winter.

- Install vegetative roofs that cover at least 50 percent of the roof area.
- Design buildings to incorporate passive solar design and solar heaters.
- Install solar panels on carports and parking areas.
- Limit nonessential idling of commercial vehicles beyond Air Toxic Control Measures idling restrictions.

Waste Diversion

With the passage of SB 1016, the Per Capita Disposal Measurement System, only per capita disposal rates are measured. Targets are based on the per capita disposal rates. For 2015, the target rate was 4.1 pounds per person. The City's disposal rates were well below the target rate of 4.7 pounds per person per day in 2015. The rate reported was 3.5 pounds per person per day in 2015. The City has met the per capita target on a per-resident basis for each year of the last 3 reporting years (CalRecycle 2016a).

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SECTION 4: MODELING PARAMETERS AND ASSUMPTIONS

4.1—Model Selection and Guidance

Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors represent the emission rate of a pollutant given the activity over time; for example, grams of NO_X per horsepower-hour or grams of NO_X per vehicle mile traveled. The ARB has published emission factors for on-road mobile vehicles/trucks in the EMFAC mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was developed by the South Coast Air Quality Management District in cooperation with other air districts throughout the State. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with construction and operation from a variety of land uses.

The modeling follows District guidance where applicable from its GAMAQI. The models used in this analysis are summarized as follows:

- Construction emissions: CalEEMod, version 2016.3.2
- Operational emissions: CalEEMod, version 2016.3.2

4.2—Air Pollutants and GHGs Assessed

4.2.1 - Criteria Pollutants Assessed

The following air pollutants are assessed in this analysis:

- Reactive organic gases (ROG)
- Nitrogen oxides (NO_X)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)
- Particulate matter less than 10 microns in diameter (PM_{10})
- Particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)

Note that the project would emit ozone precursors ROG and NO_X. However, the project would not directly emit ozone, since it is formed in the atmosphere during the photochemical reaction of ozone precursors. Other criteria pollutants such as vinyl chloride, hydrogen sulfide, lead, and sulfates were not included because of their low levels of emissions from the project.

As noted previously, the project would emit ultrafine particles. However, there is currently no standard separate from the $PM_{2.5}$ standards for ultrafine particles and there is no accepted methodology to quantify or assess the significance of such particles.

4.2.2 - Greenhouse Gases Assessed

This analysis is restricted to GHGs identified by AB 32, which include: carbon dioxide, methane, NO_X, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would generate a variety of GHGs, including several defined by AB 32 such as carbon dioxide, methane, and NO_X.

The project may emit GHGs that are not defined by AB 32. For example, the project may generate aerosols through emissions of DPM from the vehicles and trucks that would access the project site. Aerosols are short-lived particles, as they remain in the atmosphere for about one week. Black carbon is a component of aerosol. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty (IPCC 2007a).

Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain GHGs defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

4.3—Construction Modeling Assumptions

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Additionally, paving operations and application of architectural coatings would release VOC emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM_{10} and $PM_{2.5}$).

4.3.1 - Project Schedule

The project was assumed to begin construction in June 2020 with full buildout completed in December 2024. First occupancy was assumed to occur by January 2023. The project was assumed to be completed in a single phase, but with a break between grading and ground up construction to reflect anticipated market conditions.

The CalEEMod default schedule for building construction was extended by 86 days to 826 days to match anticipated construction schedule provided by the applicant. The number of days for demolition was reduced to 5 days to reflect that only one existing house would be demolished.

Because the expected schedule and the default schedule differ, the equipment in the building construction phase was adjusted to retain the default horsepower-hours.

The analysis uses CalEEMod default assumptions for the equipment used during construction. CalEEMod default construction equipment and equipment activity are based on surveys of construction projects of various sizes conducted for development in Southern California and may overstate equipment use for larger project sites in regions outside of Southern California and should be considered highly conservative. The modeling assumptions can be reviewed in the modeling results included in Appendix A of this report.

4.3.2 - Construction Equipment Emission Factors

CalEEMod contains an inventory of construction equipment that incorporates estimates of the number of equipment, age, horsepower, and equipment emission control level or tier from which rates of emissions are developed. The CalEEMod default equipment assumptions were used in this analysis for the estimation of emissions from on-site construction equipment. CalEEMod's off-road emission factors and load factors are from the ARB OFFROAD model.

4.3.3 - Demolition

The project will require the removal of one house and one shed totaling approximately 3,281 square feet. CalEEMod default equipment assumptions based on square feet of buildings to be removed were used to calculate demolition emissions.

4.3.4 - Site Preparation

Site preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading. During site preparation, emissions are generated from the use of diesel construction equipment. Fugitive dust is generated during soil-disturbing activities and truck loading and unloading.

4.3.5 - Grading

During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading dirt into haul trucks. Each activity is calculated differently in CalEEMod, based on the number of acres traversed by the grading equipment.

Only some pieces of equipment generate fugitive dust in CalEEMod. The CalEEMod manual identifies various equipment and the acreage disturbed in an 8-hour day:

- Crawler tractors, graders, and rubber-tired dozers: 0.5 acre per 8-hour day
- Scrapers: 1 acre per 8-hour day

Therefore, the following acres are the total quantities disturbed per day, per phase, according to the acreage disturbed quantities listed above:

- Site preparation = 1.03 acres per day
- Grading = 2.06 acres per day

It was assumed that up to 7,500 cubic yards of soil import would be required. This would require approximately 375 truck-loads with a 20 cubic yard capacity.

4.3.6 - Building Construction, Paving, and Architectural Coatings

The analysis uses the default modeling assumptions from CalEEMod for construction equipment during building construction, paving, and application of architectural coatings. As previously discussed, the equipment hours for the building construction phases were adjusted to retain the CalEEMod default-generated horsepower hours. The coatings used for the project are required to comply with the SJVAPCD Rule 4601—Architectural Coatings. The rule required flat paints to meet a standard of 50 grams per liter (g/l) and gloss paints 100 g/l by 2012 for an average rate of 65 g/l. Most of the coatings used for residential painting are flat paints.

4.3.7 - Construction Off-site Trips

Worker trips are accounted for during the construction phases, based on 1.25 trips per piece of equipment (the CalEEMod default). The CalEEMod default worker trip length of 10.8 miles was retained. The CalEEMod default vehicle fleet (LD Mix) was used for employee trips.

Vendor trips for the building construction phase are calculated from a study performed by the Sacramento Metropolitan Air Quality Management District (SMAQMD) based on land use and size. The CalEEMod defaults for vendor trips, trip length, and vehicle fleet (Heavy Duty Truck Vehicle Fleet Mix) were used.

4.4—Operation

Operational emissions are those emissions that occur when the project is occupied by the future residents. The major sources are summarized below.

4.4.1 - Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the project residences.

Project trip generation rates were obtained from the *Institute of Transportation Engineers Trip Generation Manual, 10th Edition* for single-family dwelling units.

A pass-by trip accounts for vehicles already on the roadway network that stop at the project site as they pass-by; the pass-by trips are existing vehicle trips in the community. CalEEMod default rates of three percent pass-by trips were used in this analysis.

The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline and diesel-powered vehicles). The CalEEMod default vehicle fleet mix overstates the percentage of heavy-duty trucks for residential development projects; therefore, the SJVAPCD-approved Residential Fleet Mix was used for the analysis.

4.4.2 - Architectural Coatings (Painting)

Paints release VOC emissions during application and drying. The buildings in the project would be repainted on occasion. The project is required to comply with the SJVAPCD Rule 4601—Architectural Coatings. The rule required flat paints to meet a standard of 50 grams per liter (g/l) and gloss paints 100 g/l by 2012 for an average rate of 65 g/l. Most of the coatings used for residential painting are flat paints.

4.4.3 - Consumer Products

Consumer products are various solvents used in non-industrial applications, which emit VOCs during their product use. "Consumer Product" means a chemically formulated product used by household and institutional consumers, including but not limited to: detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. It does not include other paint products, furniture coatings, or architectural coatings (ARB 2011). The default emission factor developed for CalEEMod was used.

4.4.4 - Landscape Equipment

CalEEMod estimated the landscaping equipment using the default assumptions in the model.

4.4.5 - Electricity

Electricity used by the project (for lighting, etc.) would result in emissions from the power plants that would generate electricity distributed on the electrical power grid. Electricity emissions estimates are only used in the GHG analysis. CalEEMod was used to estimate these emissions from the project.

Electricity Emission Factor

The default CalEEMod emission factors for Pacific Gas & Electric (from the CEC's year 2006 data) are as follows:

- Carbon dioxide: 641.35 pounds per megawatt hour (lbs/MWh)
- Methane: 0.029 lb/MWh
- Nitrous oxide: 0.006 lb/MWh

It is assumed that the Renewable Electricity Standards would have taken effect by 2020. The Renewable Electricity Standard requires that electricity providers include a minimum of 33 percent renewable energy in their portfolios by the year 2020. Pacific Gas & Electric provides estimates of its emission factor per megawatt hour of electricity delivered to its customers. The Pacific Gas and Electric Company (PG&E) emissions factor for 2020 for CO_2 is provided below. No projections have been made by PG&E for later years, so the rate is assumed to remain constant through 2030. The rates for methane and nitrous oxide are based on compliance with the Renewable Portfolio Standard.

- Carbon dioxide: 290 lbs/MWh
- Methane: 0.022 lb/MWh
- Nitrous oxide: 0.005 lb/MWh

4.4.6 - Electricity Consumption

CalEEMod has three categories for electricity consumption: electricity that is impacted by Title 24 regulations, non-Title 24 electricity, and lighting. The Title 24 uses are defined as the major building envelope systems covered by California's Building Code Title 24 Part 6, such as space heating, space cooling, water heating, and ventilation. Lighting is separate since it can be both part and not part of Title 24. Since lighting is not considered as part of the building envelope energy budget, CalEEMod does not consider lighting to have any further association with Title 24 references in the program. Non-Title 24 includes everything else such as appliances and electronics. Total electricity consumption in CalEEMod is divided into the three categories. The percentage for each category is determined by using percentages derived from the CalEEMod default electricity intensity factors. The percentages are then applied to the electricity consumption to result in the values used in the analysis.

4.4.7 - Natural Gas

The project would generate emissions from the combustion of natural gas for water heaters, heat, etc. CalEEMod has two categories for natural gas consumption: Title 24 and non-Title 24. CalEEMod defaults were used.

4.4.8 - Water and Wastewater

GHG emissions are emitted from the use of electricity to pump water to the project and to treat wastewater. CalEEMod defaults were used.

4.4.9 - Refrigerants

During operation, air conditioners and refrigeration systems may leak refrigerants (hydrofluorocarbons). Hydrofluorocarbons are typically used for refrigerants, which are long-lived GHGs. Residential uses of refrigerants are minor; therefore, they were not estimated.

4.4.10 - Solid Waste

GHG emissions would be generated from the decomposition of solid waste generated by the project. CalEEMod was used to estimate the GHG emissions from this source. The CalEEMod default for the mix of landfill types is as follows:

- Landfill no gas capture: 6%
- Landfill capture gas flare: 94%
- Landfill capture gas energy recovery: 0%

4.4.11 - Vegetation

There is currently limited carbon sequestration occurring on-site from existing vegetation. The project would plant trees and integrate landscaping into the project design, which would provide carbon sequestration. However, the number of trees to be planted is unknown and data are insufficient to accurately determine the impact that existing plants have on carbon sequestration. For this analysis, it was assumed that the loss and addition of carbon sequestration that are due to the project would be balanced; therefore, emissions due to carbon sequestration were not included.

SECTION 5: AIR QUALITY IMPACT ANALYSIS

This section calculates the expected emissions from construction and operation of the project as a necessary requisite for assessing the regulatory significance of project emissions on a regional and localized level.

5.1—CEQA Guidelines

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines effective December 28, 2018. A significant impact would occur if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard;

c) Expose sensitive receptors to substantial pollutant concentrations; or

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

While the final determination of whether a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the lead agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below.

5.2—Impact Analysis

5.2.1 - Consistency with Air Quality Plan

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project comply with applicable control measures in the AQPs? The primary control measures applicable to development projects is Regulation VIII—Fugitive PM_{10} Prohibitions and Rule 9510 Indirect Source Review.

Contribution to Air Quality Violations

A measure for determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Regional air quality impacts and attainment of standards are the result of the cumulative impacts of all emission sources within the air basin. Individual projects are generally not large enough to contribute measurably to an existing violation of air quality standards. Therefore, the cumulative impact of the project is based on its cumulative contribution. Because of the region's nonattainment status for ozone, $PM_{2.5}$, and PM_{10}—if project-generated emissions of either of the ozone precursor pollutants (ROG and NO_X), PM_{10}, or $PM_{2.5}$ would exceed the District's significance thresholds—then the project would be considered to contribute to violations of the applicable standards and conflict with the attainment plans.

As discussed in Impact AIR-2 below, emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the construction and operation of the project would not exceed the District's significance thresholds. As shown in Impact AIR-2, the project would not result in CO hotspots that would violate CO standards. Therefore, the project would not contribute to air quality violations.

Compliance with Applicable Control Measures

The AQP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. A description of rules and regulations that apply to this project is provided below.

SJVAPCD Rule 9510—Indirect Source Review (ISR) is a control measure in the 2006 PM_{10} Plan that requires NO_X and PM_{10} emission reductions from development projects in the San Joaquin Valley. The NO_X emission reductions help reduce the secondary formation of PM_{10} in the atmosphere (primarily ammonium nitrate and ammonium sulfate) and also reduce the formation of ozone. Reductions in directly emitted PM_{10} reduce particles such as dust, soot, and aerosols. Rule 9510 is also a control measure in the 2016 Plan for the 2008 8-Hour Ozone Standard. Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site measures, or pay off-site mitigation fees. The project is required to comply with Rule 9510 and has already completed the ISR process.

Regulation VIII—Fugitive PM_{10} **Prohibitions** is a control measure that is one main strategies from the 2006 PM_{10} for reducing the PM_{10} emissions that are part of fugitive dust. Projects over 10 acres are

required to file a Dust Control Plan (DCP) containing dust control practices sufficient to comply with Regulation VIII. The project is required to prepare a DCP to comply with Regulation VIII.

Other control measures that apply to the project are Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operation that requires reductions in VOC emissions during paving and Rule 4601—Architectural Coatings that limits the VOC content of all types of paints and coatings sold in the San Joaquin Valley. These measures apply at the point of sale of the asphalt and coatings, so project compliance is ensured.

The project would comply with all applicable SJVAPCD rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

The applicable General Plan for the project is the City of Clovis General Plan, which was adopted in 2014 prior to adoption of the SJVAPCD's latest AQPs. The 2016 Plan for the 2008 8-Hour Ozone Standard was adopted in June 2016. The 2015 Plan for the 1997 $PM_{2.5}$ Standard was adopted in April 2015 and the 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard was adopted in September 2016. The site is currently designated for agriculture by Fresno County; however, the project is within the General Plan planning area. The project proposes a land use designation of Low Density Residential, which allows for a density of 2.1 dwelling units (DU) per acre to 4.0 DU per acre. The project would construct 74 units on 37.27 acres net for a density of 2.1 DU per acre. Although the project requires a General Plan Amendment, the increased density provides a more efficient use of the land, infills an area adjacent to urban development, and helps achieve the density goals of the Fresno RTP/SCS.

One of the primary means of determining whether growth is consistent with air quality plans is the Federal Transportation Conformity process required for regional transportation plans. Under this regulation, predicted emissions for the Transportation Improvement Plan (TIP)/RTP must be less than or equal to the motor vehicle emissions budget specified in the approved air quality implementation plan or the emissions budget found to be adequate for transportation conformity purposes. The most stringent emission budget in SJVAPCD air quality plans is the NOx budget. The Fresno County NOx budget for 2020 is 23.9 tons per day and declines to 14.1 tons per day in 2023. The most recently approved conformity analysis is the Conformity Analysis for the 2019 Federal Transportation Improvement Program Amendment #3 (2019 FTIP Amendment #3) and the 2018 Regional Transportation Plan Amendment #1 (2018 RTP Amendment #1) addressing the 2015 8-Hour Ozone Standards approved on March 28, 2019 (Fresno COG 2019). The conformity analysis uses the latest planning assumptions and growth projections to develop future emission budgets that show an increase in the Clovis SOI of 62,440 persons between 2015 and 2050, for a 54.4 percent increase (Fresno COG 2017). Modeling prepared for the conformity analysis using the latest approved emission models and planning assumptions found that motor vehicle emissions would remain below the conformity budgets in all analysis years. Although the project requires a General Plan Amendment, the project is within the Clovis SOI. In this case, designating additional land for development would not increase the rate of projected growth but would accommodate the overall growth already predicted for the City (Fresno COG 2019).

The General Plan PEIR found that the growth allowed by the plan was inconsistent with the SJVAPCD AQP because the emissions at buildout exceeded the criteria pollutant emission thresholds (see

Impact AIR-2), and, thus, the City of Clovis found the impact to be significant and unavoidable and adopted a Statement of Overriding Considerations (SOC). Projects that are consistent with the General Plan policies and comply with the mitigation measures included in the General Plan and Development Code Update Draft PEIR mitigation measures are able to rely upon the SOC finding to address their cumulative air quality impacts. The General Plan PEIR indicates that application of SJVAPCD Rule 9510—Indirect Source Review and implementation of the General Plan policies and implementation actions would reduce impacts to the extent feasible. The project is required to comply with Rule 9510 and is consistent with General Plan policies and implementation actions as described in Table 8.

Table 8: Consistency with General Plan Policies

General Plan Policy	Project Consistency
Air Quality Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.	**Consistent.** Existing bike lanes on Shepherd Avenue and Fowler Avenue are within one half mile of the site and connect to destinations throughout the area. Enhancements to encourage walking and bicycling will reduce driving and related pollutant emissions. The Clovis Alternative Transportation Plan shows Teague Avenue being served by a future Class II bike lane. In addition, the project is approximately 1.2 miles east of Buchanan High School and 0.5 mile north of Century Elementary School.
Air Quality Policy 1.2: Sensitive land uses. Prohibit the future siting of sensitive land uses within the distances of emission sources as defined by the California Air Resources Board, without sufficient mitigation.	**Consistent.** As discussed in Section 5.2.3—Sensitive Receptors, the project does not locate sensitive receptors within the distances of emission sources as defined by the California Air Resources Board.
Air Quality Policy 1.3: Construction activities. Encourage the use of best management practices during construction activities to reduce emissions of criteria pollutants as outlined by the San Joaquin Valley Air Pollution Control District (SJVAPCD).	**Consistent.** The project will be required to comply with Regulation VIII—Fugitive PM_{10} Prohibitions.
Air Quality Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.	**Consistent.** The project would not preclude future installment of electrical vehicle charging systems in individual residences.
Air Quality Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.	**Consistent.** The project would incorporate landscaping throughout the project site. The incorporated landscaping would provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
Air Quality Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.	**Not applicable.** However, residents can participate in educational and grant programs designed to reduce criteria pollutant emissions developed through regional coordination.

Table 8 (cont.): Consistency with General Plan Policies

General Plan Policy	Project Consistency
Air Quality Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.	**Not applicable.** This measure applies to government agencies and not to individual development projects.
Air Quality Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.	**Consistent.** The project would comply with Rule 9510, which may include payment of mitigation fees that can be used for innovative mitigation measures that reduce criteria pollutants and GHG emissions.
Circulation Policy 1.1: Multimodal network. The City shall plan, design, and maintain the transportation network to promote safe and convenient travel for all users: pedestrian, bicyclists, transit riders, freight, and motorists.	**Consistent.** The project area includes a variety of features designed to provide safe and convenient travel for users of all modes of transportation. Residents will have reasonably close access to an existing bike lane that runs along Shepherd Avenue. Ultimately, when area roads are built to urban standards additional facilities supporting pedestrians and bicyclists will be available. Class II bike lanes are planned for Teague Avenue and Fowler Avenue near the project site.
Circulation Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrian, bicyclists, and motorists.	**Consistent.** The project will have access to nearby bike lanes and sidewalks that will provide convenience and safety for pedestrians and bicyclists.
Circulation Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles traveled and effectively utilize the existing transportation infrastructure.	**Consistent.** The project is residential development that will provide employees for jobs in existing business parks and jobs centers in Clovis. The project is situated less than 1 mile west of the nearest small commercial center and is within 2 miles of regional shopping and office development along Herndon Avenue.
Circulation Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).	**Consistent.** The project is within 2 miles of multiple existing educational, commercial, and business uses.
Circulation Policy 3.11: Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.	**Consistent.** The project will comply with City of Clovis design standards and landscaping requirements.
Circulation Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety (consistent with the Bicycle Transportation Master Plan and other master plans).	**Consistent.** The project would be required to upgrade existing streets fronting the property in accordance with city standards.

Table 8 (cont.): Consistency with General Plan Policies

General Plan Policy	Project Consistency
Circulation Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.	**Not applicable.** There are no new planned trails within or directly adjacent to the development. There are existing bike lanes on East Shepherd Avenue and on North Fowler Avenue south of Nees Avenue Road improvements along East Teague Avenue will include space for a Class II bike lane.
Circulation Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in urban centers and new development 10 acres or larger.	**Consistent.** Future residents will be able to utilize existing and planned sidewalks, bike lanes, and paths constructed in compliance with city requirements in this area.
Circulation Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers to provide general pedestrian connectivity throughout the city.	**Consistent.** Future residents will be able to utilize sidewalks and paths constructed in compliance with city requirements in this area.
Land Use Policy 3.9: Connected development. New development in urban centers must fully improve roadway, pedestrian, and bicycle systems within and adjacent to the proposed project and connect to existing urbanized development.	**Consistent.** The project will provide required street improvements and connections to pedestrian and bicycle systems.
Open Space and Conservation Policy 3.5: Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.	**Consistent.** The project will meet or exceed energy and water conservation and reduction standards set in the California Building Code.
Source: City of Clovis General Plan 2014.	

The air quality mitigation measures and standard conditions from the General Plan PEIR and a discussion of project compliance with each measure are provided in Table 9.

Table 9: Compliance with General Plan PEIR Mitigation Measures

Mitigation Measure	Project Compliance
SC-1: Prior to project approval, each applicant for individual, site-specific developments under the General Plan shall comply with the San Joaquin Valley Air Pollution Control District rules and regulations, including, without limitation, Indirect Source Rule 9510. The applicant shall document, to the City's reasonable satisfaction, its compliance with this standard condition.	The project is required to submit an Air Impact Assessment Application to the SJVAPCD to comply with Rule 9510.
3-1: Prior to issuance of any construction permits, development project applicants shall prepare and submit to the City of Clovis Planning Division a technical assessment evaluating potential project construction-related air quality impacts.	The analysis of construction emissions is included herein. No criteria pollutant construction emissions exceed SJVAPCD thresholds with the application of mitigation measures.

Table 9 (cont.): Compliance with General Plan PEIR Mitigation Measures

Mitigation Measure	Project Compliance
The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SJVAPCD adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Clovis Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Division.	The air quality impact analysis prepared for this project utilizes SJVAPCD guidance and thresholds from the GAMAQI.
3-3: Prior to project approval, development project applicants shall prepare and submit to the City of Clovis Planning Division a technical assessment evaluating potential project operation phase-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If operational-related criteria air pollutants are determined to have the potential to exceed the SJVAPCD adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Clovis Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities.	The analysis of project operational emissions is included herein. No criteria pollutant operational emissions exceed SJVAPCD thresholds.
The identified measures shall be included as part of the Standard Conditions of Approval.	
3-4: Prior to project approval, the City of Clovis Planning Division shall require applicants for individual, site-specific developments to consider establishing a Voluntary Emission Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District. Under this agreement, project proponents may enter into an agreement where funds are used to develop and implement emission reduction projects.	The project does not exceed SJVAPCD significance thresholds; therefore, no VERA would be required to reduce project impacts.
3-5: Prior to discretionary project approval, the City of Clovis shall evaluate new development proposals for sensitive land uses (e.g., residential, schools, day care centers) within the City for potential incompatibilities with regard to the California Air Resources Board's Air Quality and Land Use	The impacts to sensitive receptors were evaluated herein. No sources of toxic emissions identified by the ARB Air Quality and Land Use Handbook were identified within the recommended buffer distances.

Table 9 (cont.): Compliance with General Plan PEIR Mitigation Measures

Mitigation Measure	Project Compliance
Handbook: A Community Health Perspective (April 2005). Applicants for sensitive land uses that are within the recommended buffer distances shall submit a health risk assessment (HRA) to the City of Clovis prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the San Joaquin Valley Air Pollution Control District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children age 0 to 6 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), the appropriate non-cancer hazard index exceeds 1.0, or if the PM_{10} or $PM_{2.5}$ ambient air quality standard increment exceeds 2.5 $\mu g/m^3$, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms.	
3-6: Prior to discretionary project approval, applicants for industrial or warehousing land uses shall coordinate with the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Clovis in conjunction with the SJVAPCD to determine the appropriate level of health risk assessment (HRA) required. All HRAs shall be submitted to the City of Clovis.	The project is a residential development. This mitigation measure is not applicable.

Conclusion

The project's emissions are less than significant for all criteria pollutants and would not result in inconsistency with the AQP for this criterion. The project's proposed land use designation (Low Density Residential 2.1-4.0 DU/Acre) would provide densities and development patterns consistent with the land use policies of the City of Clovis 2014 General Plan. The growth accommodated by the project would not result in growth in excess of forecasts used for Federal Transportation Conformity consistency determinations. The project complies with all applicable policies, implementation actions, and mitigation measures of the 2014 General Plan; therefore, the project is consistent with the AQP, and the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

5.2.2 - Cumulative Criteria Pollutant Impacts

Impact AIR-2: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

Impact Analysis

To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Regional Emissions

Air pollutant emissions have both regional and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to SJVAPCD thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from project construction and operation are assessed under Impact AIR-3—Sensitive Receptors using concentration-based thresholds that determine if the project would result in a localized exceedance of any ambient air quality standards or would make a cumulatively considerable contribution to an existing exceedance.

The primary pollutants of concern during project construction and operation are ROG, NO_X, PM_{10}, and $PM_{2.5}$. The SJVAPCD GAMAQI adopted in 2015 contains thresholds for CO, NO_X, ROG, SO_X, PM_{10}, and $PM_{2.5}$.

Ozone is a secondary pollutant that can be formed miles from the source of emissions, through reactions of ROG and NO_X emissions in the presence of sunlight. Therefore, ROG and NO_X are termed ozone precursors. The Air Basin often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The Air Basin also exceeds air quality standards for PM_{10}, and $PM_{2.5}$; therefore, substantial project emissions may contribute to an exceedance for these pollutants.

The District's annual emission significance thresholds used for the project define the substantial contribution for both operational and construction emissions as follows:

- 100 tons per year CO
- 10 tons per year NO_X
- 10 tons per year ROG
- 27 tons per year SO_X
- 15 tons per year PM_{10}
- 15 tons per year $PM_{2.5}$

The project does not contain sources that would produce substantial quantities of SO_2 emissions during construction and operation. Modeling conducted for the project show that SO_2 emissions are well below the SJVAPCD GAMAQI thresholds, as shown in the modeling results contained in Appendix A. No further analysis of SO_2 is required.

Construction Emissions

Construction emissions were modeled using the CalEEMod version 2016.3.2. The results of the modeling are presented in Table 10. The highest emissions that would occur in any year of construction activity were compared with the significance threshold. For assumptions in estimating the emissions, please refer to Section 4, Modeling Parameters and Assumptions. As shown in Table 10, the emissions are below the significance thresholds in each construction year. Therefore, the emissions are less than significant on a project basis.

Table 10: Construction Air Pollutant Emissions Summary (Unmitigated)

Year	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction 2020	0.24	**2.59**	1.57	**0.40**	**0.24**
Construction 2021	0.14	1.31	1.23	0.14	0.08
Construction 2022	0.22	1.95	**2.01**	0.13	0.10
Construction 2023	0.20	1.78	1.99	0.12	0.09
Construction 2024	**0.68**	1.27	1.62	0.08	0.06
Grand Total for All Years of Construction	**1.48**	**8.89**	**8.41**	**0.86**	**0.56**
Highest Construction Emissions in Any Year	***0.68***	***2.59***	***2.01***	***0.40***	***0.24***
Significance threshold (tons/year)	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with Regulation VIII—Fugitive PM_{10} Prohibitions.
ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Calculations use unrounded numbers.
Source: CalEEMod output (Appendix A).

Operational Emissions

Operational emissions occur over the lifetime of the project and are from two main sources: area sources and motor vehicles, or mobile sources. Construction of the project is expected to begin in

June 2020 with full buildout completed in December 2024. First occupancy is expected in January 2023 and was used as the project buildout modeling year as a conservative assumption. The SJVAPCD considers construction and operational emissions separately when making significance determinations.

For assumptions in estimating the emissions, please refer to Section 4, Modeling Parameters and Assumptions. The emissions modeling results for project operation are summarized in Table 11.

As shown in Table 11, the emissions are below the SJVAPCD significance thresholds prior to application of mitigation measures or taking credit for project design features that would reduce project emissions and, therefore, would result in a less than significant impact.

Table 11: Operational Air Pollutant Emissions (2023 Unmitigated)

Source	Emissions (tons per year)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	1.35	0.17	7.42	1.12	1.12
Energy	0.01	0.09	0.04	0.01	0.01
Mobile	0.20	0.66	2.26	0.76	0.21
Total Project Emissions	**1.56**	**0.92**	**9.72**	**1.90**	**1.34**
Significance threshold	10	10	100	15	15
Exceed threshold—significant impact?	No	No	No	No	No

Notes:
ROG = reactive organic gases NO_X = nitrogen oxides PM_{10} and $PM_{2.5}$ = particulate matter
Area source emissions include emissions from natural gas, landscape, and painting.
Source: CalEEMod output (Appendix A).

Step 2: Plan Approach

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. The District attainment plans are based on a summary of projections that accounts for projected growth throughout the Air Basin, and the controls needed to achieve ambient air quality standards. This analysis considers the current CEQA Guidelines, which includes the amendments approved by the Natural Resources Agency, effective on December 28, 2018. The Air Basin is in nonattainment or maintenance status for ozone and particulate matter

(PM_{10} and $PM_{2.5}$), which means that concentrations of those pollutants currently exceed the ambient air quality standards for those pollutants, or that the standards have recently been attained in the case of pollutants with maintenance status. When concentrations of ozone, PM_{10}, or $PM_{2.5}$ exceed the ambient air quality standard, then those sensitive to air pollution (such as children, the elderly, and the infirm) could experience health effects such as: decrease of pulmonary function and localized lung edema in humans and animals; increased mortality risk; and risk to public health, implied by altered connective tissue metabolism, altered pulmonary morphology in animals after long-term exposures, and pulmonary function decrements in chronically exposed humans. See Section 2.3—Existing Air Quality Conditions for additional correlation of the health impacts with the existing pollutant concentrations experienced in the Clovis area.

Under the CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The geographic scope for cumulative criteria pollution from air quality impacts is the Air Basin, because that is the area in which the air pollutants generated by the sources within the Air Basin circulate and are often trapped. The SJVAPCD is required to prepare and maintain air quality attainment plans and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SJVAPCD does not have authority over land use decisions, it is recognized that changes in land use and circulation planning would help the Air Basin achieve clean air mandates. The District evaluated emissions from land uses and transportation in the entire Air Basin when it developed its attainment plans. Emission inventories used to predict attainment of NAAQS must be based on the latest planning assumptions for mobile sources.

In accordance with CEQA Guidelines Section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously approved plan or mitigation program.

The history and development of the SJVAPCD's current Ozone Attainment Plan is described in Section 2.4, Air Quality Plans. The 2007 8-Hour Ozone Plan contains measures to achieve reductions in emissions of ozone precursors, and sets plans towards attainment of ambient ozone standards by 2023. The 2012 $PM_{2.5}$ Plan and the 2015 $PM_{2.5}$ Plan for the 1997 $PM_{2.5}$ Standard require fewer NO_X reductions to attain the $PM_{2.5}$ standard than the Ozone Plan, so the Ozone Plan is considered the applicable plan for reductions of the ozone precursors NO_X and ROG. The 2012 $PM_{2.5}$ Plan requires reductions in directly emitted $PM_{2.5}$ from combustion sources, such as diesel engines and fireplaces, and from fugitive dust to attain the ambient standard and is the applicable plan for $PM_{2.5}$ emissions. $PM_{2.5}$ is also formed in secondary reactions in the atmosphere involving NO_X and ammonia to form nitrate particles. Reductions in NO_X required for ozone attainment are also sufficient for $PM_{2.5}$ attainment. As discussed in Impact AIR-1, the project is consistent with all applicable control measures in the air quality attainment plans. The project would comply with any District rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with applicable rules and regulations.

The City Clovis General Plan PEIR found cumulative impacts to be significant because the projected emissions from the buildout of the plan exceed the SJVAPCD quantitative thresholds of significance and application of SJVAPCD Rule 9510, and implementation of the General Plan policies and implementation actions would reduce impacts to the extent feasible. For example, Policy 1.1 of the

Air Quality Element focuses on reducing mobile-source emissions through land use planning that would reduce overall VMT. However, future development projects could exceed the SJVAPCD regional emissions thresholds. Therefore, operational-related air quality impacts associated with future development under the General Plan Update are considered significant and unavoidable. The PEIR examines the impact of development through buildout of the entire plan area, which includes the project site. Therefore, even though the project requires annexation, the cumulative effects of developing the project site were considered in the EIR. This project does not exceed SJVAPCD thresholds and will reduce its cumulative impact through compliance with Rule 9510; therefore, the project is considered less than significant for this criterion.

Project Health Impacts

In the 5th District Court of Appeal case *Sierra Club v. County of Fresno (Friant Ranch, L.P.)*, the Court found the project EIR deficient because it did not identify specific health-related effects resulting from the estimated amount of pollutants generated by the project. The ruling stated that the EIR should give a "sense of the nature and magnitude of the 'health and safety problems' caused by a project's air pollution. The EIR should translate the emission numbers into adverse impacts or to understand why such translation is not possible at this time (and what limited translation is, in fact, possible)."

The standard measure of the severity of impact is the concentration of pollutant in the atmosphere compared to the ambient air quality standard for the pollutant for a specified period of time. The severity of the impact increases with the concentration and the amount of time that people are exposed to the pollutant. The change in health impacts with concentration is described in Table 3 and Table 4 using the EPA's Air Quality Index. The pollutants of concern in the Friant Ranch ruling were regional criteria pollutants ozone, and PM_{10}. It is important to note that the potential for localized impacts can be addressed through dispersion modeling. The SJVAPCD includes screening criteria that if exceeded would require dispersion modeling to determine if project emissions would result in a significant health impact. For this project, no significant localized health impacts would occur. Regional pollutants require more complex modeling as described below.

Ozone concentrations are estimated using regional photochemical models because ozone formation is subject to temperature, inversion strength, sunlight, emissions transport over long distances, dispersion, and the regional nature of the precursor emissions. The emissions from individual projects are too small to produce a measurable change in ozone concentrations – it is the cumulative contribution of emissions from existing and new development that is accounted for in the photochemical model. Ozone concentrations vary widely throughout the day and year even with the same amount of daily emissions. The SJVAPCD indicated in an Amicus Brief on Friant Ranch that running the photochemical model with just Friant Ranch emissions (109.5 tons/year NO_X) is not likely to yield valid information given the relative scale involved. A copy of the SJVAPCD brief is included in Appendix B. The NO_X inventory for the San Joaquin Valley is 224 tons per day in 2019 or 81,760 tons per year. Friant Ranch would result in 0.13 percent increase in NO_X emissions. A project emitting at the SJVAPCD CEQA threshold of 10 tons per year would result in a 0.01 percent increase in NO_X emissions. Most project emissions are generated by motor vehicle travel distributed on regional roadways miles from the project site, and these emissions are not conducive to project-level modeling.

Emissions throughout the San Joaquin Valley are projected to markedly decline in the coming decade. The SJVAPCD 2016 Ozone Plan predicts NO_X emissions will decline to 103 tons per day by 2029 or 54 percent from 2019 levels through implementation of control measures included in the plan. This means that ozone health impacts to residents of the San Joaquin Valley will be lower than currently experienced and most areas of the San Joaquin Valley will have attained ozone air quality standards. The plan accounts for growth in population at rates projected by the State of California for the San Joaquin Valley, so only cumulative projects that would exceed regional growth projections would potentially delay attainment and prolong the time and the number of people would experience health impacts. It is unlikely that anyone would experience greater impacts from regional emissions than currently occur. The federal transportation conformity regulation provides a means of ensuring growth in emissions does not exceed emission budgets for each County. Regional Transportation Plans and Regional Transportation Improvement Plans must provide a conformity analysis based on the latest planning assumptions that demonstrates that budgets will be not be exceeded. If budgets are exceeded, the San Joaquin Valley may be subject to Clean Air Act sanctions until the deficiency is addressed.

Particulate emission impacts can be localized and regional. Particulates can be directly emitted and can be formed in the atmosphere with chemical reactions. Small directly emitted particles such as diesel emissions and other combustion emissions can remain in the atmosphere for a long time and can be transported over long distances. Large particles such as fugitive dust tend to be deposited a short distance from where emitted but can also travel long distances during periods of high winds. Particulates can be washed out of the atmosphere by rain and deposited on surfaces. Secondary particulates formed in the atmosphere such as ammonium nitrate require NO_X and ammonia, and they require low inversion levels and certain ranges of temperature and humidity to result in substantial concentrations. These complications make modeling project particulate emissions to determine concentration feasible only for directly emitted particles at receptor locations close to the project site. Regional particulate concentrations are modeled using a gridded inventory (emissions in tons/day are placed a 4-kilometer, three-dimensional grid to spatially allocate the emissions geographically and vertically in the atmosphere) and an atmospheric chemistry component to simulate the chemical reactions. The model uses relative reduction factors to determine the amount of reductions of each PM component will be needed to attain the air quality standards on the days with the conditions most favorable to high particulate concentrations. A small project would not produce sufficient emissions to determine a project's individual contribution to the particulate concentration.

Step 3: Cumulative Health Impacts

The Air Basin is in nonattainment for ozone, PM_{10} (State only), and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 1. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the

population would experience health effects. Table 2, Table 3, and Table 4 relate the pollutant concentration experienced by residents using air quality data for the nearest air monitoring station to the health impacts ascribed to those concentrations by the EPA Air Quality Index. This provides a more detailed look at the actual impacts currently experienced by area residents.

Since the Basin is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The SJVAPCD regional thresholds for NO_X, VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would have a cumulatively considerable health impact. As shown in Table 10 and Table 11, the regional analysis of construction and operational emissions indicates that the project would not exceed the District's significance thresholds and the project is consistent with the applicable Air Quality

The SJVAPCD Air Quality Attainment Plans predict that nonattainment pollutant emissions will continue to decline each year as regulations adopted to reduce these emissions are implemented, accounting for growth projected for the region. Therefore, the cumulative health impact will also decline even with the project's emission contribution.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

5.2.3 - Sensitive Receptors

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis

Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The closest off-site sensitive receptors are existing residences located adjacent to the project site to the north, east, south, and west. As a residential land use development project, proposed residences included as part of the project would be considered sensitive receptors once occupied.

Off-site Sensitive Receptors

Impacts to receptors located outside the project boundaries would occur primarily during project construction. Construction emissions commencing with the year 2020 and continue until project buildout. Based on the applicant-provided conceptual construction schedule, construction is expected to last approximately four years. For criteria pollutants, impacts to receptors located outside of the project are based on emissions during the highest emissions during any construction year. As shown in Table 12 and Table 13, emissions generated from construction and operation of the project are less than SJVAPCD screening criteria. Therefore, this impact is less than significant.

On-site Sensitive Receptors

The project is not a significant source of TAC emissions. Construction activities produce short-term emissions that would not contribute substantially to cancer risk, which is estimated on a 70-year exposure period.

Construction: ROG

ROG is emitted during the application of architectural coatings (painting). The amount emitted is dependent on the amount of ROG (or VOC) in the paint. ROG emissions are typically an indoor air quality health hazard concern rather than an outdoor air quality health hazard concern. Therefore, exposure to ROG during architectural coatings is a less than significant health impact.

There are three types of asphalt that are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, SJVAPCD Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of 3 percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Residents are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to nearby sensitive receptors from ROG during construction would be less than significant.

Localized Pollutant Screening Analysis

Emissions occurring at or near the project have the potential to create a localized impact, also referred to as an air pollutant hotspot. Localized emissions are considered significant if, when combined with background emissions, they would result in exceedance of any health-based air quality standard. The impact from localized pollutants is based on the impact to the nearest sensitive receptor.

The SJVAPCD's GAMAQI includes screening thresholds for identifying projects that need detailed analysis for localized impacts. Projects with on-site emission increases from construction activities or operational activities that exceed the 100 pounds per day screening level of any criteria pollutant

after compliance with Rule 9510 and implementation of all enforceable mitigation measures would require preparation of an ambient air quality analysis. The criteria pollutants of concern for localized impact in the SJVAB are PM_{10}, $PM_{2.5}$, NO_X, and CO. There is no localized emission standard for ROG and most types of ROG are not toxic and have no health-based standard; however, ROG was included for informational purposes only.

The highest daily emissions occur during project grading activities except for ROG emissions, which are highest during application of architectural coatings. The results of the construction screening analysis are presented in Table 12.

Table 12: Maximum Daily Air Pollutant Emissions during Construction

	Emissions (pounds per day)				
Maximum Daily Emissions by Year	**ROG**	**NO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Construction 2020	4.59	**51.67**	**32.78**	10.48	**6.53**
Construction 2021	4.32	47.75	31.64	**11.04**	4.72
Construction 2022	1.67	14.97	15.57	1.01	0.76
Construction 2023	1.54	13.67	15.38	0.91	0.67
Construction 2024	**19.90**	12.81	15.25	0.83	0.60
Highest Emissions in Any Year	**19.90**	**51.67**	**32.78**	**11.04**	**6.53**
Screening Thresholds	100	100	100	100	100
Exceeds Threshold (Yes or No)	No	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
N/A = Not applicable
Emissions were highest in the summer run for ROG and CO, while emissions for NO_X were higher in the winter run.
Emissions in the highest years are in **bold**. There is no ambient air quality standard for ROG.
Source: CalEEMod output (Appendix A).

Maximum Daily Operational Emissions

An analysis of maximum daily emissions during operation was conducted to determine if emissions would exceed 100 pounds per day for any pollutant of concern. The maximum daily operational emissions would occur at project buildout. The built-out project was modeled for 2023, which is the estimated year of first occupancy. This is considered conservative because emissions decline each year and will be lower if a later buildout year is assumed. Operational emissions include emissions generated on-site by area sources such as natural gas combustion and landscape maintenance, and off-site by motor vehicles accessing the project. Most motor vehicle emissions would occur distant from the site and would not contribute to a violation of ambient air quality standards; therefore, operational emissions reflect a very conservative assumption. The results of the screening analysis are presented in Table 13.

Table 13: Maximum Daily Air Pollutant Emissions during Operations

Maximum Daily Emissions per Source Category and Phase	Emissions (pounds per day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	3.47	1.30	6.58	0.13	0.13
Energy	0.06	0.49	0.21	0.04	0.04
Mobile	1.45	3.69	13.50	4.10	1.12
Total	**4.98**	**5.48**	**20.29**	**4.28**	**1.29**
Screening threshold	100	100	100	100	100
Exceed screening threshold?	No	No	No	No	No

Notes:
NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
N/A = Not applicable
Emissions were highest in the summer run for ROG and CO, while emissions for NO_X were higher in the winter run. There is no ambient air quality standard for ROG.
Source: CalEEMod output (Appendix A).

The project would not exceed SJVAPCD screening thresholds for localized operational criteria pollutant impacts; therefore, the project's localized criteria pollutant impacts would be less than significant.

Operation: ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across miles and miles of roadway and in the air. The concentrations would not be great enough to result in direct health effects.

Operation: PM_{10}, $PM_{2.5}$, CO, NO_2

As shown in Table 13, localized emissions of PM_{10}, $PM_{2.5}$, CO, and NO_2 would not exceed the SJVAPCD screening thresholds at full project build-out. Residential development is an insignificant source of these pollutants, except for projects that allow woodburning devices that emit PM_{10}, $PM_{2.5}$ in wood smoke. The project will include only natural gas-fueled fireplaces and inserts that are insignificant sources of $PM_{2.5}$ and PM_{10}. Therefore, the project would not expose sensitive receptors to substantial criteria air pollutant concentrations during operation.

Carbon Monoxide Hot Spot Analysis

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The SJVAPCD provides screening criteria to determine when to quantify local CO concentrations based on impacts to the level of service (LOS) of intersections in the project vicinity.

The construction of the project would result in minor increases in traffic for the surrounding road network during the duration of construction. Motor vehicles accessing the site when it becomes operational would result in a minor increase in daily trips that would not substantially reduce the LOS. Furthermore, local roadways are not identified as operating at unacceptable conditions under

existing and future buildout conditions, according the City of Clovis General Plan. In addition, the highest background 8-hour average CO concentration during the latest year it was monitored is 2.06 ppm, which is 78 percent lower than the CAAQS of 9.0 ppm or the NAAQS of 9 ppm. Therefore, the project would not significantly contribute to an exceedance of state or federal CO standards.

Therefore, the project would not significantly contribute to an exceedance of state or federal CO standards.

Operation: Toxic Air Contaminants

The ARB Air Quality and Land Use Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. In the *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) (Case No. S213478) the California Supreme Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions." Although the Court ruled that impacts from the existing environment on projects are not required to be addressed under CEQA, land uses such as gasoline stations, dry cleaners, distribution centers, and auto body shops can expose residents to high levels of TAC emissions if they are in proximity of the project site. Information regarding the location of existing TAC sources is provided for disclosure purposes only and not as a measure of the project's significance under CEQA.

Consistency with these recommendations is assessed as follows:

- Heavily traveled roads. ARB recommends avoiding new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. Epidemiological studies indicate that the distance from the roadway and truck traffic densities were key factors in the correlation of health effects, particularly in children. The project is located on the south side of East Teague Avenue between North Sunnyside Avenue and North Fowler Avenue. No traffic volume data is available for Sunnyside Avenue and Teague Avenue. The traffic volume on North Fowler Avenue south of East Shepherd Avenue was 6,110 trips per day in 2005. The traffic volume for East Nees Avenue near the project was 7,511 trips per day in 2005. No roads serving the project would exceed this criterion (Kittleson 2019).
- Distribution centers. ARB also recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center. The project is not located within 1,000 feet of a distribution center.
- Fueling stations. ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (a facility with a throughput of 3.6 million gallons per year or greater). ARB recommends a 50-foot separation is recommended for typical gas dispensing facilities. The nearest gas station is located at 1175 North Fowler Avenue, approximately 0.9 mile south of the project site.

- Dry cleaning operations. ARB recommends avoiding siting new sensitive land uses within 300 feet of any dry-cleaning operation that uses perchloroethylene. For operations with two or more machines, ARB recommends a buffer of 500 feet. For operations with three or more machines, ARB recommends consultation with the local air district. The nearest dry-cleaning operation is approximately 1.9 miles south the project site at 1865 E. Herndon Avenue.
- Auto body shops. Auto body shops have the potential to emit TACs related to painting. The nearest auto body shop is located at 157 N. Sunnyside Avenue approximately 2.0 miles south of the project site, which is beyond the distance that would result in a measurable impact.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley fever. By geographic region, hospitalizations for Valley fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley fever died (CDC 2009). California experienced 7,466 new cases of Valley fever in 2017. A total of 275 Valley fever cases were reported in Fresno County in 2017 for a rate of 82.4 per 100,000 people (CDPH 2018).

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils
4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils
8) Sandy, well-aerated soil with relatively high water-holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g. grassy lawns)
3) Higher elevations (above 7,000 feet)
4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms
8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000).

The project site is situated in a city growth area. The project includes urbanization of a site that was formerly used for agricultural purposes. Therefore, implementation of the project would have a low probability of the site having *C. immitis* growth sites and exposure to the spores from disturbed soil.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The project will minimize the generation of fugitive dust during construction activities by complying with the District's Regulation VIII. Therefore, this regulation, combined with the relatively low probability of the presence of *C. immitis* spores, would reduce Valley fever impacts to less than significant.

During operations, dust emissions are anticipated to be negligible, because most of the project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the project from providing habitat suitable for *C. immitis* spores and for generating fugitive dust that may contribute to Valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

According to a map of areas where naturally occurring asbestos in California are likely to occur (U.S. Geological Survey 2011), there are no such areas in the project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant.

In summary, the project would not exceed SJVAPCD localized emission daily screening levels for any criteria pollutant. The project is not a significant source of TAC emissions during construction or operation. The project is not in an area with suitable habitat for Valley fever spores and is not in area known to have naturally occurring asbestos. Therefore, the project would not result in significant impacts to sensitive receptors.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

5.2.4 - Objectionable Odors

Impact AIR-4: The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

Thresholds of Significance

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. According to the *CBIA v. BAAQMD* ruling, impacts of existing sources of odors on the project are not subject to CEQA review. Therefore, the analysis to determine if the project would locate new sensitive receptors near an existing source of odor is provided for information only. The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in Table 14.

Table 14: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: SJVAPCD 2015a.	

According to the SJVAPCD GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and

- **Receivers:** residential or other sensitive receptor projects or other projects built for the intent of attracting people located near existing odor sources.

Project Analysis

Project as a Generator

Land uses that are typically identified as sources of objectionable odors include landfills, transfer stations, sewage treatment plants, wastewater pump stations, composting facilities, feed lots, coffee roasters, asphalt batch plants, and rendering plants. The project would not engage in any of these activities. Therefore, the project would not be considered a generator of objectionable odors during operations.

During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and would not likely be noticeable for extended periods of time beyond the project's site boundaries. The potential for diesel odor impacts would therefore be less than significant.

Project as a Receiver

With the *CBIA v. BAAQMD* ruling, analysis of odor impacts on receivers is not required for CEQA compliance. Therefore, the following analysis is provided for information only.

As a residential development, the project has the potential to place sensitive receptors near existing odor sources. There are no major odor-generating sources (as listed in Table 14) within screening distance of the site. Therefore, the uses in the vicinity of the project would not cause substantial odor impacts to the project.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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SECTION 6: GREENHOUSE GAS IMPACT ANALYSIS

6.1—CEQA Guidelines

CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on GHGs, the type, level, and impact of emissions generated by the project must be evaluated.

The following GHG significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

6.2—Impact Analysis

6.2.1 - Greenhouse Gas Inventory

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.

Impact Analysis

Threshold of Significance

Section 15064.4(b) of the CEQA Guidelines' 2018 amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term

climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

The City of Clovis has not adopted its own GHG thresholds or prepared a Climate Action Plan that can be used as a basis for determining project significance; however, General Plan PEIR Mitigation Measure 7-1 requires applicants to meet a 29 percent reduction from BAU in accordance with SJVAPCD methodologies. The SJVAPCD's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* includes thresholds based on whether the project will reduce or mitigate GHG levels by 29 percent from BAU levels compared with 2005 levels by 2020 (SJVAPCD 2009b). This level of GHG reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008. First occupancy at the project site is expected to occur in 2023 with full buildout in 2024. This date is beyond the AB 32 2020 milestone year, so a new approach based on continued progress toward later goals is included in this analysis.

The General Plan PEIR GHG analysis based significance on achieving a reduction from BAU of 29 percent at project buildout in 2035. Mitigation Measure 7-1 does not differentiate between analysis of projects pre-2020 and post-2020 with its 29 percent reduction from BAU. Therefore, an analysis of the project's reduction from BAU based on emissions in 2030 compared with the 29 percent reduction as one measure of significance was prepared. This approach provides estimates of project emissions in the new milestone year with the existing threshold to address Considerations 1 and 2 above.

The 29 percent GHG reduction level is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008. The GHG reduction level for the State to reach 1990 emission levels by 2020 was reduced to 21.7 percent from BAU in 2020 in the 2014 First Update to the Scoping Plan to account for slower than projected growth after the 2008 recession (ARB 2014). In addition, the State has reported that the 2016 greenhouse gas inventory was below the 2020 target for the first time (ARB 2018). Furthermore, the 2017 Scoping Plan states that California is on track to achieve the 2020 target (ARB 2017c). First occupancy at the project site is expected to occur in 2023, which is after the AB 32 target year. Until a new threshold or BPS are identified for projects constructed after-2020, significance is based on making continued progress toward the SB 32 2030 goal.

A quantitative analysis was prepared for this project to determine the extent to which it may increase or reduce greenhouse gas emissions as compared to the existing environmental setting to fulfill Consideration 1 and 2.

Newhall Ranch

On November 30, 2015, the California Supreme Court issued its decision in *Newhall Ranch,* invalidating the GHG analysis for a large master planned residential development in Los Angeles County consisting of over 20,000 residential dwelling units and other uses. In particular, the Court upheld: (1) use of the statewide emissions reduction goal in AB 32 as a significance criterion (pp. 15–19), (2) use of the Scoping Plan's BAU model "as a comparative tool for evaluating efficiency and conservation efforts" of the Project (pp. 18–19), and (3) a comparison of the project's expected emissions to a BAU model rather than a baseline of pre-project conditions (pp. 15–19). The Court invalidated the GHG analysis on the grounds that the "administrative record discloses no substantial evidence that the Newhall Ranch's

project-level reduction of 31 percent in comparison to [BAU] is consistent with achieving AB 32's statewide goal of a 29 percent reduction from [BAU]." The Court indicated that a lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals. The Court suggested a lead agency could examine the "data behind the Scoping Plan's business-as-usual model" to determine the necessary project-level reductions from new land use development at the proposed location (p. 25). A lead agency "might assess consistency with A.B. 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities."

The substantial evidence needed to support a project BAU threshold can be derived from data used to develop the Scoping Plan inventory and control strategy, and from analysis conducted by the ARB to track progress in achieving the AB 32 2020 target. The critical factor in determining the appropriate project threshold is whether the State requires additional reductions beyond those achieved by existing regulations in order to achieve its target. If no additional reductions are required from individual projects, no nexus exists to require a project to mitigate its emissions. In that case, the percentage reductions achieved by projects through compliance with regulations is the amount needed to reach the AB 32 target.

The State's regulatory program implementing the 2008 Scoping Plan is now fully mature. All regulations envisioned in the Scoping Plan have been adopted by the responsible agencies and the effectiveness of those regulations have been estimated by the agencies during the adoption process and then are tracked to verify their effectiveness after implementation. The combined effect of this successful effort is that the State now projects that it will meet the 2020 target and achieve continued progress toward meeting post-2020 targets. Governor Brown, in the introduction to Executive Order B-30-15, states "California is on track to meet or exceed the current target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32)."

The Supreme Court was concerned that new development may need to do more than existing development to reduce GHGs to demonstrate that it is doing its fair share of reductions. As will be shown below, new development does do more than existing development and, because of the nature of the sources of GHG emissions related to development, existing development is equally responsible for reducing emissions from the most important sources of emissions. It is important to note that most of the State's regulatory program applies to both new and existing development.

The Scoping Plan reduction from BAU accounts for growth projected in the State and assumes that existing development would continue to emit GHGs at the same rate that occurred in the base year (2002-2004 average). The California Department of Finance (DOF) Report E-5 predicts that population growth in California from 2005 to 2020 will be 13.2 percent. This means that development that existed in 2005 will produce nearly 87 percent of the State's emissions in 2020. Conversely, new development is only responsible for about 13 percent of the emissions generated during this timeframe. If measures to reduce emissions from existing development were not available, new development could not provide sufficient reductions to reach the 2020 target even if their emissions were reduced to net zero. This continues to apply to the 2030 target. The DOF forecasts California's population will grow by 8.1 percent between 2020 and 2030, so existing development will be responsible for 92 percent of the emissions that occur in 2030.

The State's regulatory program is able to target both new and existing development because the two most important strategies—motor vehicle fuel efficiency and emissions from electricity generation—obtain reductions equally from existing and new sources. This is because all vehicle operators use cleaner low carbon fuels and buy vehicles subject to the fuel efficiency regulations, and all building owners or operators purchase cleaner energy from the grid that is produced by increasing percentages of renewable fuels. This includes regulations on mobile sources such as: The Pavley standards that apply to all vehicles purchased in California, the Low Carbon Fuel Standard (LCFS) that applies to all fuel used in California, and the Renewable Portfolio Standard and Renewable Energy Standard that apply to utilities providing electricity to all California homes and businesses. The reduction strategy where new development is required to do more than existing development is building energy efficiency and energy use related to water conservation regulations. For example, new projects are subject to Title 24 Energy Efficiency standards and CALGreen Code and Model Water Efficient Landscape Ordinance (MWELO) water conservation requirements. Residential buildings constructed to the 2013 Title 24 standards use 25 percent less energy than buildings complying with the 2008 standards. The version of Title 24 effective January 1, 2017 improves energy efficiency in residential buildings by 28 percent compared to the 2013 Title 24 standards and 46 percent compared with 2008 Title 24 standards. New buildings and landscapes are much more energy efficient and water efficient than the development that has been built over the past decades and will require much less energy. The 2019 Title 24 standards which become effective in January 2020 makes progress toward achieving net zero energy use through requirements for on-site renewable generation for most projects. The project buildings would be constructed after 2020 and would be required to comply with 2019 Title 24 standards.

As described above, the State requires an average reduction from all sources of the emission inventory of 21.7 percent to achieve the 2020 target. The Scoping Plan strategy will achieve greater than average reductions from energy and mobile source sectors that are the primary sources related to development projects, and lower than average reductions from other sources such as agriculture. The amount of reduction estimated by the ARB for each sector was based on technical feasibility and cost effectiveness. Review of the 2008 Scoping Plan inventory and strategy shows that the reduction from all development related sources is approximately 29 percent from BAU in order to make up for the below average sectors and achieve the required 21.7 percent average reduction. Achieving the SB 32 2030 target will require an approximate 40 percent reduction from 2020 levels assuming the State achieves the AB 32 target. The 2017 Scoping Plan Update identifies a range of reduction amounts expected from each emission sector, but an amount needed for development's fair share of reductions have not been determined.

As suggested by the Court, a project BAU analysis was prepared for this project that assesses "consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities." The analysis shows the extent to which the project complies with adopted regulations and the additional amount that will be achieved through project design features. At this point in time, no additional reductions are required from new development beyond regulations for the State to achieve its 2020 target. The recently adopted 2030 target will require a reduction from 431 $MTCO_2e$ to 260 $MTCO_2e$ or 40 percent from 1990 levels. After accounting for projected growth of approximately 0.8 percent per year an average decrease of 5.2 percent per year from the State GHG inventory will be required to achieve the target. The 2017 Scoping Plan Update includes a strategy for achieving the needed

reductions, but does not identify an amount required specifically from new development. However, all GHG emission sources within development projects are subject to GHG regulations.

Therefore, this analysis demonstrates consistency with the existing 2020 target and shows progress toward achieving the 2030 target. The quantitative analysis prepared for the project provides the reduction from BAU in the 2030 target year to show the progress anticipated prior to applying reductions from new strategies contained in the 2017 Scoping Plan Update. The new reduction strategies from the plan are designed to close the gap between existing commitments and those needed to achieve the 2030 target, but many of the strategies must go through a regulatory process to be implemented. Therefore, the amount of reductions needed from new development beyond regulations, if any, is uncertain.

The analysis prepared for the project also includes qualitative assessments of compliance with 2008 Scoping Plan, the 2017 Scoping Plan Update, and City of Clovis General Plan to support GHG significance findings under Impact GHG-2.

To determine significance, the analysis first quantifies project-related GHG emissions under a BAU scenario, and then compares these emissions with emissions that would occur when all project-related design features are accounted for, and when compliance with applicable regulatory measures is assumed. The standard and methodology is explained in further detail below.

Impact Analysis

Construction

Total GHG emissions generated during all phases of construction were combined and are presented in Table 15. The SJVAPCD does not recommend assessing the significance of construction-related emissions. However, other jurisdictions, such as the SCAQMD and the SMAQMD, have concluded that construction emissions should be included since they may remain in the atmosphere for years after construction is complete. In order to account for the construction emissions, amortization of the total emissions generated during construction were based on the life of the development (residential—30 years) and added to the operational emissions.

Table 15: Construction Greenhouse Gas Emissions

Year	$MTCO_2e$ per year
2020	280.10
2021	194.90
2022	322.97
2023	321.50
2024	253.19
Total	**1,372.66**
Amortized over 30 years	***45.76***

Notes:
Calculation totals use unrounded numbers from CalEEMod output.
$MTCO_2e$ = metric tons of carbon dioxide equivalents
Source: CalEEMod output (Appendix A).

Operation

Operational or long-term emissions occur over the life of the project. Sources of emissions may include motor vehicles and trucks, energy usage, water usage, waste generation, and area sources, such as landscaping activities and residential wood burning.

Business As Usual Operational Emissions

Operational emissions under the BAU scenario were modeled using CalEEMod 2016.3.2. Modeling assumptions for the year 2005 were used to represent 2023 and 2030 BAU conditions (without the benefit of regulations adopted to reduce GHG emissions). The SJVAPCD guidance recommends using emissions in 2002–2004 in the baseline scenario to represent conditions—as if regulations had not been adopted -to allow the effect of projected growth on achieving reduction targets to be clearly defined. CalEEMod defaults were used for project energy usage, water usage, waste generation, and area sources (architectural coating, consumer products, and landscaping). The vehicle fleet mix was revised to reflect the residential fleet mix approved by SJVAPCD for the year of first occupancy, which is expected to occur in 2023. Full assumptions and CalEEMod model outputs are provided in Appendix A.

2023 and 2030 Operational Emissions

Operational emissions were modeled for the years 2023 and 2030 using CalEEMod. CalEEMod assumes compliance with some, but not all, applicable rules and regulations regarding energy efficiency, vehicle fuel efficiency, renewable energy usage, and other GHG reduction policies, as described in the CalEEMod User's Guide (SCAQMD 2017). The reductions obtained from each regulation and the source of the reduction amount used in the analysis are described below.

Emissions Accounting for Applicable Regulations

The following regulations are incorporated into the CalEEMod emission factors:

- Pavley I and Pavley II (LEV III) motor vehicle emission standards
- ARB Medium and Heavy-Duty Vehicle Regulation
- 2005, 2008, 2013, and 2016 Title 24 Energy Efficiency Standards

The following regulations have not been incorporated into the CalEEMod emission factors and require alternative methods to account for emission reductions provided by the regulations:

- Renewable Portfolio Standards (RPS)
- Low Carbon Fuel Standard (LCFS)
- Green Building Code Standards (indoor water use)
- California Model Water Efficient Landscape Ordinance (Outdoor Water)

Pavley II/LEV III standards have been incorporated in the latest version of CalEEMod. ARB estimates a 3 percent reduction in 2020 and a 19 percent reduction from the vehicle categories subject to the regulation by 2030 (ARB 2010b and ARB 2013d).

The ARB GHG Regulation for Medium and Heavy-Duty Engines and Vehicles applies to trucks that will be accessing the project site. The benefits of the regulation were incorporated into CalEEMod 2016.3.2. The ARB estimates that this regulation will reduce GHG emissions from the affected vehicles by 7.2 percent (ARB 2013f).

The Low Carbon Fuel Standard (LCFS) is estimated to achieve a 10 percent reduction in emissions by 2020 and an 18 percent reduction by 2030 (ARB 2010). CalEEMod does not include credit for the LCFS.

Title 24 reductions for 2013 and 2016 updates were added to CalEEMod 2016.3.2. The California Energy Commission (CEC) estimates that 2013 Title 24 standards would result in an increase in energy efficiency of 25 percent in residential buildings compared to 2008 Title 24 (CEC 2014a). An additional 28 percent reduction from the 2008 standards have been claimed for compliance with 2016 Title 24. This results in a combined reduction of 46 percent (CEC 2015). Compliance with 2019 Title 24 is expected to reduce residential energy use by 7 percent beyond 2016 Title 24 (CEC 2018).

RPS is not accounted for in CalEEMod 2016.3.2. Reductions from RPS are addressed by revising the electricity emission intensity factor in CalEEMod to account for the utility RPS rate forecast for 2020 (CPUC 2016). PG&E provides emission factors for the electricity it provides to customers and projections for its energy portfolio for 2020 that is used to estimate project emissions. No data to reflect compliance in 2030 was included in the PG&E projections. The utilities will be required by SB 350 to increase the use of renewable energy sources to 50 percent, but details on individual utility compliance have not been determined.

Energy savings from water conservation resulting from the Green Building Code Standards for indoor water use and California Model Water Efficient Landscape Ordinance for outdoor water use are not included in CalEEMod. The Water Conservation Act of 2009 mandates a 20 percent reduction in urban water use that is implemented with these regulations (CDWR 2013). Benefits of the water conservation regulations are applied in the CalEEMod mitigation component.

Reductions in emissions from solid waste are based on the City achieving the CalRecycle 75 Percent Initiative by 2020 compared with a 50 percent baseline for 2005. Reductions are taken using the CalEEMod mitigation component.

Regulations applicable to project sources and the percent reduction anticipated from each source are shown in Table 16. The percentage reductions are only applied to the specific sources subject to the regulations. For example, the Pavley LEV Standards apply only to light duty cars and trucks.

Table 16: Reductions from Greenhouse Gas Regulations

Regulation	Project Applicability	Reduction Source	Percent Reduction in 2020 and 2030
Pavley Low Emission Vehicle Standards	Light-duty cars and trucks accessing the site are subject to the regulation.	CalEEMod defaults (Pavley I)	25.1[1]
		Adjusted GHG emission factor (Pavley II/LEV III) in CalEEMod.	3% 2020 19.5% 2030[2]
Truck and Bus Regulation	Heavy-duty trucks accessing the site for deliveries and services are subject to the regulation.	Adjusted GHG emission factors for the regulation in CalEEMod	7.2%[3]
Low Carbon Fuel Standard (LCFS)	Vehicles accessing the site will use fuel subject to the LCFS	CalEEMod defaults	10% 2020 18% 2030[1]

Table 16 (cont.): Reductions from Greenhouse Gas Regulations

Regulation	Project Applicability	Reduction Source	Percent Reduction in 2020 and 2030
Title 24 Energy Efficiency Standards	Project buildings will be constructed to meet the latest version of Title 24 (currently 2016). Reduction applies only to energy consumption subject to the regulation.	CalEEMod defaults	35%[4,5]
Green Building Code Standards	The project will include water conservation features required by the standard	CalEEMod mitigation component	20%[6]
Water Efficient Land Use Ordinance	The project landscaping will comply with the regulation	CalEEMod mitigation component	20%[7]
Renewable Portfolio Standard (RPS)	Electricity purchased for use at the project site is subject to the 33 percent RPS mandate	CalEEMod adjusted energy intensity factors with PG&E emission factors that show the company will exceed the 33 percent mandate.	54.5%[8]
Solid waste	The solid waste service provider will need to provide programs to increase diversion and recycling to meet the 75 percent mandate.	CalEEMod mitigation component	25%[9]

Notes:
Regulations are described in Section 2.3 Regulatory Environment. The source of the percentage reductions from each measure are from the following sources:
1 Pavley 1 + Low Carbon Fuel Standard Postprocessor Version 1.0 User's Guide (ARB 2010b)
2 ARB Staff Report for LEV III Amendments (ARB 2013e)
3 ARB Staff Report for GHG Regulations for Medium and Heavy-Duty Engines and Vehicles (ARB 2013f)
4 California Energy Commission News Release: New Title 24 Standards Will Cut Residential Energy Use by 25 Percent, Save Water, and Reduce Greenhouse Gas Emissions (CEC 2014b)
5 California Energy Commission Adoption Hearing Presentation: 2016 Buildings Energy Efficiency Standards (CEC 2015)
6 2013 California Green Building Standards Code Section 5.303.2
7 California Water Plan Update 2013 (CDWR 2013)
8 Based on CalEEMod default PG&E rate for 2005 and PG&E projected emission factor for 2020
9 CalRecycle 75 Percent Initiative: Defining the Future (2016b)

In addition to rules and regulations, the project would incorporate design features and would obtain benefits from its location and infrastructure that would reduce project VMT compared with default values. The project would construct pedestrian infrastructure connecting to adjacent land uses. In addition, the project would provide electrical outlets for landscaping equipment that would be used in accordance with statewide usage rates for this type of equipment. The project is located approximately 3.2 miles from existing development in Downtown Clovis providing shorter than average trip lengths to important destinations.

Note that CalEEMod nominally treats these design elements and conditions as "mitigation measures," despite their inclusion in the project description. Therefore, reported operational emissions are considered to represent unmitigated project conditions. Full assumptions and model outputs are provided in Appendix A and results of this analysis for 2023 are presented in Table 17. A second analysis for 2030 is presented in Table 18.

Table 17: Project Operational Greenhouse Gases 2023

Source	Emissions ($MTCO_2e$ per year)		
	Business as Usual	2023 (with Regulation and Design Features)	Percent Reduction
Area	226.63	59.54	73.7%
Energy	293.19	595.79	34.7%
Mobile	912.52	661.99	27.5%
Waste	38.38	28.79	25.0%
Water	17.29	9.14	47.1%
Amortized Construction Emissions	45.76	45.76	0.0%
Total	**1,533.77**	**928.77**	**39.4%**
Reduction from BAU		**605.00**	—
Percent Reduction		**39.4%**	—
Significance Threshold		**29.0%**	—
Are emissions significant?		**No**	

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
The project achieves the SJVAPCD 29 percent reduction from BAU threshold and the 21.7 percent required to show consistency with AB 32 targets.
Source: CalEEMod output (Appendix A).

As shown in Table 17, the project would achieve a reduction of 39.4 percent from BAU by the year 2023 with regulations and design features incorporated. This is 10.4 percent above the 29 percent reduction required by the SJVAPCD threshold, and 17.7 percent beyond the 21.7 percent average reduction from all sources of GHG emissions now required to achieve AB 32 targets. The ARB originally identified a reduction of 29 percent from BAU as needed to achieve AB 32 targets. The 2008 recession and slower growth in the years since 2008 have reduced the growth forecasted for 2020, and the amount needed to be reduced to achieve 1990 levels as required by AB 32. The California Department of Finance (DOF) population forecast for 2020 to 2030 predicts growth in the State of 8.1 percent by the 2030 target year or 0.8 percent per year (DOF 2017).

The project includes design features that would result in reductions in energy use and support walking and bicycling. Measures that are part of the project design do not require additional mitigation measures to ensure they are accomplished.

The 39.4 percent reduction from BAU is 17.7 percent beyond the average reduction required by the State from all sources to achieve the AB 32 2020 target and therefore addresses the concern expressed in Newhall Ranch that projects should likely do more than the average to ensure they are providing a fair share of emission reductions.

Since the project buildout would occur after 2020, additional analysis summarized in Table 18 was prepared to show consistency with SB 32 2030 target.

Table 18: Project Operational Greenhouse Gases 2030

Source	Emissions ($MTCO_2e$ per year)		
	Business as Usual	2030 (with Regulation and Design Features)	Percent Reduction
Area	226.63	59.54	73.7%
Energy	293.19	189.76	35.3%
Mobile	912.52	446.70	51.0%
Waste	38.38	28.79	25.0%
Water	17.29	9.14	47.1%
Amortized Construction Emissions	45.76	45.76	0.0%
Total	**1,533.77**	**779.69**	**49.2%**
Reduction from BAU		**754.08**	—
Percent Reduction		**49.2%**	—
Significance Threshold		**29.0%**	—
Are emissions significant?		**No**	

Notes:
$MTCO_2e$ = metric tons of carbon dioxide equivalents
The project achieves the SJVAPCD 29 percent reduction from BAU threshold and the 21.7 percent required to show consistency with AB 32 targets. No new target has been set for 2030.
Source: CalEEMod output (Appendix A).

As shown in Table 18, the project would exceed the 21.7 percent reduction required by the State to achieve the 2020 target by 27.5 percent and the SJVAPCD 29.0 percent target by 20.2 percent. No new threshold has been adopted by the SJVAPCD or the City of Clovis for the 2030 target, so in the interim the project must make continued progress toward the 2030 goal.

The analysis presented above does not include new strategies proposed in the 2017 Scoping Plan Update. The update was adopted in December 2017. The update provides alternatives in terms of their likelihood of implementation and ranges of reduction from the strategies. Measures already authorized by legislation are highly likely to be implemented, while measures requiring new legislation are less likely to go forward. The State is highly likely to incorporate zero net energy buildings in future updates to Title 24. A new round of motor vehicle fuel efficiency standards beyond 2025 when LEV III standards are at their maximum reduction level is highly likely. Changing

heavy-duty trucks and off-road equipment to alternative fuels face greater technological hurdles and are less likely to provide dramatic reductions by 2030.

The 2030 emission limit is 260 $MMTCO_2e$. The ARB estimates that the 2030 BAU (reference) Inventory will be 392 $MMTCO_2e$—a reduction of 132 $MMCO_2e$, including existing policies and programs but not including known commitments that are already underway. The 2017 Scoping Plan Update includes the estimated GHG emissions by sector compared with 1990 levels that is presented in Table 19. The proposed plan would achieve the bulk of the reductions from Electric Power, Industrial fuel combustion, and Transportation. Cap-and-Trade would provide between 10 and 20 percent of the required reductions depending on the amounts achieved by the other reduction measures.

Table 19: 2017 Scoping Plan Update Estimated Change in GHG Emissions by Sector

Scoping Plan Sector	Emissions ($MMTCO_2e$ per year)		
	1990	2030 Proposed Plan Ranges	Percent Change form 1990
Agriculture	26	24–25	-4 to -8
Residential and Commercial	44	38–40	-9 to -14
Electric Power	108	42–62	-43 to -61
High GWP	3	8–11	167 to 267
Industrial	98	77–87	-11 to -21
Recycling and Waste	7	8–9	14 to 29
Transportation (including TCU)	152	103–111	-27 to -32
Net Sink	-7	TBD	TBD
Subtotal	**431**	**300–345**	**-20 to -30**
Cap-and-Trade Program	N/A	40–85	N/A
Total	**431**	**260**	**-40**
ARB 2017 Scoping Plan Update (ARB 2017)			

Although 2017 Scoping Plan Update focuses on state agency actions necessary to achieve the 2030 GHG limit, the ARB considers local governments essential partners in achieving California's goals to reduce GHG emissions. The 2030 target will require an increase in the rate of emission reductions compared to what was needed to achieve the 2020 limit, and this will require action and collaboration at all levels, including local government action to complement and support State-level actions. For individual projects, the 2017 Scoping Plan Update suggests that all new land use development implement all feasible measures to reduce GHG emissions. The Scoping Plan does not define all feasible measures or attribute an amount of reductions required from new development beyond compliance with regulations. When requiring mitigation of a project's fair share of a cumulative impact, the Lead Agency must show the nexus between the project contribution and its fair share of mitigation to reduce the impact to less than cumulatively considerable. A threshold based on local support and collaboration with State actions as described in the 2017 Scoping Plan Update does not lend itself to a quantitative determination of fair share. Requiring developers and

future residents of the development to fully mitigate emissions without accounting for compliance with regulations would result in double mitigation, first by the developer and then by the residents purchasing electricity, fuel, and vehicles compliant with regulations in effect at the time of purchase and beyond that would violate constitutional nexus requirements.

In conclusion, the project would achieve reductions 17.7 percent beyond the ARB 2020 21.7 percent target and 10.4 percent beyond the SJVAPCD 29 percent reduction from BAU requirements from adopted regulations and on-site design features. No new threshold has been adopted by the City for the SB 32 2030 target. Based on this progress and the strong likelihood that the measures included in the 2017 Scoping Plan Update will be implemented, it is reasonable to conclude that the project is consistent with the 2017 Scoping Plan and will contribute a reasonable fair-share contribution to achieving the 2030 target. The fair share may very well be achieved through compliance with increasingly stringent State regulations that apply to new development, such as Title 24 and CALGreen; regulations on energy production, fuels, and motor vehicles that apply to both new and existing development; and voluntary actions to improve energy efficiency in existing development. In addition, compliance with the VMT targets adopted to comply with SB 375 and implemented through the RTP/SCS may be considered to adequately address GHG emissions from passenger cars and light-duty trucks. As shown in Table 19, the State strategy relies on the Cap-and-Trade Program to make up any shortfalls that may occur from the other regulatory strategies. The costs of Cap-and-Trade emission reductions will ultimately be passed on to the consumers of fuels, electricity and products produced by regulated industries which include future residents of development projects and other purchasers of products and services. Therefore, the impact in terms of Considerations #1 and #2 would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

6.2.2 - Greenhouse Gas Reduction Plans

Impact GHG-2: The project would not conflict with any applicable plan, policy, or regulation of an agency adopted to reduce the emissions of greenhouse gases.

Impact Analysis

The following analysis assesses the project's compliance with Consideration #3 regarding consistency with adopted plans to reduce GHG emissions. The City of Clovis has not adopted a GHG reduction plan. In addition, the City has not completed the GHG inventory, benchmarking, or goal-setting process required to identify a reduction target and take advantage of the streamlining provisions contained in the CEQA Guidelines amendments adopted for SB 97 and clarifications provided in the CEQA Guidelines amendments adopted on December 28, 2018. The SJVAPCD has adopted a Climate Action Plan, but it does not contain measures that are applicable to development projects.

Therefore, the SJVAPCD Climate Action Plan cannot be applied to the project. Since no other local or regional Climate Action Plan is in place, the project is assessed for its consistency with ARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with Scoping Plan measures contained in the 2008 Scoping Plan and the 2017 Scoping Plan Update.

Although the City of Clovis General Plan does not meet the CEQA Guidelines 15064.4(b)(3) requirements for an applicable plan to reduce GHG emissions, it contains policies intended to reduce vehicle travel and energy use that would provide GHG reductions. Therefore, the project's consistency with the General Plan policies is also assessed.

AB 32 Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's GHG emissions, cutting approximately 30 percent from BAU emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020. As stated earlier, the ARB has updated its emission inventory forecasts and now estimates a reduction of 21.7 percent is required from BAU in 2020 to achieve AB 32 targets.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in Table 20, the project is consistent with most of the strategies, while others are not applicable to the project. As discussed earlier, the 2017 Scoping Plan Update strategies primarily rely on increasing the stringency of existing regulations with which the project would continue to comply, support through the project's design, and implementation of the General Plan goals and policies.

Table 20: Project Consistency with AB 32 Scoping Plan

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Transportation	California Cap-and-Trade Program Linked to Western Climate Initiative	Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanism October 20, 2015 (CCR 95800)	**Consistent.** The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers. However, the regulation indirectly affects people who use the products and services produced by these industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.
	California Light-Duty Vehicle Greenhouse Gas Standards	Pavley I 2005 Regulations to Control GHG Emissions from Motor Vehicles 2012 LEV III Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards	**Consistent**. This measure applies to all new vehicles starting with model year 2012. The project would not conflict with its implementation as it would apply to all new passenger vehicles purchased in California. Passenger vehicles, model year 2012 and later, associated with construction and operation of the project would be required to comply with the Pavley emissions standards.
	Low Carbon Fuel Standard.	2009 readopted in 2015. Regulations to Achieve Greenhouse Gas Emission Reductions Subarticle 7. Low Carbon Fuel Standard CCR 95480	**Consistent.** This measure applies to transportation fuels utilized by vehicles in California. The project would not conflict with implementation of this measure. Motor vehicles associated with construction and operation of the project would utilize low carbon transportation fuels as required under this measure.

Table 20 (cont.): Project Consistency with AB 32 Scoping Plan

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Regional Transportation-Related Greenhouse Gas Targets.	SB 375. Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28	**Consistent**. The project will provide residential development in the region that is consistent with the increased development densities promoted in the 2018 Regional Transportation Plan/Sustainable Communities Strategy (SCS). The project is not within an SCS priority area and so is not subject to requirements applicable to those areas.
	Goods Movement	Goods Movement Action Plan January 2007.	**Not applicable**. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
	Medium/Heavy-Duty Vehicles	2010 Amendments to the Truck and Bus Regulation, the Drayage Truck Regulation and the Tractor-Trailer Greenhouse Gas Regulation	**Consistent**. This measure applies to medium- and heavy-duty vehicles that operate in the State. The project would not conflict with implementation of this measure. Medium- and heavy-duty vehicles associated with construction and operation of the project would be required to comply with the requirements of this regulation.
	High Speed Rail	Funded under SB 862	**Not applicable**. This is a statewide measure that cannot be implemented by a project applicant or lead agency.
Electricity and Natural Gas	Energy Efficiency	Title 20 Appliance Efficiency Regulation	**Consistent.** The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
		Title 24 Part 6 Energy Efficiency Standards for Residential and Non-Residential Building	
		Title 24 Part 11 California Green Building Code Standards	
	Renewable Portfolio Standard/Renewable Electricity Standard.	2010 Regulation to Implement the Renewable Electricity Standard (33% 2020)	**Consistent**. PG&E obtained 33 percent of its power supply from renewable sources such as solar and geothermal in 2017, and about 70 percent of the electricity it delivers is carbon-free, including nuclear and large hydroelectric facilities. The owners of residences within the project would purchase power that consists of a greater percentage of renewable sources and could install renewable solar power systems that will assist the utility in achieving exceeding the renewable mandate.
		SB 350 Clean Energy and Pollution Reduction Act of 2015 (50% 2030)	

Table 20 (cont.): Project Consistency with AB 32 Scoping Plan

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
	Million Solar Roofs Program	Tax incentive program	**Consistent.** This measure is intended to increase solar throughout California by means of a variety of electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction. The project includes installation of solar panels.
Water	Water	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use. The project will also comply with the MWELO as required by the City's development code and water ordinance.
		SBX 7-7—The Water Conservation Act of 2009	
		Model Water Efficient Landscape Ordinance	
Green Buildings	Green Building Strategy	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The State will increase the use of green building practices. The project would implement required green building strategies through existing regulation that requires the project to comply with various CALGreen requirements. The project includes sustainability design features that support the Green Building Strategy.
Industry	Industrial Emissions	2010 ARB Mandatory Reporting Regulation	**Not applicable.** The project is not an industrial land use.
Recycling and Waste Management	Recycling and Waste	Title 24 Part 11 California Green Building Code Standards	**Consistent.** The project would not conflict with implementation of these measures. The project is required to achieve the recycling mandates via compliance with the CALGreen code. The project would utilize City of Clovis recycling services.
		AB 341 Statewide 75 Percent Diversion Goal	

Table 20 (cont.): Project Consistency with AB 32 Scoping Plan

Scoping Plan Sector	Scoping Plan Measure	Implementing Regulations	Project Consistency
Forests	Sustainable Forests	Cap-and-Trade Offset Projects	**Not applicable.** The project site is in an area designated for urban uses. No forested lands exist on-site.
High Global Warming Potential	High Global Warming Potential Gases	ARB Refrigerant Management Program CCR 95380	**Not applicable**. The regulations are applicable to refrigerants used by large air conditioning systems and large commercial and industrial refrigerators and cold storage system. Homes do not use large systems subject to the refrigerant management regulations adopted by ARB.
Agriculture	Agriculture	Cap-and-Trade Offset Projects for Livestock and Rice Cultivation	**Not applicable**. The project site is proposed for urban development. No grazing, feedlot, or other agricultural activities that generate manure occur currently exist on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measures: California Air Resources Board 2008.			

General Plan Compliance

The City of Clovis updated and adopted its General Plan in August of 2014. The General Plan contains a limited number of goals or policies that relate directly to climate change. However, some of the policies in the Air Quality and Circulation Element would likely reduce GHG emissions as well as the other criteria pollutant emissions, because they attempt to reduce VMT and increase energy efficiency. As shown in Table 21, the project is consistent with the feasible and applicable policies.

Table 21: Consistency with General Plan Policies

General Plan Policy	Project Consistency
Air Quality Policy 1.1: Land use and transportation. Reduce greenhouse gas and other local pollutant emissions through mixed use and transit-oriented development and well-designed transit, pedestrian, and bicycle systems.	**Consistent.** Residents would have easy access to the existing bike lane on East Shepherd Avenue that connects to destinations throughout the area. Planned Class II bike lanes on East Teague Avenue and North Fowler Avenues will provide additional access. Enhancements to encourage walking and bicycling will reduce driving and related pollutant emissions. In addition, the project is near existing primary and secondary schools.
Air Quality Policy 1.6: Alternative fuel infrastructure. Encourage public and private activity and employment centers to incorporate electric charging and alternative fuel stations.	**Consistent.** The project would not preclude future installment of electrical vehicle charging systems. Building codes require homes to be wired to allow future installations of charging equipment.
Air Quality Policy 1.8: Trees. Maintain or plant trees where appropriate to provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.	**Consistent.** The project would incorporate landscaping throughout the project site. The incorporated landscaping would provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
Air Quality Policy 2.1: Regional coordination. Support regional efforts to reduce air pollution (criteria air pollutants and greenhouse gas emissions) and collaborate with other agencies to improve air quality at the emission source and reduce vehicle miles traveled.	**Not applicable.** This measure applies to local government coordination and not project proponents or residents. However, future residents can participate in educational and grant programs designed to reduce criteria pollutant emissions developed through regional coordination.
Air Quality Policy 2.2: Cross-jurisdictional issues. Collaborate with regional agencies and surrounding jurisdictions to address cross-jurisdictional transportation and air quality issues.	**Not applicable.** This measure applies to local government coordination and not to project proponents or residents.

Table 21 (cont.): Consistency with General Plan Policies

General Plan Policy	Project Consistency
Air Quality Policy 2.6: Innovative mitigation. Encourage innovative mitigation measures to reduce air quality impacts by coordinating with the SJVAPCD, project applicants, and other interested parties.	**Consistent.** The project would comply with Rule 9510, which may include payment of mitigation fees that can be used for innovative mitigation measures that reduce criteria pollutants and GHG emissions. Residents can participate in educational and grant programs designed to reduce GHG emissions developed through regional coordination.
Circulation Policy 1.1: Multimodal network. The City shall plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrian, bicyclists, transit riders, freight, and motorists.	**Consistent.** The project area includes features designed to provide safe and convenient travel for users of all transportation modes. Residents will have access planned bike lanes on East Teague and North Fowler Avenue and to an existing bike lane on East Shepherd Avenue and connects to the Clovis trail system.
Circulation Policy 1.2: Transportation decisions. Decisions should balance the comfort, convenience, and safety of pedestrians, bicyclists, and motorists.	**Consistent.** The project will comply with City of Clovis standards for street design that supports multiple modes of transportation. Residents will have easy access to the regional bikeways and the City of Clovis trail system, which will provide convenience and safety for pedestrians and bicyclists.
Circulation Policy 1.4: Jobs and housing. Encourage infill development that would provide jobs and services closer to housing, and vice versa, to reduce citywide vehicle miles traveled and effectively utilize the existing transportation infrastructure.	**Consistent.** The project is a residential development with 74 units that will provide employees for jobs in existing business parks and jobs centers in Clovis. The project is situated approximately 0.50 mile west of the nearest neighborhood commercial center and is within 2 miles of multiple medical facilities and regional commercial centers on Herndon Avenue.
Circulation Policy 1.5: Neighborhood connectivity. The transportation network shall provide multimodal access between neighborhoods and neighborhood-serving uses (educational, recreational, or neighborhood commercial uses).	**Consistent.** The project is within 1 to 2 miles of multiple existing educational, commercial, and businesses uses.
Circulation Policy 3.11: Right-of-way design. Design landscaped parkways, medians, and right-of-ways as aesthetic buffers to improve the community's appearance and encourage non-motorized transportation.	**Consistent.** The project will comply with City of Clovis design standards regarding landscaping and design of road improvements consistent with this policy.

Table 21 (cont.): Consistency with General Plan Policies

General Plan Policy	Project Consistency
Circulation Policy 5.1: Complete street amenities. Upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements to bicycle and pedestrian connectivity or safety (consistent with the Bicycle Transportation Master Plan and other master plans).	**Consistent.** The project would be required to upgrade existing streets fronting the property in accordance with city standards. The project is located near bike lanes and trail systems, which provide access and safety for pedestrians and cyclists to jobs, schools, and shopping.
Circulation Policy 5.2: Development-funded facilities. Require development to fund and construct facilities as shown in the Bicycle Transportation Plan when facilities are in or adjacent to the development.	**Consistent.** There are no planned trails within or directly adjacent to the development. Street frontage on Teague Avenue would be widened sufficiently to accommodate a Class II bike lane.
Circulation Policy 5.3: Pathways. Encourage pathways and other pedestrian amenities in urban centers and new development 10 acres or larger.	**Consistent.** The project will be served by bike lanes along the roads accessing the site.
Circulation Policy 5.4: Homeowner associations. The city may require homeowner associations to maintain pathways and other bicycle and pedestrian facilities within the homeowner association area.	**Consistent.** The project would comply with this policy if a homeowner's association is formed for the development.
Circulation Policy 5.5: Pedestrian access. Require sidewalks, paths, and crosswalks to provide access to schools, parks, and other activity centers to provide general pedestrian connectivity throughout the city.	**Consistent.** Future residents will be able to utilize sidewalks and paths constructed in compliance with city requirements in this area.
Land Use Policy 3.9: Connected development. New development in urban centers must fully improve roadway, pedestrian, and bicycle systems within and adjacent to the proposed project and connect to existing urbanized development.	**Not applicable.** The project is not in an urban center, but it will provide required street improvements and connections to pedestrian and bicycle systems.
Open Space and Conservation Policy 3.4: Drought-tolerant landscaping. Promote water conservation through use of drought-tolerant landscaping on existing and new residential properties. Require drought-tolerant landscaping for all new commercial and industrial development and city-maintained landscaping, unless used for recreation purposes.	**Consistent.** The project will promote water conservation through use of drought-tolerant landscaping on new residential properties.

Table 21 (cont.): Consistency with General Plan Policies

General Plan Policy	Project Consistency
Open Space and Conservation Policy 3.5: Energy and water conservation. Encourage new development and substantial rehabilitation projects to exceed energy and water conservation and reduction standards set in the California Building Code.	**Consistent:** The project will, at a minimum, comply with the 2016 Title 24 energy efficiency standards, which are 28 percent more stringent than previous standards. The 2016 Title 24 energy efficiency standards went into effect in January 2017 and provide a 28 percent reduction in energy use compared with 2013 Title 24. 2019 Title 24 becomes effective on January 1, 2020 and is expected to provide an additional 7 percent reduction in energy use.
Open Space and Conservation Policy 3.6: Renewable Energy. Promote the use of renewable and sustainable energy sources to serve public and private sector development	**Consistent:** The project will comply with Green Building Code requirements for solar-ready roofs.
Open Space and Conservation Policy 3.7: Construction and design. Encourage new construction to incorporate energy efficient building and site design strategies**.**	**Consistent:** The project will design homes to meet or exceed the latest most stringent energy standards.
Source: City of Clovis General Plan 2014	

In summary, the project incorporates a number of features that would minimize GHG emissions. These features are consistent with project-level strategies identified by the ARB's Scoping Plan and the City of Clovis General Plan. As demonstrated in the impact analysis above, the project would achieve an approximately 39.4 percent reduction from the BAU inventory by 2023 and a 49.2 percent reduction by 2030 and, therefore, would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or SB 32 or conflict with implementation of the Scoping Plan. The project promotes the goals of the Scoping Plan through implementation of design measures that reduce energy consumption, water consumption, and reduction in VMT. Therefore, the project does not conflict with any plans to reduce GHG emissions. The impact would be less than significant.

Consistency with California's Post-2020 Targets

The State's executive branch adopted several Executive Orders related to GHG emissions. Executive Orders S-3-05 and B-30-15 are two examples. Executive Order S-3-05 sets goals to reduce emissions to 1990 levels by 2020 and 80 percent below 1990 levels by 2050. The goal of Executive Order S-3-05 to reduce GHG emissions to 1990 levels by 2020 was codified by AB 32. The project, as analyzed above, is consistent with AB 32. Therefore, the project does not conflict with this component of Executive Order S-3-05. Executive Order B-30-15 establishes an interim goal to reduce GHG emissions to 40 percent below 1990 levels by 2030.

The 2030 goal was codified under SB 32 and is now addressed by the 2017 Scoping Plan Update. The new plan provides a strategy that is capable of reaching the SB 32 target if the measures included in the plan are implemented and achieve reductions within the ranges expected. Under the Scoping

Plan Update, local government plays a supporting role through its land use authority and control over local transportation infrastructure. The Plan Update includes reductions from implementation of SB 375 that applies to VMT from passenger vehicles. Fresno County targets for SB 375 are a 5 percent reduction by 2020 and a 10 percent reduction by 2035. SB 375 is implemented with the Fresno COG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS envisions an increase in development density that would encourage fewer and shorter trips and more trips by transit, walking, and bicycling in amounts sufficient to achieve the SB 375 targets.

Now that the 2017 Scoping Plan has been adopted, new methodologies and threshold approaches are required to determine the fair-share contributions City development projects would need to make to achieve the 2030 target. In the meantime, however, the discussion under "Consistency with SB 32" below addresses the consistency of the proposed project with SB 32, which provides the statutory underpinning of the 2017 Scoping Plan. The SB 32 target requires GHG emissions to be reduced from 1990 levels. No consensus has been reached around the State on a new quantitative target for new development based on consistency with the SB 32 targets.

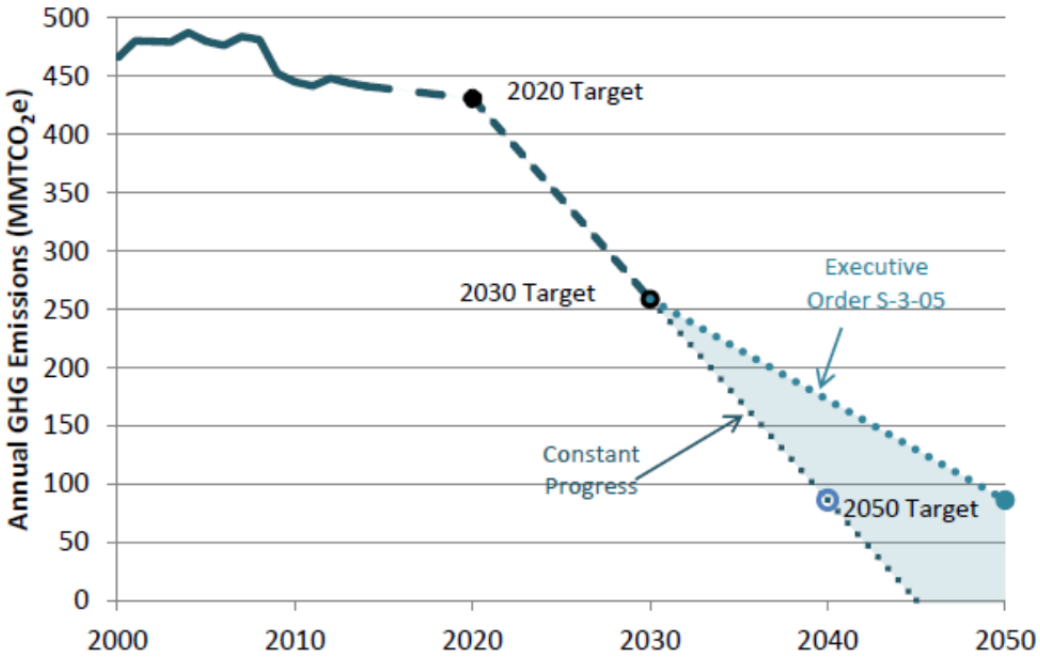
The Executive Order S-3-05 2050 target has not been codified by legislation. Studies have shown that, in order to meet the 2050 target, aggressive pursuit of technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. Because of the technological shifts required and the unknown parameters of the regulatory framework in 2050, quantitatively analyzing the project's impacts further relative to the 2050 goal is speculative for purposes of CEQA (ARB 2014b).

The ARB recognized that AB 32 established an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate." In addition, ARB's First Update "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by ARB would serve to reduce the proposed project's post-2020 emissions level to the extent applicable by law:

- **Energy Sector:** Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.
- **Water Sector:** The project's emissions level will be reduced as a result of further desired enhancements to water conservation technologies.
- **Waste Management Sector:** Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level.

For the reasons described above, the project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets. The trajectory required to achieve the post-2020 targets is shown in Figure 8.

Figure 8: California's Path to Achieving the 2050 Target



Source: ARB 2017 Scoping Plan Update (ARB 2017)

In his January 2015 inaugural address, Governor Brown expressed a commitment to achieve "three ambitious goals" that he would like to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;
- Cutting the petroleum use in cars and trucks in half; and
- Doubling the efficiency of existing buildings and making heating fuels cleaner.

These expressions of executive branch policy may be manifested in adopted legislative or regulatory action through the state agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change (Brown 2015). Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target (Energy and Economics 2015).

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies also show that relatively new trends—such as the increasing importance of web-based shopping, the emergence of different driving patterns by the "millennial" generation, and the increasing effect of web-based applications on transportation choices—are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions. For the reasons described above, the proposed project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets.

Consistency with SB 32

The 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

- SB 350
  - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
  - Doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard (LCFS)
  - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
  - Maintaining existing GHG standards for light- and heavy-duty vehicles.
  - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
  - Increase ZEV buses, delivery and other trucks.
- Sustainable Freight Action Plan
  - Improve freight system efficiency.
  - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
  - Deploy over 100,000 zero-emission trucks and equipment by 2030.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy
  - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
  - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
- SB 375 Sustainable Communities Strategies
  - Increased stringency of 2035 targets.
- Post-2020 Cap-and-Trade Program
  - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
  - ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.

- By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Table 22 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures.

Table 22: Consistency with SB 32 2017 Scoping Plan Update

Scoping Plan Measure	Project Consistency
SB 350 50% Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33% in 2020 to 50% in 2030.	**Consistent**: The project will purchase electricity from a utility subject to the SB 350 Renewable Mandate.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels	**Not Applicable**. This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency until residential housing achieves zero net energy.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent**. Vehicles accessing the project site will use fuel containing lower carbon content as the fuel standard is implemented.
Mobile Source Strategy (Cleaner Technology and Fuels Scenario) Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent**. Project residents can be expected to purchase increasing numbers of more fuel efficient and zero emission cars and trucks each year. The 2016 CALGreen Code requires electrical service in new single-family housing to be EV charger-ready. Home deliveries will be made by increasing numbers of ZEV delivery trucks.
Sustainable Freight Action Plan The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	**Not Applicable**. The measure applies to owners and operators of trucks and freight operations. However, home deliveries are expected to be made by increasing number of ZEV delivery trucks.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	**Consistent**. The project will include only natural gas hearths that produce very little black carbon compared to wood burning fireplaces and heaters.
SB 375 Sustainable Communities Strategies. Requires Regional Transportation Plans to include a sustainable communities strategy for reduction of per capita vehicle miles traveled. The targets for Fresno County are	**Consistent**. The project will provide residential development in the region that is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (SCS) strategy to increase development densities to reduce VMT. The project is not within an SCS priority area and so is not subject to requirements applicable to those areas.

Table 22 (cont.): Consistency with SB 32 2017 Scoping Plan Update

Scoping Plan Measure	Project Consistency
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent.** The post-2020 Cap-and-Trade Program indirectly affects people who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the program's first compliance period.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, state, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Not Applicable**. The project is residential development and will not be considered natural or working lands.
Source: ARB 2017 Scoping Plan Update.	

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the project would comply with whatever measures are enacted that state lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050. In its 2008 Scoping Plan, ARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the First Scoping Plan Update; however, ARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately." The 2017 Scoping Plan provides an intermediate target that is intended to achieve reasonable progress toward the 2050 target.

Accordingly, taking into account the proposed project's emissions, project design features, and the progress being made by the State towards reducing emissions in key sectors such as transportation, industry, and electricity, the project would be consistent with State GHG Plans and would further the

State's goals of reducing GHG emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

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Appendix A: Modeling Assumptions and Results

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Appendix A: Modeling Assumptions and Results

Modeling Assumptions for Woodside Tract 6284

Operational Schedule			**Construction Start**
Single Family Homes		74	6/1/2020
Rough Grading			
Ground Up			6/1/2021
First Occupancy			1/1/2023
Buildout			12/31/2024
Demolition			
House		3179	
Shed		102	
Total		3281	
Acres (gross)		37.27	
Disturbed Area		36.5	
Zoning	R-1		
Density (DU/Acre		2.1	
PG&E Emission Factor for 2020	MTCO2/MWh		
2020		290	

PG&E Greenhouse Gas Emission Factors:
Guidance for PG&E Customers
November 2015

Nearest Gas Station	SE Corner Nees and Fowler	1175 N Fowler Ave, Valer	0.9
Nearest Dry Cleaner	1865 E. Herndon Ave, Regency Cleaners		1.9
Nearest Autobody Shop	157 N. Sunnside, Caliber Collision		2
Road Volume Fresno COG	Fowler S/O Shepherd	6,110 ADT	
	Nees W/O Marion	7511 ADT	

	CY	**Truck Capacity (CY)**	**Truck Loads**
Soil Import	7500	20	375

Construction Schedule and Equipment List

Default Schedule

PhaseNumber	Phase Name	Phase Type	Start Date	End Date	Num Days Weel	Num Days
1	Demolition	Demolition	2020/06/01	2020/06/05	5	5
2	Site Preparation	Site Preparation	2020/08/08	2020/09/18	5	30
3	Grading	Grading	2020/09/19	2021/01/01	5	75
4	Building Construction	Building Construction	2021/06/01	2024/04/01	5	740
5	Paving	Paving	2024/04/02	2024/06/17	5	55
6	Architectural Coating	Architectural Coating	2024/06/18	2024/09/02	5	55

Project Schedule

PhaseNumber	Phase Name	Phase Type	Start Date	End Date	Num Days Weel	Num Days
1	Demolition	Demolition			5	5
2	Site Preparation	Site Preparation			5	30
3	Grading	Grading			5	75
4	Building Construction	Building Construction			5	826
5	Paving	Paving			5	55
6	Architectural Coating	Architectural Coating				55

Equipment Usage Ajdustment to Match Buildout Estimate

PhaseName	CalEEMod OffRoad Equipment Type	Equipment Unit Amount	Default Usage Hours/day	Default Work Days	Adjusted Work Days	CalEEMod Adjusted Hours/Day	CalEEMod Horse Power	CalEEMod Load Factor
Demolition	Concrete/Industrial Saws	1	8	5	5	8.0	81	0.73
Demolition	Excavators	1	8	5	5	8.0	158	0.38
Demolition	Rubber Tired Dozers	1	8	5	5	8.0	247	0.4
Site Preparation	Rubber Tired Dozers	3	8	30	30	8.0	247	0.4
Site Preparation	Tractors/Loaders/Backho	4	8	30	30	8.0	97	0.37
Grading	Excavators	2	8	75	75	8.0	158	0.38
Grading	Graders	1	8	75	75	8.0	187	0.41
Grading	Rubber Tired Dozers	1	8	75	75	8.0	247	0.4
Grading	Scrapers	2	8	75	75	8.0	367	0.48
Grading	Tractors/Loaders/Backho	2	8	75	75	8.0	97	0.37
Building Construction	Cranes	1	7	740	826	6.3	231	0.29
Building Construction	Forklifts	3	8	740	826	7.2	89	0.2
Building Construction	Generator Sets	1	8	740	826	7.2	84	0.74
Building Construction	Tractors/Loaders/Backho	3	7	740	826	6.3	97	0.37
Building Construction	Welders	1	8	740	826	7.2	46	0.45
Paving	Pavers	2	8	55	55	8.0	130	0.42
Paving	Paving Equipment	2	8	55	55	8.0	132	0.36
Paving	Rollers	2	8	55	55	8.0	80	0.38
Architectural Coating	Air Compressors	1	6	55	55	6.0	78	0.48

Ajdusted building construction date to match estimated ground up construction start and estimated buildout date of Nov 2023 Dec. 31, 2024

Appendix A: Emissions Summary

Woodside Homes Tract 6284 Emissions Summary

		Tons/Year				
Construction Emissions		**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
	2020	0.24	**2.59**	1.57	**0.40**	**0.24**
	2021	0.14	1.31	1.23	0.14	0.08
	2022	0.22	1.95	**2.01**	0.13	0.10
	2023	0.20	1.78	1.99	0.12	0.09
	2024	**0.68**	1.27	1.62	0.08	0.06
Total		**1.48**	**8.89**	**8.41**	**0.86**	**0.56**
Highest Emissions in Any Year		**0.68**	**2.59**	**2.01**	**0.40**	**0.24**

	Tons/Year				
Unmitigated Operational Emissions	**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
Area	1.35	0.17	7.42	1.12	1.12
Energy	0.01	0.09	0.04	0.01	0.01
Mobile	0.20	0.66	2.26	0.76	0.21
Total	**1.56**	**0.92**	**9.72**	**1.90**	**1.34**

Construction Summer Daily		Pound/Day				
Maximum Daily Emission		**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
	2020	4.59	**51.62**	**32.78**	10.48	**6.53**
	2021	4.32	47.71	31.64	**11.04**	4.72
	2022	1.67	14.95	15.57	1.01	0.76
	2023	1.54	13.66	15.38	0.91	0.67
	2024	**19.90**	12.80	15.25	0.83	0.60
Max Daily any Year						

Construction Winter Daily		Pound/Day				
Maximum Daily Emission		**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
	2020	4.58	**51.67**	**32.71**	**10.48**	**6.53**
	2021	4.31	47.75	31.57	2.89	4.72
	2022	1.66	14.97	15.48	0.07	0.76
	2023	1.53	13.67	15.29	0.07	0.67
	2024	**19.90**	12.81	15.17	0.07	0.60
Max Daily Any Year		**19.90**	**51.67**	**32.78**	**11.04**	**6.53**

Operations 2023 Summer	Pound/Day				
Maximum Daily Emissions	**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
Area	3.47	1.30	6.58	0.13	0.13
Energy	0.06	0.49	0.21	0.04	0.04
Mobile	1.45	3.49	13.50	4.10	1.12
Total	**4.98**	**5.28**	**20.29**	**4.28**	**1.29**

Mitigated run used to reflect woodburning regulation and design features.

Operations 2023 Winter			**Pound/Day**		
Maximum Daily Emissions	**ROG**	**NOX**	**CO**	**PM10**	**PM2.5**
Area	3.47	1.30	6.58	0.13	0.13
Energy	0.06	0.49	0.21	0.04	0.04
Mobile	0.99	3.69	12.13	4.10	1.12
	4.52	**5.48**	**18.93**	**4.28**	**1.29**

Area emissions are from mitigated report to reflect no woodburning devices.

Construction GHG Emissions

Year	**MTCO2e**
2020	280.10
2021	194.90
2022	322.97
2023	321.50
2024	253.19
2020-2024 Total	1,372.66
Amortized over 30 years	45.76

Operational GHG Emissions 2023

	BAU (MTCO2e)	**2023 (MTCO2e)**	**Percent Reduction**
Area	226.63	59.54	73.7%
Energy	293.19	189.76	35.3%
Mobile	912.52	595.79	34.7%
Waste	38.38	28.79	25.0%
Water	17.29	9.14	47.1%
Total	**1,488.02**	**883.02**	**40.7%**
Construction	45.76	45.76	0.0%
Total with Amortized Construction	**1,533.77**	**928.77**	**39.4%**

Reduction from BAU **605.00**

LCFS 10% reduction for 2020 for calculated by multiplying mitigated mobile by 0.90

Operational GHG Emissions 2030

	BAU (MTCO2e)	**2030 (MTCO2e)**	**Percent Reduction**
Area	226.63	59.54	73.7%
Energy	293.19	189.76	35.3%
Mobile	912.52	446.70	51.0%
Waste	38.38	28.79	25.0%
Water	17.29	9.14	47.1%
Total	**1,488.02**	**733.94**	**50.7%**
Construction	45.76	45.76	0.0%
Total with Amortized Construction	**1,533.77**	**779.69**	**49.2%**

Reduction from BAU **754.08**

LCFS 18% reduction for 2030 for calculated by multiplying mitigated mobile by 0.82

Appendix A: CalEEMod Output

CalEEMod Output

Construction and Operations 2023 - (Annual)

Woodside Tract 6284 Construction and Ops

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	74.00	Dwelling Unit	36.50	133,200.00	212

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.025	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Energy Intensity Factor

Land Use - Site Plan

Construction Phase - Demo for 1 house only

Off-road Equipment - Adjusted hours for developers schedule and default hours of operation

Off-road Equipment - Demo for 1 house

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Soil import 7500 CY

Demolition -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Vehicle Trips - ITE 10th Edition Trip Rates 9.44, 9.54, 8.55

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Water Mitigation -

Waste Mitigation -

Fleet Mix - SJVAPCD Residential Fleet Mix 2023

Woodstoves - Rule 4901 Woodburning Device allowed installations

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaCoating	Area_EF_Residential_Exterior	150	65
tblAreaCoating	Area_EF_Residential_Interior	150	65
tblConstructionPhase	NumDays	740.00	826.00
tblConstructionPhase	NumDays	50.00	5.00

tblFireplaces	NumberGas	40.70	74.00
tblFireplaces	NumberNoFireplace	33.30	74.00
tblFleetMix	HHD	0.13	0.02
tblFleetMix	LDA	0.50	0.53
tblFleetMix	LDT1	0.03	0.21
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.01	1.1000e-003
tblFleetMix	LHD2	4.2870e-003	9.0000e-004
tblFleetMix	MCY	4.9660e-003	2.5000e-003
tblFleetMix	MDV	0.11	0.06
tblFleetMix	MH	5.6200e-004	1.9000e-003
tblFleetMix	MHD	0.03	8.5000e-003
tblFleetMix	OBUS	2.3600e-003	0.00
tblFleetMix	SBUS	1.0700e-003	4.0000e-004
tblFleetMix	UBUS	1.4600e-003	4.3000e-003
tblLandUse	LotAcreage	24.03	36.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	HaulingTripNumber	0.00	375.00

tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	3.70	37.00
tblWoodstoves	NumberNoncatalytic	3.70	37.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2362	2.5933	1.5693	3.1500e-003	0.6066	0.1158	0.7224	0.2856	0.1066	0.3922	0.0000	278.0027	278.0027	0.0840	0.0000	280.1017
2021	0.1440	1.3063	1.2274	2.2300e-003	0.1256	0.0677	0.1934	0.0186	0.0637	0.0823	0.0000	193.8530	193.8530	0.0420	0.0000	194.9018
2022	0.2156	1.9456	2.0117	3.6900e-003	0.0350	0.0951	0.1301	9.4500e-003	0.0895	0.0989	0.0000	321.2488	321.2488	0.0687	0.0000	322.9668
2023	0.1981	1.7765	1.9876	3.6800e-003	0.0350	0.0821	0.1171	9.4500e-003	0.0773	0.0867	0.0000	319.8216	319.8216	0.0672	0.0000	321.5010
2024	0.6841	1.2698	1.6155	2.8900e-003	0.0248	0.0567	0.0815	6.6900e-003	0.0531	0.0598	0.0000	251.7579	251.7579	0.0573	0.0000	253.1907
Maximum	**0.6841**	**2.5933**	**2.0117**	**3.6900e-003**	**0.6066**	**0.1158**	**0.7224**	**0.2856**	**0.1066**	**0.3922**	**0.0000**	**321.2488**	**321.2488**	**0.0840**	**0.0000**	**322.9668**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2362	2.5933	1.5693	3.1500e-003	0.2794	0.1158	0.3952	0.1302	0.1066	0.2368	0.0000	278.0024	278.0024	0.0840	0.0000	280.1014
2021	0.1440	1.3063	1.2274	2.2300e-003	0.0693	0.0677	0.1370	0.0118	0.0637	0.0754	0.0000	193.8528	193.8528	0.0420	0.0000	194.9016
2022	0.2156	1.9456	2.0117	3.6900e-003	0.0350	0.0951	0.1301	9.4500e-003	0.0895	0.0989	0.0000	321.2485	321.2485	0.0687	0.0000	322.9665
2023	0.1981	1.7765	1.9876	3.6800e-003	0.0350	0.0821	0.1171	9.4500e-003	0.0773	0.0867	0.0000	319.8213	319.8213	0.0672	0.0000	321.5007
2024	0.6841	1.2698	1.6155	2.8900e-003	0.0248	0.0567	0.0815	6.6900e-003	0.0531	0.0598	0.0000	251.7577	251.7577	0.0573	0.0000	253.1905
Maximum	**0.6841**	**2.5933**	**2.0117**	**3.6900e-003**	**0.2794**	**0.1158**	**0.3952**	**0.1302**	**0.1066**	**0.2368**	**0.0000**	**321.2485**	**321.2485**	**0.0840**	**0.0000**	**322.9665**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.38**	**0.00**	**30.82**	**49.17**	**0.00**	**22.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	0.4349	0.4349
2	9-1-2020	11-30-2020	1.7661	1.7661
3	12-1-2020	2-28-2021	0.6414	0.6414
5	6-1-2021	8-31-2021	0.6078	0.6078
6	9-1-2021	11-30-2021	0.6014	0.6014
7	12-1-2021	2-28-2022	0.5554	0.5554

8	**3-1-2022**	**5-31-2022**	0.5463	0.5463
9	**6-1-2022**	**8-31-2022**	0.5462	0.5462
10	**9-1-2022**	**11-30-2022**	0.5405	0.5405
11	**12-1-2022**	**2-28-2023**	0.5044	0.5044
12	**3-1-2023**	**5-31-2023**	0.4993	0.4993
13	**6-1-2023**	**8-31-2023**	0.4992	0.4992
14	**9-1-2023**	**11-30-2023**	0.4939	0.4939
15	**12-1-2023**	**2-29-2024**	0.4735	0.4735
16	**3-1-2024**	**5-31-2024**	0.4679	0.4679
17	**6-1-2024**	**8-31-2024**	0.4261	0.4261
18	**9-1-2024**	**9-30-2024**	0.1135	0.1135
		Highest	1.7661	1.7661

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3509	0.1684	7.4188	0.0227		1.1242	1.1242		1.1242	1.1242	149.5808	59.1836	208.7644	0.7012	1.0700e-003	226.6138
Energy	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	188.5234	188.5234	9.3300e-003	3.3600e-003	189.7588
Mobile	0.2001	0.6637	2.2631	7.6800e-003	0.7578	5.9600e-003	0.7638	0.2027	5.5500e-003	0.2083	0.0000	706.4796	706.4796	0.0415	0.0000	707.5169
Waste						0.0000	0.0000		0.0000	0.0000	15.4923	0.0000	15.4923	0.9156	0.0000	38.3814
Water						0.0000	0.0000		0.0000	0.0000	1.5296	4.8312	6.3608	0.1575	3.7900e-003	11.4291
Total	**1.5614**	**0.9212**	**9.7199**	**0.0309**	**0.7578**	**1.1374**	**1.8952**	**0.2027**	**1.1370**	**1.3397**	**166.6026**	**959.0177**	**1,125.6203**	**1.8252**	**8.2200e-003**	**1,173.7001**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5966	0.0566	0.5670	3.5000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	59.1755	59.1755	1.9700e-003	1.0700e-003	59.5432
Energy	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	188.5234	188.5234	9.3300e-003	3.3600e-003	189.7588
Mobile	0.1965	0.6393	2.1425	7.1900e-003	0.7055	5.6000e-003	0.7111	0.1887	5.2100e-003	0.1939	0.0000	660.9970	660.9970	0.0395	0.0000	661.9854
Waste						0.0000	0.0000		0.0000	0.0000	11.6192	0.0000	11.6192	0.6867	0.0000	28.7861
Water						0.0000	0.0000		0.0000	0.0000	1.2237	3.8649	5.0886	0.1260	3.0300e-003	9.1433
Total	**0.8035**	**0.7851**	**2.7475**	**8.1100e-003**	**0.7055**	**0.0199**	**0.7254**	**0.1887**	**0.0195**	**0.2082**	**12.8429**	**912.5608**	**925.4036**	**0.8635**	**7.4600e-003**	**949.2168**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**48.54**	**14.78**	**71.73**	**73.79**	**6.90**	**98.25**	**61.72**	**6.90**	**98.28**	**84.46**	**92.29**	**4.84**	**17.79**	**52.69**	**9.25**	**19.13**

3.0 Construction Detail

Construction Phase

Woodside Tract 6284 Construction and Ops - Fresno County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/5/2020	5	5	
2	Site Preparation	Site Preparation	8/8/2020	9/18/2020	5	30	
3	Grading	Grading	9/19/2020	1/1/2021	5	75	
4	Building Construction	Building Construction	6/1/2021	7/30/2024	5	826	
5	Paving	Paving	7/31/2024	10/15/2024	5	55	
6	Architectural Coating	Architectural Coating	10/16/2024	12/31/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 269,730; Residential Outdoor: 89,910; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Woodside Tract 6284 Construction and Ops - Fresno County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	6.30	231	0.29
Building Construction	Forklifts	3	7.20	89	0.20
Building Construction	Generator Sets	1	7.20	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	6.30	97	0.37
Building Construction	Welders	1	7.20	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	15.00	0.00	15.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	27.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6100e-003	0.0000	1.6100e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3600e-003	0.0426	0.0277	5.0000e-005		2.1700e-003	2.1700e-003		2.0400e-003	2.0400e-003	0.0000	4.3548	4.3548	1.0600e-003	0.0000	4.3812
Total	**4.3600e-003**	**0.0426**	**0.0277**	**5.0000e-005**	**1.6100e-003**	**2.1700e-003**	**3.7800e-003**	**2.4000e-004**	**2.0400e-003**	**2.2800e-003**	**0.0000**	**4.3548**	**4.3548**	**1.0600e-003**	**0.0000**	**4.3812**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.1100e-003	2.8000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5713	0.5713	5.0000e-005	0.0000	0.5725
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.0400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2595	0.2595	1.0000e-005	0.0000	0.2597
Total	**2.2000e-004**	**2.2100e-003**	**1.3200e-003**	**1.0000e-005**	**4.3000e-004**	**1.0000e-005**	**4.4000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.8307**	**0.8307**	**6.0000e-005**	**0.0000**	**0.8322**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.3000e-004	0.0000	7.3000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3600e-003	0.0426	0.0277	5.0000e-005		2.1700e-003	2.1700e-003		2.0400e-003	2.0400e-003	0.0000	4.3548	4.3548	1.0600e-003	0.0000	4.3812
Total	**4.3600e-003**	**0.0426**	**0.0277**	**5.0000e-005**	**7.3000e-004**	**2.1700e-003**	**2.9000e-003**	**1.1000e-004**	**2.0400e-003**	**2.1500e-003**	**0.0000**	**4.3548**	**4.3548**	**1.0600e-003**	**0.0000**	**4.3812**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.1100e-003	2.8000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5713	0.5713	5.0000e-005	0.0000	0.5725
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.0400e-003	0.0000	3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2595	0.2595	1.0000e-005	0.0000	0.2597
Total	**2.2000e-004**	**2.2100e-003**	**1.3200e-003**	**1.0000e-005**	**4.3000e-004**	**1.0000e-005**	**4.4000e-004**	**1.2000e-004**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**0.8307**	**0.8307**	**6.0000e-005**	**0.0000**	**0.8322**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0612	0.6363	0.3227	5.7000e-004		0.0330	0.0330		0.0303	0.0303	0.0000	50.1460	50.1460	0.0162	0.0000	50.5515
Total	**0.0612**	**0.6363**	**0.3227**	**5.7000e-004**	**0.2710**	**0.0330**	**0.3040**	**0.1490**	**0.0303**	**0.1793**	**0.0000**	**50.1460**	**50.1460**	**0.0162**	**0.0000**	**50.5515**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.4000e-004	7.5000e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.8682	1.8682	5.0000e-005	0.0000	1.8695
Total	**1.1700e-003**	**7.4000e-004**	**7.5000e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1700e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.8682**	**1.8682**	**5.0000e-005**	**0.0000**	**1.8695**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1220	0.0000	0.1220	0.0670	0.0000	0.0670	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0612	0.6363	0.3227	5.7000e-004		0.0330	0.0330		0.0303	0.0303	0.0000	50.1460	50.1460	0.0162	0.0000	50.5514
Total	**0.0612**	**0.6363**	**0.3227**	**5.7000e-004**	**0.1220**	**0.0330**	**0.1549**	**0.0670**	**0.0303**	**0.0974**	**0.0000**	**50.1460**	**50.1460**	**0.0162**	**0.0000**	**50.5514**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	7.4000e-004	7.5000e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1700e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.8682	1.8682	5.0000e-005	0.0000	1.8695
Total	**1.1700e-003**	**7.4000e-004**	**7.5000e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1700e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.8682**	**1.8682**	**5.0000e-005**	**0.0000**	**1.8695**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3222	0.0000	0.3222	0.1332	0.0000	0.1332	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1647	1.8573	1.1825	2.2900e-003		0.0804	0.0804		0.0740	0.0740	0.0000	201.5919	201.5919	0.0652	0.0000	203.2219
Total	**0.1647**	**1.8573**	**1.1825**	**2.2900e-003**	**0.3222**	**0.0804**	**0.4027**	**0.1332**	**0.0740**	**0.2072**	**0.0000**	**201.5919**	**201.5919**	**0.0652**	**0.0000**	**203.2219**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4800e-003	0.0521	7.0000e-003	1.5000e-004	3.2000e-003	1.8000e-004	3.3700e-003	8.8000e-004	1.7000e-004	1.0500e-003	0.0000	14.0908	14.0908	1.2400e-003	0.0000	14.1217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1900e-003	2.0300e-003	0.0206	6.0000e-005	5.9200e-003	4.0000e-005	5.9500e-003	1.5700e-003	4.0000e-005	1.6100e-003	0.0000	5.1204	5.1204	1.4000e-004	0.0000	5.1238
Total	**4.6700e-003**	**0.0541**	**0.0276**	**2.1000e-004**	**9.1200e-003**	**2.2000e-004**	**9.3200e-003**	**2.4500e-003**	**2.1000e-004**	**2.6600e-003**	**0.0000**	**19.2111**	**19.2111**	**1.3800e-003**	**0.0000**	**19.2455**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1450	0.0000	0.1450	0.0600	0.0000	0.0600	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1647	1.8573	1.1825	2.2900e-003		0.0804	0.0804		0.0740	0.0740	0.0000	201.5917	201.5917	0.0652	0.0000	203.2216
Total	**0.1647**	**1.8573**	**1.1825**	**2.2900e-003**	**0.1450**	**0.0804**	**0.2254**	**0.0600**	**0.0740**	**0.1340**	**0.0000**	**201.5917**	**201.5917**	**0.0652**	**0.0000**	**203.2216**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4800e-003	0.0521	7.0000e-003	1.5000e-004	3.2000e-003	1.8000e-004	3.3700e-003	8.8000e-004	1.7000e-004	1.0500e-003	0.0000	14.0908	14.0908	1.2400e-003	0.0000	14.1217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1900e-003	2.0300e-003	0.0206	6.0000e-005	5.9200e-003	4.0000e-005	5.9500e-003	1.5700e-003	4.0000e-005	1.6100e-003	0.0000	5.1204	5.1204	1.4000e-004	0.0000	5.1238
Total	**4.6700e-003**	**0.0541**	**0.0276**	**2.1000e-004**	**9.1200e-003**	**2.2000e-004**	**9.3200e-003**	**2.4500e-003**	**2.1000e-004**	**2.6600e-003**	**0.0000**	**19.2111**	**19.2111**	**1.3800e-003**	**0.0000**	**19.2455**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1024	0.0000	0.1024	0.0124	0.0000	0.0124	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	0.0232	0.0154	3.0000e-005		9.9000e-004	9.9000e-004		9.1000e-004	9.1000e-004	0.0000	2.7248	2.7248	8.8000e-004	0.0000	2.7468
Total	**2.1000e-003**	**0.0232**	**0.0154**	**3.0000e-005**	**0.1024**	**9.9000e-004**	**0.1034**	**0.0124**	**9.1000e-004**	**0.0133**	**0.0000**	**2.7248**	**2.7248**	**8.8000e-004**	**0.0000**	**2.7468**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.5000e-004	9.0000e-005	0.0000	2.4100e-003	0.0000	2.4200e-003	5.9000e-004	0.0000	6.0000e-004	0.0000	0.1881	0.1881	2.0000e-005	0.0000	0.1885
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0668	0.0668	0.0000	0.0000	0.0669
Total	**6.0000e-005**	**6.7000e-004**	**3.4000e-004**	**0.0000**	**2.4900e-003**	**0.0000**	**2.5000e-003**	**6.1000e-004**	**0.0000**	**6.2000e-004**	**0.0000**	**0.2549**	**0.2549**	**2.0000e-005**	**0.0000**	**0.2554**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0461	0.0000	0.0461	5.5800e-003	0.0000	5.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	0.0232	0.0154	3.0000e-005		9.9000e-004	9.9000e-004		9.1000e-004	9.1000e-004	0.0000	2.7248	2.7248	8.8000e-004	0.0000	2.7468
Total	**2.1000e-003**	**0.0232**	**0.0154**	**3.0000e-005**	**0.0461**	**9.9000e-004**	**0.0471**	**5.5800e-003**	**9.1000e-004**	**6.4900e-003**	**0.0000**	**2.7248**	**2.7248**	**8.8000e-004**	**0.0000**	**2.7468**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.5000e-004	9.0000e-005	0.0000	2.4100e-003	0.0000	2.4200e-003	5.9000e-004	0.0000	6.0000e-004	0.0000	0.1881	0.1881	2.0000e-005	0.0000	0.1885
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	2.0000e-005	2.5000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0668	0.0668	0.0000	0.0000	0.0669
Total	**6.0000e-005**	**6.7000e-004**	**3.4000e-004**	**0.0000**	**2.4900e-003**	**0.0000**	**2.5000e-003**	**6.1000e-004**	**0.0000**	**6.2000e-004**	**0.0000**	**0.2549**	**0.2549**	**2.0000e-005**	**0.0000**	**0.2554**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1317	1.2080	1.1487	1.8700e-003		0.0664	0.0664		0.0625	0.0625	0.0000	160.5246	160.5246	0.0387	0.0000	161.4928
Total	**0.1317**	**1.2080**	**1.1487**	**1.8700e-003**		**0.0664**	**0.0664**		**0.0625**	**0.0625**	**0.0000**	**160.5246**	**160.5246**	**0.0387**	**0.0000**	**161.4928**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0693	0.0106	1.7000e-004	4.0800e-003	1.9000e-004	4.2700e-003	1.1800e-003	1.8000e-004	1.3600e-003	0.0000	16.4562	16.4562	1.9900e-003	0.0000	16.5059
Worker	8.2900e-003	5.0600e-003	0.0524	1.5000e-004	0.0166	1.0000e-004	0.0167	4.4200e-003	1.0000e-004	4.5100e-003	0.0000	13.8924	13.8924	3.4000e-004	0.0000	13.9010
Total	**0.0102**	**0.0744**	**0.0630**	**3.2000e-004**	**0.0207**	**2.9000e-004**	**0.0210**	**5.6000e-003**	**2.8000e-004**	**5.8700e-003**	**0.0000**	**30.3487**	**30.3487**	**2.3300e-003**	**0.0000**	**30.4069**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1317	1.2080	1.1487	1.8700e-003		0.0664	0.0664		0.0625	0.0625	0.0000	160.5244	160.5244	0.0387	0.0000	161.4926
Total	**0.1317**	**1.2080**	**1.1487**	**1.8700e-003**		**0.0664**	**0.0664**		**0.0625**	**0.0625**	**0.0000**	**160.5244**	**160.5244**	**0.0387**	**0.0000**	**161.4926**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0693	0.0106	1.7000e-004	4.0800e-003	1.9000e-004	4.2700e-003	1.1800e-003	1.8000e-004	1.3600e-003	0.0000	16.4562	16.4562	1.9900e-003	0.0000	16.5059
Worker	8.2900e-003	5.0600e-003	0.0524	1.5000e-004	0.0166	1.0000e-004	0.0167	4.4200e-003	1.0000e-004	4.5100e-003	0.0000	13.8924	13.8924	3.4000e-004	0.0000	13.9010
Total	**0.0102**	**0.0744**	**0.0630**	**3.2000e-004**	**0.0207**	**2.9000e-004**	**0.0210**	**5.6000e-003**	**2.8000e-004**	**5.8700e-003**	**0.0000**	**30.3487**	**30.3487**	**2.3300e-003**	**0.0000**	**30.4069**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8270	1.9145	3.1500e-003		0.0947	0.0947		0.0891	0.0891	0.0000	271.1185	271.1185	0.0650	0.0000	272.7423
Total	**0.1996**	**1.8270**	**1.9145**	**3.1500e-003**		**0.0947**	**0.0947**		**0.0891**	**0.0891**	**0.0000**	**271.1185**	**271.1185**	**0.0650**	**0.0000**	**272.7423**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9200e-003	0.1109	0.0165	2.9000e-004	6.8900e-003	2.7000e-004	7.1600e-003	1.9900e-003	2.6000e-004	2.2500e-003	0.0000	27.5180	27.5180	3.2500e-003	0.0000	27.5993
Worker	0.0130	7.6300e-003	0.0807	2.5000e-004	0.0281	1.7000e-004	0.0282	7.4600e-003	1.6000e-004	7.6100e-003	0.0000	22.6123	22.6123	5.2000e-004	0.0000	22.6252
Total	**0.0159**	**0.1186**	**0.0972**	**5.4000e-004**	**0.0350**	**4.4000e-004**	**0.0354**	**9.4500e-003**	**4.2000e-004**	**9.8600e-003**	**0.0000**	**50.1303**	**50.1303**	**3.7700e-003**	**0.0000**	**50.2245**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1996	1.8270	1.9145	3.1500e-003		0.0947	0.0947		0.0891	0.0891	0.0000	271.1182	271.1182	0.0650	0.0000	272.7420
Total	**0.1996**	**1.8270**	**1.9145**	**3.1500e-003**		**0.0947**	**0.0947**		**0.0891**	**0.0891**	**0.0000**	**271.1182**	**271.1182**	**0.0650**	**0.0000**	**272.7420**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9200e-003	0.1109	0.0165	2.9000e-004	6.8900e-003	2.7000e-004	7.1600e-003	1.9900e-003	2.6000e-004	2.2500e-003	0.0000	27.5180	27.5180	3.2500e-003	0.0000	27.5993
Worker	0.0130	7.6300e-003	0.0807	2.5000e-004	0.0281	1.7000e-004	0.0282	7.4600e-003	1.6000e-004	7.6100e-003	0.0000	22.6123	22.6123	5.2000e-004	0.0000	22.6252
Total	**0.0159**	**0.1186**	**0.0972**	**5.4000e-004**	**0.0350**	**4.4000e-004**	**0.0354**	**9.4500e-003**	**4.2000e-004**	**9.8600e-003**	**0.0000**	**50.1303**	**50.1303**	**3.7700e-003**	**0.0000**	**50.2245**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1840	1.6830	1.9006	3.1500e-003		0.0819	0.0819		0.0770	0.0770	0.0000	271.2116	271.2116	0.0645	0.0000	272.8245
Total	**0.1840**	**1.6830**	**1.9006**	**3.1500e-003**		**0.0819**	**0.0819**		**0.0770**	**0.0770**	**0.0000**	**271.2116**	**271.2116**	**0.0645**	**0.0000**	**272.8245**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-003	0.0867	0.0134	2.8000e-004	6.8900e-003	8.0000e-005	6.9800e-003	1.9900e-003	8.0000e-005	2.0700e-003	0.0000	26.8457	26.8457	2.2000e-003	0.0000	26.9007
Worker	0.0121	6.8300e-003	0.0737	2.4000e-004	0.0281	1.7000e-004	0.0282	7.4600e-003	1.5000e-004	7.6100e-003	0.0000	21.7644	21.7644	4.6000e-004	0.0000	21.7759
Total	**0.0141**	**0.0935**	**0.0871**	**5.2000e-004**	**0.0350**	**2.5000e-004**	**0.0352**	**9.4500e-003**	**2.3000e-004**	**9.6800e-003**	**0.0000**	**48.6100**	**48.6100**	**2.6600e-003**	**0.0000**	**48.6766**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1840	1.6830	1.9006	3.1500e-003		0.0819	0.0819		0.0770	0.0770	0.0000	271.2112	271.2112	0.0645	0.0000	272.8242
Total	**0.1840**	**1.6830**	**1.9006**	**3.1500e-003**		**0.0819**	**0.0819**		**0.0770**	**0.0770**	**0.0000**	**271.2112**	**271.2112**	**0.0645**	**0.0000**	**272.8242**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-003	0.0867	0.0134	2.8000e-004	6.8900e-003	8.0000e-005	6.9800e-003	1.9900e-003	8.0000e-005	2.0700e-003	0.0000	26.8457	26.8457	2.2000e-003	0.0000	26.9007
Worker	0.0121	6.8300e-003	0.0737	2.4000e-004	0.0281	1.7000e-004	0.0282	7.4600e-003	1.5000e-004	7.6100e-003	0.0000	21.7644	21.7644	4.6000e-004	0.0000	21.7759
Total	**0.0141**	**0.0935**	**0.0871**	**5.2000e-004**	**0.0350**	**2.5000e-004**	**0.0352**	**9.4500e-003**	**2.3000e-004**	**9.6800e-003**	**0.0000**	**48.6100**	**48.6100**	**2.6600e-003**	**0.0000**	**48.6766**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1007	0.9196	1.1058	1.8400e-003		0.0420	0.0420		0.0395	0.0395	0.0000	158.5848	158.5848	0.0375	0.0000	159.5223
Total	**0.1007**	**0.9196**	**1.1058**	**1.8400e-003**		**0.0420**	**0.0420**		**0.0395**	**0.0395**	**0.0000**	**158.5848**	**158.5848**	**0.0375**	**0.0000**	**159.5223**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1400e-003	0.0503	7.4500e-003	1.6000e-004	4.0300e-003	5.0000e-005	4.0800e-003	1.1600e-003	5.0000e-005	1.2100e-003	0.0000	15.5749	15.5749	1.3000e-003	0.0000	15.6074
Worker	6.6200e-003	3.5900e-003	0.0396	1.4000e-004	0.0164	9.0000e-005	0.0165	4.3600e-003	9.0000e-005	4.4500e-003	0.0000	12.2267	12.2267	2.4000e-004	0.0000	12.2327
Total	**7.7600e-003**	**0.0539**	**0.0471**	**3.0000e-004**	**0.0204**	**1.4000e-004**	**0.0206**	**5.5200e-003**	**1.4000e-004**	**5.6600e-003**	**0.0000**	**27.8016**	**27.8016**	**1.5400e-003**	**0.0000**	**27.8401**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1007	0.9196	1.1058	1.8400e-003		0.0420	0.0420		0.0395	0.0395	0.0000	158.5846	158.5846	0.0375	0.0000	159.5221
Total	**0.1007**	**0.9196**	**1.1058**	**1.8400e-003**		**0.0420**	**0.0420**		**0.0395**	**0.0395**	**0.0000**	**158.5846**	**158.5846**	**0.0375**	**0.0000**	**159.5221**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1400e-003	0.0503	7.4500e-003	1.6000e-004	4.0300e-003	5.0000e-005	4.0800e-003	1.1600e-003	5.0000e-005	1.2100e-003	0.0000	15.5749	15.5749	1.3000e-003	0.0000	15.6074
Worker	6.6200e-003	3.5900e-003	0.0396	1.4000e-004	0.0164	9.0000e-005	0.0165	4.3600e-003	9.0000e-005	4.4500e-003	0.0000	12.2267	12.2267	2.4000e-004	0.0000	12.2327
Total	**7.7600e-003**	**0.0539**	**0.0471**	**3.0000e-004**	**0.0204**	**1.4000e-004**	**0.0206**	**5.5200e-003**	**1.4000e-004**	**5.6600e-003**	**0.0000**	**27.8016**	**27.8016**	**1.5400e-003**	**0.0000**	**27.8401**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0730	55.0730	0.0178	0.0000	55.5183
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0272**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0730**	**55.0730**	**0.0178**	**0.0000**	**55.5183**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3300e-003	7.2000e-004	7.9600e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.4579	2.4579	5.0000e-005	0.0000	2.4591
Total	**1.3300e-003**	**7.2000e-004**	**7.9600e-003**	**3.0000e-005**	**3.3000e-003**	**2.0000e-005**	**3.3200e-003**	**8.8000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.4579**	**2.4579**	**5.0000e-005**	**0.0000**	**2.4591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.2619	0.4022	6.3000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	55.0729	55.0729	0.0178	0.0000	55.5182
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0272**	**0.2619**	**0.4022**	**6.3000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**55.0729**	**55.0729**	**0.0178**	**0.0000**	**55.5182**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3300e-003	7.2000e-004	7.9600e-003	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.4579	2.4579	5.0000e-005	0.0000	2.4591
Total	**1.3300e-003**	**7.2000e-004**	**7.9600e-003**	**3.0000e-005**	**3.3000e-003**	**2.0000e-005**	**3.3200e-003**	**8.8000e-004**	**2.0000e-005**	**8.9000e-004**	**0.0000**	**2.4579**	**2.4579**	**5.0000e-005**	**0.0000**	**2.4591**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313
Total	**0.5467**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0215**	**7.0215**	**4.0000e-004**	**0.0000**	**7.0313**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.4000e-004	2.6500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8193	0.8193	2.0000e-005	0.0000	0.8197
Total	**4.4000e-004**	**2.4000e-004**	**2.6500e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8193**	**0.8193**	**2.0000e-005**	**0.0000**	**0.8197**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.9700e-003	0.0335	0.0498	8.0000e-005		1.6800e-003	1.6800e-003		1.6800e-003	1.6800e-003	0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313
Total	**0.5467**	**0.0335**	**0.0498**	**8.0000e-005**		**1.6800e-003**	**1.6800e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**7.0214**	**7.0214**	**4.0000e-004**	**0.0000**	**7.0313**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.4000e-004	2.6500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8193	0.8193	2.0000e-005	0.0000	0.8197
Total	**4.4000e-004**	**2.4000e-004**	**2.6500e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.8193**	**0.8193**	**2.0000e-005**	**0.0000**	**0.8197**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1965	0.6393	2.1425	7.1900e-003	0.7055	5.6000e-003	0.7111	0.1887	5.2100e-003	0.1939	0.0000	660.9970	660.9970	0.0395	0.0000	661.9854
Unmitigated	0.2001	0.6637	2.2631	7.6800e-003	0.7578	5.9600e-003	0.7638	0.2027	5.5500e-003	0.2083	0.0000	706.4796	706.4796	0.0415	0.0000	707.5169

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	698.56	705.96	632.70	2,022,083	1,882,559
Total	698.56	705.96	632.70	2,022,083	1,882,559

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530500	0.205800	0.167300	0.055000	0.001100	0.000900	0.008500	0.021800	0.000000	0.004300	0.002500	0.000400	0.001900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	85.2779	85.2779	7.3500e-003	1.4700e-003	85.8998
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	85.2779	85.2779	7.3500e-003	1.4700e-003	85.8998
NaturalGas Mitigated	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
NaturalGas Unmitigated	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total		**0.0104**	**0.0892**	**0.0379**	**5.7000e-004**		**7.2100e-003**	**7.2100e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006	0.0104	0.0892	0.0379	5.7000e-004		7.2100e-003	7.2100e-003		7.2100e-003	7.2100e-003	0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total		**0.0104**	**0.0892**	**0.0379**	**5.7000e-004**		**7.2100e-003**	**7.2100e-003**		**7.2100e-003**	**7.2100e-003**	**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	85.2779	7.3500e-003	1.4700e-003	85.8998
Total		**85.2779**	**7.3500e-003**	**1.4700e-003**	**85.8998**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	85.2779	7.3500e-003	1.4700e-003	85.8998
Total		**85.2779**	**7.3500e-003**	**1.4700e-003**	**85.8998**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5966	0.0566	0.5670	3.5000e-004		7.0900e-003	7.0900e-003		7.0900e-003	7.0900e-003	0.0000	59.1755	59.1755	1.9700e-003	1.0700e-003	59.5432
Unmitigated	1.3509	0.1684	7.4188	0.0227		1.1242	1.1242		1.1242	1.1242	149.5808	59.1836	208.7644	0.7012	1.0700e-003	226.6138

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0542					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.7599	0.1620	6.8693	0.0227		1.1212	1.1212		1.1212	1.1212	149.5808	58.2861	207.8668	0.7004	1.0700e-003	225.6947
Landscaping	0.0166	6.3400e-003	0.5496	3.0000e-005		3.0400e-003	3.0400e-003		3.0400e-003	3.0400e-003	0.0000	0.8975	0.8975	8.6000e-004	0.0000	0.9191
Total	**1.3509**	**0.1684**	**7.4188**	**0.0227**		**1.1242**	**1.1242**		**1.1242**	**1.1242**	**149.5808**	**59.1836**	**208.7644**	**0.7012**	**1.0700e-003**	**226.6138**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0542					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5202					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.8900e-003	0.0503	0.0214	3.2000e-004		4.0700e-003	4.0700e-003		4.0700e-003	4.0700e-003	0.0000	58.2861	58.2861	1.1200e-003	1.0700e-003	58.6325
Landscaping	0.0163	6.3000e-003	0.5456	3.0000e-005		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	0.8895	0.8895	8.5000e-004	0.0000	0.9107
Total	**0.5966**	**0.0566**	**0.5670**	**3.5000e-004**		**7.0900e-003**	**7.0900e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**59.1755**	**59.1755**	**1.9700e-003**	**1.0700e-003**	**59.5432**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.0886	0.1260	3.0300e-003	9.1433
Unmitigated	6.3608	0.1575	3.7900e-003	11.4291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.8214 / 3.03958	6.3608	0.1575	3.7900e-003	11.4291
Total		**6.3608**	**0.1575**	**3.7900e-003**	**11.4291**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.85712 / 2.43166	5.0886	0.1260	3.0300e-003	9.1433
Total		**5.0886**	**0.1260**	**3.0300e-003**	**9.1433**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.6192	0.6867	0.0000	28.7861
Unmitigated	15.4923	0.9156	0.0000	38.3814

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	76.32	15.4923	0.9156	0.0000	38.3814
Total		**15.4923**	**0.9156**	**0.0000**	**38.3814**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	57.24	11.6192	0.6867	0.0000	28.7861
Total		**11.6192**	**0.6867**	**0.0000**	**28.7861**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output

Construction and Operations 2023

(Summer Daily)

Woodside Tract 6284 Construction and Ops

Fresno County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	74.00	Dwelling Unit	36.50	133,200.00	212

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.025	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Energy Intensity Factor

Land Use - Site Plan

Construction Phase - Demo for 1 house only

Off-road Equipment - Adjusted hours for developers schedule and default hours of operation

Off-road Equipment - Demo for 1 house

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Soil import 7500 CY

Demolition -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Vehicle Trips - ITE 10th Edition Trip Rates 9.44, 9.54, 8.55

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Water Mitigation -

Waste Mitigation -

Fleet Mix - SJVAPCD Residential Fleet Mix 2023

Woodstoves - Rule 4901 Woodburning Device allowed installations

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaCoating	Area_EF_Residential_Exterior	150	65
tblAreaCoating	Area_EF_Residential_Interior	150	65
tblConstructionPhase	NumDays	740.00	826.00
tblConstructionPhase	NumDays	50.00	5.00

Woodside Tract 6284 Construction and Ops - Fresno County, Summer

tblFireplaces	NumberGas	40.70	74.00
tblFireplaces	NumberNoFireplace	33.30	74.00
tblFleetMix	HHD	0.13	0.02
tblFleetMix	LDA	0.50	0.53
tblFleetMix	LDT1	0.03	0.21
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.01	1.1000e-003
tblFleetMix	LHD2	4.2870e-003	9.0000e-004
tblFleetMix	MCY	4.9660e-003	2.5000e-003
tblFleetMix	MDV	0.11	0.06
tblFleetMix	MH	5.6200e-004	1.9000e-003
tblFleetMix	MHD	0.03	8.5000e-003
tblFleetMix	OBUS	2.3600e-003	0.00
tblFleetMix	SBUS	1.0700e-003	4.0000e-004
tblFleetMix	UBUS	1.4600e-003	4.3000e-003
tblLandUse	LotAcreage	24.03	36.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	HaulingTripNumber	0.00	375.00

tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	3.70	37.00
tblWoodstoves	NumberNoncatalytic	3.70	37.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5877	51.6229	32.7806	0.0677	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	6,596.7754	6,596.7754	1.9819	0.0000	6,646.3233
2021	4.3189	47.7101	31.6355	0.0676	13.8170	1.9905	15.8075	4.8648	1.8315	6.6963	0.0000	6,587.0923	6,587.0923	1.9809	0.0000	6,636.6144
2022	1.6712	14.9530	15.5652	0.0286	0.2760	0.7315	1.0075	0.0744	0.6882	0.7626	0.0000	2,745.6302	2,745.6302	0.5817	0.0000	2,760.1719
2023	1.5363	13.6569	15.3756	0.0285	0.2760	0.6317	0.9077	0.0744	0.5944	0.6688	0.0000	2,732.7337	2,732.7337	0.5690	0.0000	2,746.9594
2024	19.8991	12.8000	15.2494	0.0284	0.2760	0.5539	0.8299	0.0744	0.5210	0.5954	0.0000	2,723.4697	2,723.4697	0.7161	0.0000	2,737.6093
Maximum	**19.8991**	**51.6229**	**32.7806**	**0.0677**	**18.2141**	**2.1983**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**6,596.7754**	**6,596.7754**	**1.9819**	**0.0000**	**6,646.3233**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5877	51.6229	32.7806	0.0677	8.2777	2.1983	10.4760	4.5080	2.0225	6.5305	0.0000	6,596.7754	6,596.7754	1.9819	0.0000	6,646.3233
2021	4.3189	47.7101	31.6355	0.0676	9.0467	1.9905	11.0372	2.8867	1.8315	4.7182	0.0000	6,587.0923	6,587.0923	1.9809	0.0000	6,636.6144
2022	1.6712	14.9530	15.5652	0.0286	0.2760	0.7315	1.0075	0.0744	0.6882	0.7626	0.0000	2,745.6302	2,745.6302	0.5817	0.0000	2,760.1719
2023	1.5363	13.6569	15.3756	0.0285	0.2760	0.6317	0.9077	0.0744	0.5944	0.6688	0.0000	2,732.7337	2,732.7337	0.5690	0.0000	2,746.9594
2024	19.8991	12.8000	15.2494	0.0284	0.2760	0.5539	0.8299	0.0744	0.5210	0.5954	0.0000	2,723.4697	2,723.4697	0.7161	0.0000	2,737.6092
Maximum	**19.8991**	**51.6229**	**32.7806**	**0.0677**	**9.0467**	**2.1983**	**11.0372**	**4.5080**	**2.0225**	**6.5305**	**0.0000**	**6,596.7754**	**6,596.7754**	**1.9819**	**0.0000**	**6,646.3233**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**44.76**	**0.00**	**37.74**	**49.41**	**0.00**	**35.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	21.8663	4.0226	173.6495	0.5531		27.3795	27.3795		27.3795	27.3795	4,021.5744	1,578.0517	5,599.6261	18.8407	0.0287	6,079.2037
Energy	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Mobile	1.4674	3.6217	14.3165	0.0467	4.3746	0.0335	4.4081	1.1676	0.0312	1.1988		4,727.2377	4,727.2377	0.2605		4,733.7512
Total	**23.3908**	**8.1327**	**188.1739**	**0.6029**	**4.3746**	**27.4525**	**31.8271**	**1.1676**	**27.4502**	**28.6178**	**4,021.5744**	**6,928.8987**	**10,950.4731**	**19.1131**	**0.0402**	**11,440.2700**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4724	1.2975	6.5848	8.1500e-003		0.1328	0.1328		0.1328	0.1328	0.0000	1,577.9527	1,577.9527	0.0405	0.0287	1,587.5254
Energy	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Mobile	1.4458	3.4927	13.4951	0.0437	4.0727	0.0315	4.1042	1.0871	0.0293	1.1164		4,422.0982	4,422.0982	0.2478		4,428.2924
Total	**4.9753**	**5.2786**	**20.2878**	**0.0550**	**4.0727**	**0.2038**	**4.2765**	**1.0871**	**0.2016**	**1.2887**	**0.0000**	**6,623.6601**	**6,623.6601**	**0.3002**	**0.0402**	**6,643.1328**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**78.73**	**35.09**	**89.22**	**90.89**	**6.90**	**99.26**	**86.56**	**6.90**	**99.27**	**95.50**	**100.00**	**4.41**	**39.51**	**98.43**	**0.00**	**41.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/5/2020	5	5	
2	Site Preparation	Site Preparation	8/8/2020	9/18/2020	5	30	
3	Grading	Grading	9/19/2020	1/1/2021	5	75	
4	Building Construction	Building Construction	6/1/2021	7/30/2024	5	826	
5	Paving	Paving	7/31/2024	10/15/2024	5	55	
6	Architectural Coating	Architectural Coating	10/16/2024	12/31/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 269,730; Residential Outdoor: 89,910; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Woodside Tract 6284 Construction and Ops - Fresno County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	6.30	231	0.29
Building Construction	Forklifts	3	7.20	89	0.20
Building Construction	Generator Sets	1	7.20	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	6.30	97	0.37
Building Construction	Welders	1	7.20	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	15.00	0.00	15.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	27.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6459	0.0000	0.6459	0.0978	0.0000	0.0978			0.0000			0.0000
Off-Road	1.7427	17.0435	11.0860	0.0200		0.8700	0.8700		0.8162	0.8162		1,920.1256	1,920.1256	0.4669		1,931.7974
Total	**1.7427**	**17.0435**	**11.0860**	**0.0200**	**0.6459**	**0.8700**	**1.5159**	**0.0978**	**0.8162**	**0.9140**		**1,920.1256**	**1,920.1256**	**0.4669**		**1,931.7974**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0236	0.8246	0.1075	2.4200e-003	0.0525	2.8800e-003	0.0554	0.0144	2.7600e-003	0.0172		254.1669	254.1669	0.0210		254.6914
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.0973**	**0.8629**	**0.5899**	**3.6800e-003**	**0.1757**	**3.6500e-003**	**0.1794**	**0.0471**	**3.4700e-003**	**0.0506**		**379.6409**	**379.6409**	**0.0244**		**380.2503**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2907	0.0000	0.2907	0.0440	0.0000	0.0440			0.0000			0.0000
Off-Road	1.7427	17.0435	11.0860	0.0200		0.8700	0.8700		0.8162	0.8162	0.0000	1,920.1256	1,920.1256	0.4669		1,931.7974
Total	**1.7427**	**17.0435**	**11.0860**	**0.0200**	**0.2907**	**0.8700**	**1.1607**	**0.0440**	**0.8162**	**0.8603**	**0.0000**	**1,920.1256**	**1,920.1256**	**0.4669**		**1,931.7974**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0236	0.8246	0.1075	2.4200e-003	0.0525	2.8800e-003	0.0554	0.0144	2.7600e-003	0.0172		254.1669	254.1669	0.0210		254.6914
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.0973**	**0.8629**	**0.5899**	**3.6800e-003**	**0.1757**	**3.6500e-003**	**0.1794**	**0.0471**	**3.4700e-003**	**0.0506**		**379.6409**	**379.6409**	**0.0244**		**380.2503**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0459	0.5789	1.5100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		150.5688	150.5688	4.0800e-003		150.6707
Total	**0.0884**	**0.0459**	**0.5789**	**1.5100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**150.5688**	**150.5688**	**4.0800e-003**		**150.6707**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0459	0.5789	1.5100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		150.5688	150.5688	4.0800e-003		150.6707
Total	**0.0884**	**0.0459**	**0.5789**	**1.5100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**150.5688**	**150.5688**	**4.0800e-003**		**150.6707**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0394	1.3743	0.1792	4.0400e-003	0.0884	4.8000e-003	0.0932	0.0242	4.5900e-003	0.0288		423.6115	423.6115	0.0350		424.4857
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0982	0.0510	0.6432	1.6800e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		167.2986	167.2986	4.5300e-003		167.4119
Total	**0.1376**	**1.4253**	**0.8224**	**5.7200e-003**	**0.2527**	**5.8300e-003**	**0.2586**	**0.0678**	**5.5400e-003**	**0.0733**		**590.9101**	**590.9101**	**0.0395**		**591.8975**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**3.9030**	**2.1739**	**6.0769**	**1.6184**	**2.0000**	**3.6184**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0394	1.3743	0.1792	4.0400e-003	0.0884	4.8000e-003	0.0932	0.0242	4.5900e-003	0.0288		423.6115	423.6115	0.0350		424.4857
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0982	0.0510	0.6432	1.6800e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		167.2986	167.2986	4.5300e-003		167.4119
Total	**0.1376**	**1.4253**	**0.8224**	**5.7200e-003**	**0.2527**	**5.8300e-003**	**0.2586**	**0.0678**	**5.5400e-003**	**0.0733**		**590.9101**	**590.9101**	**0.0395**		**591.8975**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0371	1.2648	0.1724	3.9900e-003	4.9794	4.2000e-003	4.9836	1.2247	4.0200e-003	1.2287		418.4867	418.4867	0.0341		419.3380
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0454	0.5847	1.6200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		161.5622	161.5622	4.0300e-003		161.6630
Total	**0.1277**	**1.3102**	**0.7571**	**5.6100e-003**	**5.1437**	**5.2000e-003**	**5.1489**	**1.2683**	**4.9400e-003**	**1.2732**		**580.0489**	**580.0489**	**0.0381**		**581.0010**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.9030**	**1.9853**	**5.8883**	**1.6184**	**1.8265**	**3.4449**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0371	1.2648	0.1724	3.9900e-003	4.9794	4.2000e-003	4.9836	1.2247	4.0200e-003	1.2287		418.4867	418.4867	0.0341		419.3380
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0454	0.5847	1.6200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		161.5622	161.5622	4.0300e-003		161.6630
Total	**0.1277**	**1.3102**	**0.7571**	**5.6100e-003**	**5.1437**	**5.2000e-003**	**5.1489**	**1.2683**	**4.9400e-003**	**1.2732**		**580.0489**	**580.0489**	**0.0381**		**581.0010**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7108	15.6889	14.9177	0.0242		0.8628	0.8628		0.8112	0.8112		2,298.0275	2,298.0275	0.5544		2,311.8878
Total	**1.7108**	**15.6889**	**14.9177**	**0.0242**		**0.8628**	**0.8628**		**0.8112**	**0.8112**		**2,298.0275**	**2,298.0275**	**0.5544**		**2,311.8878**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0237	0.8901	0.1264	2.2800e-003	0.0542	2.3800e-003	0.0566	0.0156	2.2700e-003	0.0179		238.7232	238.7232	0.0269		239.3954
Worker	0.1224	0.0613	0.7894	2.1900e-003	0.2218	1.3400e-003	0.2231	0.0588	1.2400e-003	0.0601		218.1090	218.1090	5.4400e-003		218.2450
Total	**0.1462**	**0.9514**	**0.9158**	**4.4700e-003**	**0.2760**	**3.7200e-003**	**0.2797**	**0.0744**	**3.5100e-003**	**0.0780**		**456.8321**	**456.8321**	**0.0323**		**457.6404**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7108	15.6889	14.9177	0.0242		0.8628	0.8628		0.8112	0.8112	0.0000	2,298.0275	2,298.0275	0.5544		2,311.8878
Total	**1.7108**	**15.6889**	**14.9177**	**0.0242**		**0.8628**	**0.8628**		**0.8112**	**0.8112**	**0.0000**	**2,298.0275**	**2,298.0275**	**0.5544**		**2,311.8878**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0237	0.8901	0.1264	2.2800e-003	0.0542	2.3800e-003	0.0566	0.0156	2.2700e-003	0.0179		238.7232	238.7232	0.0269		239.3954
Worker	0.1224	0.0613	0.7894	2.1900e-003	0.2218	1.3400e-003	0.2231	0.0588	1.2400e-003	0.0601		218.1090	218.1090	5.4400e-003		218.2450
Total	**0.1462**	**0.9514**	**0.9158**	**4.4700e-003**	**0.2760**	**3.7200e-003**	**0.2797**	**0.0744**	**3.5100e-003**	**0.0780**		**456.8321**	**456.8321**	**0.0323**		**457.6404**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5356	14.0541	14.7271	0.0242		0.7281	0.7281		0.6850	0.6850		2,298.9002	2,298.9002	0.5508		2,312.6690
Total	**1.5356**	**14.0541**	**14.7271**	**0.0242**		**0.7281**	**0.7281**		**0.6850**	**0.6850**		**2,298.9002**	**2,298.9002**	**0.5508**		**2,312.6690**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0221	0.8442	0.1169	2.2600e-003	0.0542	2.0400e-003	0.0563	0.0156	1.9500e-003	0.0176		236.4651	236.4651	0.0261		237.1167
Worker	0.1136	0.0548	0.7212	2.1100e-003	0.2218	1.3000e-003	0.2231	0.0588	1.2000e-003	0.0600		210.2649	210.2649	4.8600e-003		210.3863
Total	**0.1356**	**0.8989**	**0.8382**	**4.3700e-003**	**0.2760**	**3.3400e-003**	**0.2794**	**0.0744**	**3.1500e-003**	**0.0776**		**446.7300**	**446.7300**	**0.0309**		**447.5029**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5356	14.0541	14.7271	0.0242		0.7281	0.7281		0.6850	0.6850	0.0000	2,298.9002	2,298.9002	0.5508		2,312.6690
Total	**1.5356**	**14.0541**	**14.7271**	**0.0242**		**0.7281**	**0.7281**		**0.6850**	**0.6850**	**0.0000**	**2,298.9002**	**2,298.9002**	**0.5508**		**2,312.6690**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0221	0.8442	0.1169	2.2600e-003	0.0542	2.0400e-003	0.0563	0.0156	1.9500e-003	0.0176		236.4651	236.4651	0.0261		237.1167
Worker	0.1136	0.0548	0.7212	2.1100e-003	0.2218	1.3000e-003	0.2231	0.0588	1.2000e-003	0.0600		210.2649	210.2649	4.8600e-003		210.3863
Total	**0.1356**	**0.8989**	**0.8382**	**4.3700e-003**	**0.2760**	**3.3400e-003**	**0.2794**	**0.0744**	**3.1500e-003**	**0.0776**		**446.7300**	**446.7300**	**0.0309**		**447.5029**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4155	12.9464	14.6196	0.0243		0.6298	0.6298		0.5926	0.5926		2,299.6889	2,299.6889	0.5471		2,313.3655
Total	**1.4155**	**12.9464**	**14.6196**	**0.0243**		**0.6298**	**0.6298**		**0.5926**	**0.5926**		**2,299.6889**	**2,299.6889**	**0.5471**		**2,313.3655**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0151	0.6615	0.0961	2.2000e-003	0.0542	6.3000e-004	0.0548	0.0156	6.0000e-004	0.0162		230.6749	230.6749	0.0176		231.1158
Worker	0.1056	0.0490	0.6599	2.0300e-003	0.2218	1.2700e-003	0.2231	0.0588	1.1700e-003	0.0600		202.3699	202.3699	4.3300e-003		202.4782
Total	**0.1208**	**0.7105**	**0.7560**	**4.2300e-003**	**0.2760**	**1.9000e-003**	**0.2779**	**0.0744**	**1.7700e-003**	**0.0762**		**433.0448**	**433.0448**	**0.0220**		**433.5940**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4155	12.9464	14.6196	0.0243		0.6298	0.6298		0.5926	0.5926	0.0000	2,299.6889	2,299.6889	0.5471		2,313.3655
Total	**1.4155**	**12.9464**	**14.6196**	**0.0243**		**0.6298**	**0.6298**		**0.5926**	**0.5926**	**0.0000**	**2,299.6889**	**2,299.6889**	**0.5471**		**2,313.3655**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0151	0.6615	0.0961	2.2000e-003	0.0542	6.3000e-004	0.0548	0.0156	6.0000e-004	0.0162		230.6749	230.6749	0.0176		231.1158
Worker	0.1056	0.0490	0.6599	2.0300e-003	0.2218	1.2700e-003	0.2231	0.0588	1.1700e-003	0.0600		202.3699	202.3699	4.3300e-003		202.4782
Total	**0.1208**	**0.7105**	**0.7560**	**4.2300e-003**	**0.2760**	**1.9000e-003**	**0.2779**	**0.0744**	**1.7700e-003**	**0.0762**		**433.0448**	**433.0448**	**0.0220**		**433.5940**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3244	12.0994	14.5501	0.0243		0.5520	0.5520		0.5192	0.5192		2,300.1290	2,300.1290	0.5439		2,313.7269
Total	**1.3244**	**12.0994**	**14.5501**	**0.0243**		**0.5520**	**0.5520**		**0.5192**	**0.5192**		**2,300.1290**	**2,300.1290**	**0.5439**		**2,313.7269**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0147	0.6566	0.0913	2.1800e-003	0.0542	6.3000e-004	0.0548	0.0156	6.0000e-004	0.0162		228.8866	228.8866	0.0178		229.3313
Worker	0.0986	0.0441	0.6080	1.9500e-003	0.2218	1.2400e-003	0.2230	0.0588	1.1400e-003	0.0600		194.4541	194.4541	3.8800e-003		194.5511
Total	**0.1133**	**0.7006**	**0.6993**	**4.1300e-003**	**0.2760**	**1.8700e-003**	**0.2779**	**0.0744**	**1.7400e-003**	**0.0762**		**423.3407**	**423.3407**	**0.0217**		**423.8824**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3244	12.0994	14.5501	0.0243		0.5520	0.5520		0.5192	0.5192	0.0000	2,300.1290	2,300.1290	0.5439		2,313.7269
Total	**1.3244**	**12.0994**	**14.5501**	**0.0243**		**0.5520**	**0.5520**		**0.5192**	**0.5192**	**0.0000**	**2,300.1290**	**2,300.1290**	**0.5439**		**2,313.7269**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0147	0.6566	0.0913	2.1800e-003	0.0542	6.3000e-004	0.0548	0.0156	6.0000e-004	0.0162		228.8866	228.8866	0.0178		229.3313
Worker	0.0986	0.0441	0.6080	1.9500e-003	0.2218	1.2400e-003	0.2230	0.0588	1.1400e-003	0.0600		194.4541	194.4541	3.8800e-003		194.5511
Total	**0.1133**	**0.7006**	**0.6993**	**4.1300e-003**	**0.2760**	**1.8700e-003**	**0.2779**	**0.0744**	**1.7400e-003**	**0.0762**		**423.3407**	**423.3407**	**0.0217**		**423.8824**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0245	0.3378	1.0800e-003	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		108.0301	108.0301	2.1500e-003		108.0839
Total	**0.0548**	**0.0245**	**0.3378**	**1.0800e-003**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**108.0301**	**108.0301**	**2.1500e-003**		**108.0839**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0548	0.0245	0.3378	1.0800e-003	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		108.0301	108.0301	2.1500e-003		108.0839
Total	**0.0548**	**0.0245**	**0.3378**	**1.0800e-003**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**108.0301**	**108.0301**	**2.1500e-003**		**108.0839**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.7001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**19.8809**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	8.1600e-003	0.1126	3.6000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		36.0100	36.0100	7.2000e-004		36.0280
Total	**0.0183**	**8.1600e-003**	**0.1126**	**3.6000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.1000e-004**	**0.0111**		**36.0100**	**36.0100**	**7.2000e-004**		**36.0280**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.7001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**19.8809**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0183	8.1600e-003	0.1126	3.6000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		36.0100	36.0100	7.2000e-004		36.0280
Total	**0.0183**	**8.1600e-003**	**0.1126**	**3.6000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.1000e-004**	**0.0111**		**36.0100**	**36.0100**	**7.2000e-004**		**36.0280**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4458	3.4927	13.4951	0.0437	4.0727	0.0315	4.1042	1.0871	0.0293	1.1164		4,422.0982	4,422.0982	0.2478		4,428.2924
Unmitigated	1.4674	3.6217	14.3165	0.0467	4.3746	0.0335	4.4081	1.1676	0.0312	1.1988		4,727.2377	4,727.2377	0.2605		4,733.7512

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	698.56	705.96	632.70	2,022,083	1,882,559
Total	698.56	705.96	632.70	2,022,083	1,882,559

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530500	0.205800	0.167300	0.055000	0.001100	0.000900	0.008500	0.021800	0.000000	0.004300	0.002500	0.000400	0.001900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
NaturalGas Unmitigated	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	5300.68	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Total		**0.0572**	**0.4885**	**0.2079**	**3.1200e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.6093**	**623.6093**	**0.0120**	**0.0114**	**627.3151**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	5.30068	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Total		**0.0572**	**0.4885**	**0.2079**	**3.1200e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.6093**	**623.6093**	**0.0120**	**0.0114**	**627.3151**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4724	1.2975	6.5848	8.1500e-003		0.1328	0.1328		0.1328	0.1328	0.0000	1,577.9527	1,577.9527	0.0405	0.0287	1,587.5254
Unmitigated	21.8663	4.0226	173.6495	0.5531		27.3795	27.3795		27.3795	27.3795	4,021.5744	1,578.0517	5,599.6261	18.8407	0.0287	6,079.2037

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.5350	3.9522	167.5430	0.5528		27.3457	27.3457		27.3457	27.3457	4,021.5744	1,567.0588	5,588.6332	18.8301	0.0287	6,067.9465
Landscaping	0.1840	0.0704	6.1065	3.2000e-004		0.0338	0.0338		0.0338	0.0338		10.9929	10.9929	0.0106		11.2571
Total	**21.8663**	**4.0226**	**173.6495**	**0.5531**		**27.3795**	**27.3795**		**27.3795**	**27.3795**	**4,021.5744**	**1,578.0517**	**5,599.6261**	**18.8407**	**0.0287**	**6,079.2037**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1437	1.2275	0.5224	7.8400e-003		0.0993	0.0993		0.0993	0.0993	0.0000	1,567.0588	1,567.0588	0.0300	0.0287	1,576.3711
Landscaping	0.1814	0.0700	6.0625	3.2000e-004		0.0335	0.0335		0.0335	0.0335		10.8939	10.8939	0.0104		11.1544
Total	**3.4724**	**1.2975**	**6.5848**	**8.1600e-003**		**0.1328**	**0.1328**		**0.1328**	**0.1328**	**0.0000**	**1,577.9527**	**1,577.9527**	**0.0405**	**0.0287**	**1,587.5254**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output

Construction and Operations 2023

(Winter Daily)

Woodside Tract 6284 Construction and Ops

Fresno County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	74.00	Dwelling Unit	36.50	133,200.00	212

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.025	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Energy Intensity Factor

Land Use - Site Plan

Construction Phase - Demo for 1 house only

Off-road Equipment - Adjusted hours for developers schedule and default hours of operation

Off-road Equipment - Demo for 1 house

Off-road Equipment -

Off-road Equipment -

Trips and VMT - Soil import 7500 CY

Demolition -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Vehicle Trips - ITE 10th Edition Trip Rates 9.44, 9.54, 8.55

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Water Mitigation -

Waste Mitigation -

Fleet Mix - SJVAPCD Residential Fleet Mix 2023

Woodstoves - Rule 4901 Woodburning Device allowed installations

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaCoating	Area_EF_Residential_Exterior	150	65
tblAreaCoating	Area_EF_Residential_Interior	150	65
tblConstructionPhase	NumDays	740.00	826.00
tblConstructionPhase	NumDays	50.00	5.00

tblFireplaces	NumberGas	40.70	74.00
tblFireplaces	NumberNoFireplace	33.30	74.00
tblFleetMix	HHD	0.13	0.02
tblFleetMix	LDA	0.50	0.53
tblFleetMix	LDT1	0.03	0.21
tblFleetMix	LDT2	0.17	0.17
tblFleetMix	LHD1	0.01	1.1000e-003
tblFleetMix	LHD2	4.2870e-003	9.0000e-004
tblFleetMix	MCY	4.9660e-003	2.5000e-003
tblFleetMix	MDV	0.11	0.06
tblFleetMix	MH	5.6200e-004	1.9000e-003
tblFleetMix	MHD	0.03	8.5000e-003
tblFleetMix	OBUS	2.3600e-003	0.00
tblFleetMix	SBUS	1.0700e-003	4.0000e-004
tblFleetMix	UBUS	1.4600e-003	4.3000e-003
tblLandUse	LotAcreage	24.03	36.50
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	8.00	7.20
tblOffRoadEquipment	UsageHours	7.00	6.30
tblOffRoadEquipment	UsageHours	8.00	7.20
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	HaulingTripNumber	0.00	375.00

tblTripsAndVMT	WorkerTripNumber	8.00	15.00
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	3.70	37.00
tblWoodstoves	NumberNoncatalytic	3.70	37.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5819	51.6699	32.7090	0.0674	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	6,567.0101	6,567.0101	1.9859	0.0000	6,616.6570
2021	4.3137	47.7509	31.5694	0.0673	13.8170	1.9906	15.8076	4.8648	1.8315	6.6963	0.0000	6,558.1104	6,558.1104	1.9848	0.0000	6,607.7312
2022	1.6645	14.9685	15.4769	0.0283	0.2760	0.7316	1.0076	0.0744	0.6883	0.7627	0.0000	2,712.2061	2,712.2061	0.5847	0.0000	2,726.8223
2023	1.5299	13.6681	15.2870	0.0282	0.2760	0.6317	0.9077	0.0744	0.5944	0.6688	0.0000	2,700.5107	2,700.5107	0.5709	0.0000	2,714.7834
2024	19.8980	12.8102	15.1665	0.0281	0.2760	0.5539	0.8299	0.0744	0.5210	0.5954	0.0000	2,692.3681	2,692.3681	0.7159	0.0000	2,706.5567
Maximum	**19.8980**	**51.6699**	**32.7090**	**0.0674**	**18.2141**	**2.1983**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**6,567.0101**	**6,567.0101**	**1.9859**	**0.0000**	**6,616.6570**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5819	51.6699	32.7090	0.0674	8.2777	2.1983	10.4760	4.5080	2.0225	6.5305	0.0000	6,567.0101	6,567.0101	1.9859	0.0000	6,616.6570
2021	4.3137	47.7509	31.5694	0.0673	9.0467	1.9906	11.0373	2.8867	1.8315	4.7183	0.0000	6,558.1104	6,558.1104	1.9848	0.0000	6,607.7311
2022	1.6645	14.9685	15.4769	0.0283	0.2760	0.7316	1.0076	0.0744	0.6883	0.7627	0.0000	2,712.2061	2,712.2061	0.5847	0.0000	2,726.8223
2023	1.5299	13.6681	15.2870	0.0282	0.2760	0.6317	0.9077	0.0744	0.5944	0.6688	0.0000	2,700.5107	2,700.5107	0.5709	0.0000	2,714.7834
2024	19.8980	12.8102	15.1665	0.0281	0.2760	0.5539	0.8299	0.0744	0.5210	0.5954	0.0000	2,692.3681	2,692.3681	0.7159	0.0000	2,706.5567
Maximum	**19.8980**	**51.6699**	**32.7090**	**0.0674**	**9.0467**	**2.1983**	**11.0373**	**4.5080**	**2.0225**	**6.5305**	**0.0000**	**6,567.0101**	**6,567.0101**	**1.9859**	**0.0000**	**6,616.6570**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**44.76**	**0.00**	**37.74**	**49.41**	**0.00**	**35.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	21.8663	4.0226	173.6495	0.5531		27.3795	27.3795		27.3795	27.3795	4,021.5744	1,578.0517	5,599.6261	18.8407	0.0287	6,079.2037
Energy	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Mobile	1.0130	3.8337	12.7685	0.0417	4.3746	0.0336	4.4081	1.1676	0.0312	1.1989		4,231.7548	4,231.7548	0.2617		4,238.2983
Total	**22.9365**	**8.3448**	**186.6258**	**0.5979**	**4.3746**	**27.4526**	**31.8271**	**1.1676**	**27.4502**	**28.6179**	**4,021.5744**	**6,433.4158**	**10,454.9902**	**19.1143**	**0.0402**	**10,944.8171**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4724	1.2975	6.5848	8.1500e-003		0.1328	0.1328		0.1328	0.1328	0.0000	1,577.9527	1,577.9527	0.0405	0.0287	1,587.5254
Energy	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Mobile	0.9934	3.6894	12.1325	0.0390	4.0727	0.0315	4.1043	1.0871	0.0293	1.1164		3,958.9159	3,958.9159	0.2499		3,965.1624
Total	**4.5229**	**5.4753**	**18.9252**	**0.0503**	**4.0727**	**0.2038**	**4.2766**	**1.0871**	**0.2016**	**1.2887**	**0.0000**	**6,160.4778**	**6,160.4778**	**0.3023**	**0.0402**	**6,180.0029**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**80.28**	**34.39**	**89.86**	**91.59**	**6.90**	**99.26**	**86.56**	**6.90**	**99.27**	**95.50**	**100.00**	**4.24**	**41.08**	**98.42**	**0.00**	**43.53**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2020	6/5/2020	5	5	
2	Site Preparation	Site Preparation	8/8/2020	9/18/2020	5	30	
3	Grading	Grading	9/19/2020	1/1/2021	5	75	
4	Building Construction	Building Construction	6/1/2021	7/30/2024	5	826	
5	Paving	Paving	7/31/2024	10/15/2024	5	55	
6	Architectural Coating	Architectural Coating	10/16/2024	12/31/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

Residential Indoor: 269,730; Residential Outdoor: 89,910; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Woodside Tract 6284 Construction and Ops - Fresno County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	6.30	231	0.29
Building Construction	Forklifts	3	7.20	89	0.20
Building Construction	Generator Sets	1	7.20	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	6.30	97	0.37
Building Construction	Welders	1	7.20	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	15.00	0.00	15.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	27.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6459	0.0000	0.6459	0.0978	0.0000	0.0978			0.0000			0.0000
Off-Road	1.7427	17.0435	11.0860	0.0200		0.8700	0.8700		0.8162	0.8162		1,920.1256	1,920.1256	0.4669		1,931.7974
Total	**1.7427**	**17.0435**	**11.0860**	**0.0200**	**0.6459**	**0.8700**	**1.5159**	**0.0978**	**0.8162**	**0.9140**		**1,920.1256**	**1,920.1256**	**0.4669**		**1,931.7974**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0244	0.8475	0.1217	2.3700e-003	0.0525	2.9400e-003	0.0555	0.0144	2.8100e-003	0.0172		248.7142	248.7142	0.0237		249.3063
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.0928**	**0.8924**	**0.5326**	**3.4700e-003**	**0.1757**	**3.7100e-003**	**0.1795**	**0.0471**	**3.5200e-003**	**0.0506**		**358.6800**	**358.6800**	**0.0267**		**359.3469**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2907	0.0000	0.2907	0.0440	0.0000	0.0440			0.0000			0.0000
Off-Road	1.7427	17.0435	11.0860	0.0200		0.8700	0.8700		0.8162	0.8162	0.0000	1,920.1256	1,920.1256	0.4669		1,931.7974
Total	**1.7427**	**17.0435**	**11.0860**	**0.0200**	**0.2907**	**0.8700**	**1.1607**	**0.0440**	**0.8162**	**0.8603**	**0.0000**	**1,920.1256**	**1,920.1256**	**0.4669**		**1,931.7974**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0244	0.8475	0.1217	2.3700e-003	0.0525	2.9400e-003	0.0555	0.0144	2.8100e-003	0.0172		248.7142	248.7142	0.0237		249.3063
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.0928**	**0.8924**	**0.5326**	**3.4700e-003**	**0.1757**	**3.7100e-003**	**0.1795**	**0.0471**	**3.5200e-003**	**0.0506**		**358.6800**	**358.6800**	**0.0267**		**359.3469**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0820	0.0540	0.4930	1.3300e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		131.9590	131.9590	3.5900e-003		132.0487
Total	**0.0820**	**0.0540**	**0.4930**	**1.3300e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**131.9590**	**131.9590**	**3.5900e-003**		**132.0487**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0820	0.0540	0.4930	1.3300e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		131.9590	131.9590	3.5900e-003		132.0487
Total	**0.0820**	**0.0540**	**0.4930**	**1.3300e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**131.9590**	**131.9590**	**3.5900e-003**		**132.0487**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0407	1.4124	0.2029	3.9500e-003	0.0884	4.9000e-003	0.0933	0.0242	4.6800e-003	0.0289		414.5237	414.5237	0.0395		415.5105
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0911	0.0600	0.5478	1.4700e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		146.6211	146.6211	3.9900e-003		146.7208
Total	**0.1318**	**1.4724**	**0.7507**	**5.4200e-003**	**0.2527**	**5.9300e-003**	**0.2587**	**0.0678**	**5.6300e-003**	**0.0734**		**561.1448**	**561.1448**	**0.0435**		**562.2313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**3.9030**	**2.1739**	**6.0769**	**1.6184**	**2.0000**	**3.6184**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0407	1.4124	0.2029	3.9500e-003	0.0884	4.9000e-003	0.0933	0.0242	4.6800e-003	0.0289		414.5237	414.5237	0.0395		415.5105
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0911	0.0600	0.5478	1.4700e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		146.6211	146.6211	3.9900e-003		146.7208
Total	**0.1318**	**1.4724**	**0.7507**	**5.4200e-003**	**0.2527**	**5.9300e-003**	**0.2587**	**0.0678**	**5.6300e-003**	**0.0734**		**561.1448**	**561.1448**	**0.0435**		**562.2313**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0383	1.2977	0.1949	3.9000e-003	4.9794	4.2900e-003	4.9837	1.2247	4.1100e-003	1.2288		409.4690	409.4690	0.0385		410.4311
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0534	0.4961	1.4200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		141.5980	141.5980	3.5500e-003		141.6866
Total	**0.1225**	**1.3510**	**0.6909**	**5.3200e-003**	**5.1437**	**5.2900e-003**	**5.1489**	**1.2683**	**5.0300e-003**	**1.2733**		**551.0670**	**551.0670**	**0.0420**		**552.1177**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.9030**	**1.9853**	**5.8883**	**1.6184**	**1.8265**	**3.4449**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0383	1.2977	0.1949	3.9000e-003	4.9794	4.2900e-003	4.9837	1.2247	4.1100e-003	1.2288		409.4690	409.4690	0.0385		410.4311
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0534	0.4961	1.4200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		141.5980	141.5980	3.5500e-003		141.6866
Total	**0.1225**	**1.3510**	**0.6909**	**5.3200e-003**	**5.1437**	**5.2900e-003**	**5.1489**	**1.2683**	**5.0300e-003**	**1.2733**		**551.0670**	**551.0670**	**0.0420**		**552.1177**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7108	15.6889	14.9177	0.0242		0.8628	0.8628		0.8112	0.8112		2,298.0275	2,298.0275	0.5544		2,311.8878
Total	**1.7108**	**15.6889**	**14.9177**	**0.0242**		**0.8628**	**0.8628**		**0.8112**	**0.8112**		**2,298.0275**	**2,298.0275**	**0.5544**		**2,311.8878**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0250	0.8976	0.1518	2.2100e-003	0.0542	2.4700e-003	0.0567	0.0156	2.3700e-003	0.0180		231.2472	231.2472	0.0305		232.0104
Worker	0.1137	0.0720	0.6697	1.9200e-003	0.2218	1.3400e-003	0.2231	0.0588	1.2400e-003	0.0601		191.1573	191.1573	4.7900e-003		191.2769
Total	**0.1386**	**0.9696**	**0.8215**	**4.1300e-003**	**0.2760**	**3.8100e-003**	**0.2798**	**0.0744**	**3.6100e-003**	**0.0780**		**422.4045**	**422.4045**	**0.0353**		**423.2873**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7108	15.6889	14.9177	0.0242		0.8628	0.8628		0.8112	0.8112	0.0000	2,298.0275	2,298.0275	0.5544		2,311.8878
Total	**1.7108**	**15.6889**	**14.9177**	**0.0242**		**0.8628**	**0.8628**		**0.8112**	**0.8112**	**0.0000**	**2,298.0275**	**2,298.0275**	**0.5544**		**2,311.8878**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0250	0.8976	0.1518	2.2100e-003	0.0542	2.4700e-003	0.0567	0.0156	2.3700e-003	0.0180		231.2472	231.2472	0.0305		232.0104
Worker	0.1137	0.0720	0.6697	1.9200e-003	0.2218	1.3400e-003	0.2231	0.0588	1.2400e-003	0.0601		191.1573	191.1573	4.7900e-003		191.2769
Total	**0.1386**	**0.9696**	**0.8215**	**4.1300e-003**	**0.2760**	**3.8100e-003**	**0.2798**	**0.0744**	**3.6100e-003**	**0.0780**		**422.4045**	**422.4045**	**0.0353**		**423.2873**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5356	14.0541	14.7271	0.0242		0.7281	0.7281		0.6850	0.6850		2,298.9002	2,298.9002	0.5508		2,312.6690
Total	**1.5356**	**14.0541**	**14.7271**	**0.0242**		**0.7281**	**0.7281**		**0.6850**	**0.6850**		**2,298.9002**	**2,298.9002**	**0.5508**		**2,312.6690**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0232	0.8502	0.1406	2.1900e-003	0.0542	2.1300e-003	0.0563	0.0156	2.0400e-003	0.0177		229.0110	229.0110	0.0296		229.7519
Worker	0.1056	0.0643	0.6092	1.8500e-003	0.2218	1.3000e-003	0.2231	0.0588	1.2000e-003	0.0600		184.2949	184.2949	4.2600e-003		184.4014
Total	**0.1289**	**0.9144**	**0.7498**	**4.0400e-003**	**0.2760**	**3.4300e-003**	**0.2794**	**0.0744**	**3.2400e-003**	**0.0777**		**413.3059**	**413.3059**	**0.0339**		**414.1534**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5356	14.0541	14.7271	0.0242		0.7281	0.7281		0.6850	0.6850	0.0000	2,298.9002	2,298.9002	0.5508		2,312.6690
Total	**1.5356**	**14.0541**	**14.7271**	**0.0242**		**0.7281**	**0.7281**		**0.6850**	**0.6850**	**0.0000**	**2,298.9002**	**2,298.9002**	**0.5508**		**2,312.6690**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0232	0.8502	0.1406	2.1900e-003	0.0542	2.1300e-003	0.0563	0.0156	2.0400e-003	0.0177		229.0110	229.0110	0.0296		229.7519
Worker	0.1056	0.0643	0.6092	1.8500e-003	0.2218	1.3000e-003	0.2231	0.0588	1.2000e-003	0.0600		184.2949	184.2949	4.2600e-003		184.4014
Total	**0.1289**	**0.9144**	**0.7498**	**4.0400e-003**	**0.2760**	**3.4300e-003**	**0.2794**	**0.0744**	**3.2400e-003**	**0.0777**		**413.3059**	**413.3059**	**0.0339**		**414.1534**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4155	12.9464	14.6196	0.0243		0.6298	0.6298		0.5926	0.5926		2,299.6889	2,299.6889	0.5471		2,313.3655
Total	**1.4155**	**12.9464**	**14.6196**	**0.0243**		**0.6298**	**0.6298**		**0.5926**	**0.5926**		**2,299.6889**	**2,299.6889**	**0.5471**		**2,313.3655**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.6642	0.1125	2.1300e-003	0.0542	6.5000e-004	0.0549	0.0156	6.2000e-004	0.0162		223.4336	223.4336	0.0201		223.9349
Worker	0.0985	0.0575	0.5549	1.7800e-003	0.2218	1.2700e-003	0.2231	0.0588	1.1700e-003	0.0600		177.3882	177.3882	3.8000e-003		177.4831
Total	**0.1145**	**0.7217**	**0.6674**	**3.9100e-003**	**0.2760**	**1.9200e-003**	**0.2779**	**0.0744**	**1.7900e-003**	**0.0762**		**400.8218**	**400.8218**	**0.0239**		**401.4180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4155	12.9464	14.6196	0.0243		0.6298	0.6298		0.5926	0.5926	0.0000	2,299.6889	2,299.6889	0.5471		2,313.3655
Total	**1.4155**	**12.9464**	**14.6196**	**0.0243**		**0.6298**	**0.6298**		**0.5926**	**0.5926**	**0.0000**	**2,299.6889**	**2,299.6889**	**0.5471**		**2,313.3655**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0159	0.6642	0.1125	2.1300e-003	0.0542	6.5000e-004	0.0549	0.0156	6.2000e-004	0.0162		223.4336	223.4336	0.0201		223.9349
Worker	0.0985	0.0575	0.5549	1.7800e-003	0.2218	1.2700e-003	0.2231	0.0588	1.1700e-003	0.0600		177.3882	177.3882	3.8000e-003		177.4831
Total	**0.1145**	**0.7217**	**0.6674**	**3.9100e-003**	**0.2760**	**1.9200e-003**	**0.2779**	**0.0744**	**1.7900e-003**	**0.0762**		**400.8218**	**400.8218**	**0.0239**		**401.4180**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3244	12.0994	14.5501	0.0243		0.5520	0.5520		0.5192	0.5192		2,300.1290	2,300.1290	0.5439		2,313.7269
Total	**1.3244**	**12.0994**	**14.5501**	**0.0243**		**0.5520**	**0.5520**		**0.5192**	**0.5192**		**2,300.1290**	**2,300.1290**	**0.5439**		**2,313.7269**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0155	0.6591	0.1070	2.1200e-003	0.0542	6.4000e-004	0.0549	0.0156	6.1000e-004	0.0162		221.7772	221.7772	0.0202		222.2831
Worker	0.0923	0.0517	0.5094	1.7100e-003	0.2218	1.2400e-003	0.2230	0.0588	1.1400e-003	0.0600		170.4620	170.4620	3.3900e-003		170.5468
Total	**0.1078**	**0.7108**	**0.6164**	**3.8300e-003**	**0.2760**	**1.8800e-003**	**0.2779**	**0.0744**	**1.7500e-003**	**0.0762**		**392.2391**	**392.2391**	**0.0236**		**392.8298**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3244	12.0994	14.5501	0.0243		0.5520	0.5520		0.5192	0.5192	0.0000	2,300.1290	2,300.1290	0.5439		2,313.7269
Total	**1.3244**	**12.0994**	**14.5501**	**0.0243**		**0.5520**	**0.5520**		**0.5192**	**0.5192**	**0.0000**	**2,300.1290**	**2,300.1290**	**0.5439**		**2,313.7269**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0155	0.6591	0.1070	2.1200e-003	0.0542	6.4000e-004	0.0549	0.0156	6.1000e-004	0.0162		221.7772	221.7772	0.0202		222.2831
Worker	0.0923	0.0517	0.5094	1.7100e-003	0.2218	1.2400e-003	0.2230	0.0588	1.1400e-003	0.0600		170.4620	170.4620	3.3900e-003		170.5468
Total	**0.1078**	**0.7108**	**0.6164**	**3.8300e-003**	**0.2760**	**1.8800e-003**	**0.2779**	**0.0744**	**1.7500e-003**	**0.0762**		**392.2391**	**392.2391**	**0.0236**		**392.8298**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0513	0.0287	0.2830	9.5000e-004	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		94.7011	94.7011	1.8800e-003		94.7482
Total	**0.0513**	**0.0287**	**0.2830**	**9.5000e-004**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**94.7011**	**94.7011**	**1.8800e-003**		**94.7482**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0513	0.0287	0.2830	9.5000e-004	0.1232	6.9000e-004	0.1239	0.0327	6.3000e-004	0.0333		94.7011	94.7011	1.8800e-003		94.7482
Total	**0.0513**	**0.0287**	**0.2830**	**9.5000e-004**	**0.1232**	**6.9000e-004**	**0.1239**	**0.0327**	**6.3000e-004**	**0.0333**		**94.7011**	**94.7011**	**1.8800e-003**		**94.7482**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.7001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**19.8809**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	9.5700e-003	0.0943	3.2000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		31.5670	31.5670	6.3000e-004		31.5827
Total	**0.0171**	**9.5700e-003**	**0.0943**	**3.2000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.1000e-004**	**0.0111**		**31.5670**	**31.5670**	**6.3000e-004**		**31.5827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.7001					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**19.8809**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0171	9.5700e-003	0.0943	3.2000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		31.5670	31.5670	6.3000e-004		31.5827
Total	**0.0171**	**9.5700e-003**	**0.0943**	**3.2000e-004**	**0.0411**	**2.3000e-004**	**0.0413**	**0.0109**	**2.1000e-004**	**0.0111**		**31.5670**	**31.5670**	**6.3000e-004**		**31.5827**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9934	3.6894	12.1325	0.0390	4.0727	0.0315	4.1043	1.0871	0.0293	1.1164		3,958.9159	3,958.9159	0.2499		3,965.1624
Unmitigated	1.0130	3.8337	12.7685	0.0417	4.3746	0.0336	4.4081	1.1676	0.0312	1.1989		4,231.7548	4,231.7548	0.2617		4,238.2983

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	698.56	705.96	632.70	2,022,083	1,882,559
Total	698.56	705.96	632.70	2,022,083	1,882,559

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.40	15.90	35.70	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530500	0.205800	0.167300	0.055000	0.001100	0.000900	0.008500	0.021800	0.000000	0.004300	0.002500	0.000400	0.001900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
NaturalGas Unmitigated	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	5300.68	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Total		**0.0572**	**0.4885**	**0.2079**	**3.1200e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.6093**	**623.6093**	**0.0120**	**0.0114**	**627.3151**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	5.30068	0.0572	0.4885	0.2079	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.6093	623.6093	0.0120	0.0114	627.3151
Total		**0.0572**	**0.4885**	**0.2079**	**3.1200e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.6093**	**623.6093**	**0.0120**	**0.0114**	**627.3151**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4724	1.2975	6.5848	8.1500e-003		0.1328	0.1328		0.1328	0.1328	0.0000	1,577.9527	1,577.9527	0.0405	0.0287	1,587.5254
Unmitigated	21.8663	4.0226	173.6495	0.5531		27.3795	27.3795		27.3795	27.3795	4,021.5744	1,578.0517	5,599.6261	18.8407	0.0287	6,079.2037

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	18.5350	3.9522	167.5430	0.5528		27.3457	27.3457		27.3457	27.3457	4,021.5744	1,567.0588	5,588.6332	18.8301	0.0287	6,067.9465
Landscaping	0.1840	0.0704	6.1065	3.2000e-004		0.0338	0.0338		0.0338	0.0338		10.9929	10.9929	0.0106		11.2571
Total	**21.8663**	**4.0226**	**173.6495**	**0.5531**		**27.3795**	**27.3795**		**27.3795**	**27.3795**	**4,021.5744**	**1,578.0517**	**5,599.6261**	**18.8407**	**0.0287**	**6,079.2037**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.8505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1437	1.2275	0.5224	7.8400e-003		0.0993	0.0993		0.0993	0.0993	0.0000	1,567.0588	1,567.0588	0.0300	0.0287	1,576.3711
Landscaping	0.1814	0.0700	6.0625	3.2000e-004		0.0335	0.0335		0.0335	0.0335		10.8939	10.8939	0.0104		11.1544
Total	**3.4724**	**1.2975**	**6.5848**	**8.1600e-003**		**0.1328**	**0.1328**		**0.1328**	**0.1328**	**0.0000**	**1,577.9527**	**1,577.9527**	**0.0405**	**0.0287**	**1,587.5254**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output

GHG Business as Usual

Woodside Tract 6284 GHG BAU

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	74.00	Dwelling Unit	36.50	133,200.00	212

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Energy Intensity Factor

Land Use - Site Plan

Construction Phase - GHG Ops Only

Off-road Equipment -

Off-road Equipment - Adjusted hours for developers schedule and default hours of operation

Trips and VMT - Soil import 7500 CY

Demolition -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Vehicle Trips - ITE 10th Edition Trip Rates 9.44, 9.54, 8.55

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Water Mitigation -

Waste Mitigation -

Fleet Mix - SJVAPCD Residential Fleet Mix 2023

Woodstoves - Rule 4901 Woodburning Devices Allowed

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	65
tblAreaCoating	Area_EF_Residential_Interior	250	65
tblConstructionPhase	NumDays	55.00	1.00
tblFireplaces	NumberGas	40.70	74.00

tblFireplaces	NumberNoFireplace	33.30	74.00
tblFleetMix	HHD	0.11	0.02
tblFleetMix	LDA	0.42	0.53
tblFleetMix	LDT1	0.06	0.21
tblFleetMix	LDT2	0.15	0.17
tblFleetMix	LHD1	0.04	1.1000e-003
tblFleetMix	LHD2	6.9730e-003	9.0000e-004
tblFleetMix	MCY	5.2690e-003	2.5000e-003
tblFleetMix	MDV	0.18	0.06
tblFleetMix	MH	1.5690e-003	1.9000e-003
tblFleetMix	MHD	0.03	8.5000e-003
tblFleetMix	OBUS	2.0990e-003	0.00
tblFleetMix	SBUS	1.2120e-003	4.0000e-004
tblFleetMix	UBUS	1.7870e-003	4.3000e-003
tblLandUse	LotAcreage	24.03	36.50
tblVehicleTrips	HO_TTP	35.70	36.00
tblVehicleTrips	HS_TTP	15.90	16.00
tblVehicleTrips	HW_TTP	48.40	48.00
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	3.70	37.00
tblWoodstoves	NumberNoncatalytic	3.70	37.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024											0.0000	0.1426	0.1426	1.0000e-005	0.0000	0.1428
Maximum											**0.0000**	**0.1426**	**0.1426**	**1.0000e-005**	**0.0000**	**0.1428**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024											0.0000	0.1426	0.1426	1.0000e-005	0.0000	0.1428
Maximum											**0.0000**	**0.1426**	**0.1426**	**1.0000e-005**	**0.0000**	**0.1428**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											149.5808	59.1836	208.7644	0.7018	1.0700e-003	226.6282
Energy											0.0000	291.8419	291.8419	0.0105	3.6600e-003	293.1944
Mobile											0.0000	908.6675	908.6675	0.1542	0.0000	912.5226
Waste											15.4923	0.0000	15.4923	0.9156	0.0000	38.3814
Water											1.5296	10.6843	12.2139	0.1576	3.8100e-003	17.2889
Total											**166.6026**	**1,270.3773**	**1,436.9799**	**1.9397**	**8.5400e-003**	**1,488.0155**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	59.1755	59.1755	2.5300e-003	1.0700e-003	59.5573
Energy											0.0000	291.8419	291.8419	0.0105	3.6600e-003	293.1944
Mobile											0.0000	849.4856	849.4856	0.1482	0.0000	853.1898
Waste											11.6192	0.0000	11.6192	0.6867	0.0000	28.7861
Water											1.2237	8.5475	9.7712	0.1261	3.0500e-003	13.8311
Total											**12.8429**	**1,209.0504**	**1,221.8933**	**0.9740**	**7.7800e-003**	**1,248.5587**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**92.29**	**4.83**	**14.97**	**49.79**	**8.90**	**16.09**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/20/2024	1/22/2024	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 269,730; Residential Outdoor: 89,910; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1278
Total											**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0149	0.0149	0.0000	0.0000	0.0149
Total											**0.0000**	**0.0149**	**0.0149**	**0.0000**	**0.0000**	**0.0149**

3.2 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	0.1277	0.1277	1.0000e-005	0.0000	0.1278
Total											**0.0000**	**0.1277**	**0.1277**	**1.0000e-005**	**0.0000**	**0.1278**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.0149	0.0149	0.0000	0.0000	0.0149
Total											**0.0000**	**0.0149**	**0.0149**	**0.0000**	**0.0000**	**0.0149**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	849.4856	849.4856	0.1482	0.0000	853.1898
Unmitigated											0.0000	908.6675	908.6675	0.1542	0.0000	912.5226

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	698.56	705.96	632.70	2,019,095	1,879,778
Total	698.56	705.96	632.70	2,019,095	1,879,778

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.00	16.00	36.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530500	0.205800	0.167300	0.055000	0.001100	0.000900	0.008500	0.021800	0.000000	0.004300	0.002500	0.000400	0.001900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	188.5964	188.5964	8.5300e-003	1.7600e-003	189.3354
Electricity Unmitigated											0.0000	188.5964	188.5964	8.5300e-003	1.7600e-003	189.3354
NaturalGas Mitigated											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
NaturalGas Unmitigated											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total												**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total												**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	188.5964	8.5300e-003	1.7600e-003	189.3354
Total		**188.5964**	**8.5300e-003**	**1.7600e-003**	**189.3354**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	188.5964	8.5300e-003	1.7600e-003	189.3354
Total		**188.5964**	**8.5300e-003**	**1.7600e-003**	**189.3354**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	59.1755	59.1755	2.5300e-003	1.0700e-003	59.5573
Unmitigated											149.5808	59.1836	208.7644	0.7018	1.0700e-003	226.6282

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											149.5808	58.2861	207.8668	0.7004	1.0700e-003	225.6947
Landscaping											0.0000	0.8975	0.8975	1.4400e-003	0.0000	0.9335
Total											**149.5808**	**59.1836**	**208.7644**	**0.7018**	**1.0700e-003**	**226.6282**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	58.2861	58.2861	1.1200e-003	1.0700e-003	58.6325
Landscaping											0.0000	0.8895	0.8895	1.4100e-003	0.0000	0.9248
Total											**0.0000**	**59.1755**	**59.1755**	**2.5300e-003**	**1.0700e-003**	**59.5573**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.7712	0.1261	3.0500e-003	13.8311
Unmitigated	12.2139	0.1576	3.8100e-003	17.2889

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.8214 / 3.03958	12.2139	0.1576	3.8100e-003	17.2889
Total		**12.2139**	**0.1576**	**3.8100e-003**	**17.2889**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.85712 / 2.43166	9.7712	0.1261	3.0500e-003	13.8311
Total		**9.7712**	**0.1261**	**3.0500e-003**	**13.8311**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.6192	0.6867	0.0000	28.7861
Unmitigated	15.4923	0.9156	0.0000	38.3814

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	76.32	15.4923	0.9156	0.0000	38.3814
Total		**15.4923**	**0.9156**	**0.0000**	**38.3814**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	57.24	11.6192	0.6867	0.0000	28.7861
Total		**11.6192**	**0.6867**	**0.0000**	**28.7861**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Output

GHG 2030 Mitigated

Woodside Tract 6284 Construction and Ops 2030 GHG

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	74.00	Dwelling Unit	36.50	133,200.00	212

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.025	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Energy Intensity Factor

Land Use - Site Plan

Construction Phase - Ops Only for GHG

Off-road Equipment - Adjusted hours for developers schedule and default hours of operation

Trips and VMT - Soil import 7500 CY

Demolition -

Architectural Coating - Rule 4601 Architectural Coatings compliance

Vehicle Trips - ITE 10th Edition Trip Rates 9.44, 9.54, 8.55

Area Coating - Rule 4601 Architectural Coatings

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - Rule 4601 Architectural Coatings compliance

Water Mitigation -

Waste Mitigation -

Fleet Mix - SJVAPCD Residential Fleet Mix 2023

Woodstoves - Rule 4901 Woodburning Device compliance

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	150.00	65.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	65.00
tblAreaCoating	Area_EF_Residential_Exterior	150	65
tblAreaCoating	Area_EF_Residential_Interior	150	65
tblFireplaces	NumberGas	40.70	74.00
tblFireplaces	NumberNoFireplace	33.30	74.00
tblFleetMix	HHD	0.13	0.02
tblFleetMix	LDA	0.52	0.53
tblFleetMix	LDT1	0.03	0.21

tblFleetMix	LDT2	0.18	0.17
tblFleetMix	LHD1	9.7000e-003	1.1000e-003
tblFleetMix	LHD2	3.4040e-003	9.0000e-004
tblFleetMix	MCY	4.5630e-003	2.5000e-003
tblFleetMix	MDV	0.09	0.06
tblFleetMix	MH	4.3600e-004	1.9000e-003
tblFleetMix	MHD	0.03	8.5000e-003
tblFleetMix	OBUS	2.3060e-003	0.00
tblFleetMix	SBUS	9.9800e-004	4.0000e-004
tblFleetMix	UBUS	1.1850e-003	4.3000e-003
tblLandUse	LotAcreage	24.03	36.50
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.025
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	HO_TTP	35.70	36.00
tblVehicleTrips	HS_TTP	15.90	16.00
tblVehicleTrips	HW_TTP	48.40	48.00
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	3.70	37.00
tblWoodstoves	NumberNoncatalytic	3.70	37.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024											0.0000	7.8407	7.8407	4.1000e-004	0.0000	7.8510
Maximum											**0.0000**	**7.8407**	**7.8407**	**4.1000e-004**	**0.0000**	**7.8510**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024											0.0000	7.8407	7.8407	4.1000e-004	0.0000	7.8510
Maximum											**0.0000**	**7.8407**	**7.8407**	**4.1000e-004**	**0.0000**	**7.8510**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											149.5808	59.1836	208.7644	0.7012	1.0700e-003	226.6136
Energy											0.0000	188.5234	188.5234	9.3300e-003	3.3600e-003	189.7588
Mobile											0.0000	581.2986	581.2986	0.0303	0.0000	582.0550
Waste											15.4923	0.0000	15.4923	0.9156	0.0000	38.3814
Water											1.5296	4.8312	6.3608	0.1575	3.7900e-003	11.4291
Total											**166.6026**	**833.8368**	**1,000.4394**	**1.8139**	**8.2200e-003**	**1,048.2379**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	59.1755	59.1755	1.9600e-003	1.0700e-003	59.5430
Energy											0.0000	188.5234	188.5234	9.3300e-003	3.3600e-003	189.7588
Mobile											0.0000	544.0372	544.0372	0.0290	0.0000	544.7620
Waste											11.6192	0.0000	11.6192	0.6867	0.0000	28.7861
Water											1.2237	3.8649	5.0886	0.1260	3.0300e-003	9.1433
Total											**12.8429**	**795.6011**	**808.4439**	**0.8530**	**7.4600e-003**	**831.9932**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**92.29**	**4.59**	**19.19**	**52.98**	**9.25**	**20.63**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/20/2024	4/5/2024	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 269,730; Residential Outdoor: 89,910; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	7.0215	7.0215	4.0000e-004	0.0000	7.0313
Total											**0.0000**	**7.0215**	**7.0215**	**4.0000e-004**	**0.0000**	**7.0313**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.8193	0.8193	2.0000e-005	0.0000	0.8197
Total											**0.0000**	**0.8193**	**0.8193**	**2.0000e-005**	**0.0000**	**0.8197**

3.2 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road											0.0000	7.0214	7.0214	4.0000e-004	0.0000	7.0313
Total											**0.0000**	**7.0214**	**7.0214**	**4.0000e-004**	**0.0000**	**7.0313**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker											0.0000	0.8193	0.8193	2.0000e-005	0.0000	0.8197
Total											**0.0000**	**0.8193**	**0.8193**	**2.0000e-005**	**0.0000**	**0.8197**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	544.0372	544.0372	0.0290	0.0000	544.7620
Unmitigated											0.0000	581.2986	581.2986	0.0303	0.0000	582.0550

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	698.56	705.96	632.70	2,019,095	1,879,778
Total	698.56	705.96	632.70	2,019,095	1,879,778

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	48.00	16.00	36.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.530500	0.205800	0.167300	0.055000	0.001100	0.000900	0.008500	0.021800	0.000000	0.004300	0.002500	0.000400	0.001900

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	85.2779	85.2779	7.3500e-003	1.4700e-003	85.8998
Electricity Unmitigated											0.0000	85.2779	85.2779	7.3500e-003	1.4700e-003	85.8998
NaturalGas Mitigated											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
NaturalGas Unmitigated											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total												**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.93475e+006											0.0000	103.2455	103.2455	1.9800e-003	1.8900e-003	103.8590
Total												**0.0000**	**103.2455**	**103.2455**	**1.9800e-003**	**1.8900e-003**	**103.8590**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	85.2779	7.3500e-003	1.4700e-003	85.8998
Total		**85.2779**	**7.3500e-003**	**1.4700e-003**	**85.8998**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	648295	85.2779	7.3500e-003	1.4700e-003	85.8998
Total		**85.2779**	**7.3500e-003**	**1.4700e-003**	**85.8998**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	59.1755	59.1755	1.9600e-003	1.0700e-003	59.5430
Unmitigated											149.5808	59.1836	208.7644	0.7012	1.0700e-003	226.6136

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											149.5808	58.2861	207.8668	0.7004	1.0700e-003	225.6947
Landscaping											0.0000	0.8975	0.8975	8.6000e-004	0.0000	0.9189
Total											**149.5808**	**59.1836**	**208.7644**	**0.7012**	**1.0700e-003**	**226.6136**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	58.2861	58.2861	1.1200e-003	1.0700e-003	58.6325
Landscaping											0.0000	0.8895	0.8895	8.4000e-004	0.0000	0.9105
Total											**0.0000**	**59.1755**	**59.1755**	**1.9600e-003**	**1.0700e-003**	**59.5430**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.0886	0.1260	3.0300e-003	9.1433
Unmitigated	6.3608	0.1575	3.7900e-003	11.4291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	4.8214 / 3.03958	6.3608	0.1575	3.7900e-003	11.4291
Total		**6.3608**	**0.1575**	**3.7900e-003**	**11.4291**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	3.85712 / 2.43166	5.0886	0.1260	3.0300e-003	9.1433
Total		**5.0886**	**0.1260**	**3.0300e-003**	**9.1433**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.6192	0.6867	0.0000	28.7861
Unmitigated	15.4923	0.9156	0.0000	38.3814

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	76.32	15.4923	0.9156	0.0000	38.3814
Total		**15.4923**	**0.9156**	**0.0000**	**38.3814**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	57.24	11.6192	0.6867	0.0000	28.7861
Total		**11.6192**	**0.6867**	**0.0000**	**28.7861**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B: San Joaquin Valley Air Pollution Control District Amicus Brief on Friant Ranch Supreme Court Decision

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CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
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Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.

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APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

> Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a "serious nonattainment" area to come into attainment of health-based National Ambient Air Quality Standard ("NAAQS") for coarse particulate matter (PM10), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of "extreme" nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates "smog" and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to "offset" vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)[1], ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

[1] San Joaquin's incentive program has been so successful that through 2012, it has awarded over $ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. *See* SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) *available at* http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf.

Valley counties and cities that implement the California Environment Quality Act (CEQA).[2] In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.[3] Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.[4] For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.[5]

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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[2] *See, e.g.*, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), *available at* http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

[3] Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

[4] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

[5] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).[6] The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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[6] CEQA does not require speculation. *See, e.g.*, *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015

Annette A. Ballatore-Williamson
District Counsel
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
DISTRICT

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TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

FEDERAL STATUTES

CALIFORNIA STATUTES

OTHER AUTHORITIES

I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District ("Air District") respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report ("EIR") for the Friant Ranch development project was inadequate under the California Environmental Quality Act ("CEQA") because it did not include an analysis of the correlation between the project's criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as "TACs") regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NOx) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.[1] Once formed, ozone can be transported long distances by wind.[2] Because of the complexity of ozone formation, a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NOx or VOCs can have high levels of ozone concentration simply due to wind transport.[3] Conversely, the San Francisco Bay Area has six times more NOx and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

[1] *See* United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: http://www.epa.gov/airquality/ozonepollution/basic.html (visited March 10, 2015).
[2] *Id.*
[3] *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.[4]

Particulate matter ("PM") can be divided into two categories: directly emitted PM and secondary PM.[5] While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.[6] Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SOx) and NOx.[7] Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NOx, SOx and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards ("NAAQS"), which are statutorily required to be set by the United States Environmental Protection

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[4] *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).
[5] United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: http://www.epa.gov/airquality/particlepollution/basic.html (visited March 10, 2015).
[6] *Id.*
[7] *Id.*

Agency ("EPA") at levels that are "requisite to protect the public health," 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.[8]

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.[9] Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District's tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs) and the atmospheric chemistry and meteorology of the Valley.[10] At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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[8] See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: http://www.epa.gov/air/criteria.html#3 (visited March 10, 2015).

[9] *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

[10] *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM2.5 Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).

emissions Valley wide.[11] Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.[12]

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.[13] The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.[14] This "offset"

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[11] *Id.*

[12] Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. *See* San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: http://www.valleyair.org/rules/currntrules/Rule2201041l.pdf (visited March 19, 2015).

[13] *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf (visited March 30, 2015).

[14] *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.[15] In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club*, *supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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[15] [15] *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NOx inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.[16] Running the photochemical grid model used for predicting ozone attainment with the

[16] *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9,
available at:
http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

> [t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)[17] The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)[18] The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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[17] Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

[18] Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "'[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.' [Citation.]" *Sierra Club v. City of Orange*,163 Cal.App.4th at 536.[19]

As discussed above, the City's comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since "[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action." *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal's decision requiring an analysis correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

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[19] *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or "piecemealed" the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as *"the use of a single document for both a project-level and a program-level EIR [is] 'confusing',"* and *"[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,"* were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015

Catherine T. Redmond
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015

Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a p[arty to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO

On all parties to this action at the following addresses and in the following manner:

PLEASE SEE ATTACHED SERVICE LIST

(XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.

( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.

( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

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BIOLOGICAL ASSESSMENT

OF THE

E. TEAGUE AVENUE PROPERTIES

CLOVIS, FRESNO COUNTY, CALIFORNIA

Prepared For:

Woodside Homes
9 River Park Place East Suite 430
Fresno, CA 93720

May 29, 2019

APPENDIX B

BIOLOGICAL ASSESSMENT

OF THE

E. Teague Avenue Properties

Clovis, Fresno County, California

Prepared For:

Woodside Homes
9 River Park Place East Suite 430
Fresno, CA 93720

Prepared By:

ARGONAUT ECOLOGICAL CONSULTING, INC.

2377 Gold Meadow Way, Suite 100
Gold River, CA 95670

May 29, 2019

Table of Contents

List of Tables

List of Figures

Appendices

SECTION 1 EXECUTIVE SUMMARY AND INTRODUCTION

EXECUTIVE SUMMARY

Argonaut Ecological, Inc. conducted a biological review of a proposed development within the recently approved Dry Creek Preserve Area in Clovis, California. The Study Area covers a total of 37 acres. The parcels proposed for developed were evaluated as part of a previous CEQA review for the Dry Creek Preserve Area; however, they were only evaluated on a programmatic level and not at a project-specific level that would be needed and sufficient for the City of Clovis to make a CEQA finding. This study provides a project-level biological analysis of the Study Area.

1.1 STUDY OBJECTIVES

The project area lies in the southwest quarter of section 28, Township 12 South, Range 21 East, mapped on the Clovis USGS topographic quadrangle (Figure 1). The area is bounded in part by Sunnyside Avenue on the west and Teague Avenue on the north. This review identifies biological resources within the Study Area and describes the suitability of the Study Area to support species of special concern. This review does not, nor was it designed to include exhaustive surveys for special status plant and animal species. Instead the review included a field survey designed to determine the potential for the site to support habitat that may be used or occupied by special status plant and animals species. The study also is designed to determine the approximate extent of potential wetland habitat on the site. "Wetland habitat" includes those areas that may be considered both "Waters of the U.S., as defined by the U.S. Army Corps of Engineers, and/or wetlands as defined by the Army Corps and the State of California. As described in Section 1.2, wetlands are a subset of "Waters of the U.S." under the Federal Clean Water Act.

Woodside Homes, Inc., proposes to develop the property with single-family homes, project at a maximum density of 2.3 units per acre. Teague Avenue will be widened across the project frontage per City of Clovis General Plan Circulation Element and Master EIR and also per the Dry Creek Preserve (DCP) Master Plan and Mitigated Negative Declaration (approved last June 2018). Per the total acreage to be purchased, the planned unit total at this time is 74 residential lots. Improvements will include residential streets onsite with water, sewer and storm drain facilities per City of Clovis and Fresno Metropolitan Flood Control District approved utility master plans. Project will also install dry utilities for PG&E (gas and electricity) along with cable TV, internet and phone lines.

This report can be used to assess the potential effects on biological resources associated with the proposed land use change. This review focused on the extent of the Waters of the U.S., including any wetlands that would potentially be subject to regulation under Section 404 of the Clean Water Act or by the State of California Wetland Policy (Resolution 2008-0026) which is designed to protect all waters of the State, including wetlands dredge and fill discharges. These reviews also focused on assessing and identify any potential impacts site development may have on species protected by the Federal Endangered Species Act or protected under the California Environmental Quality Act.

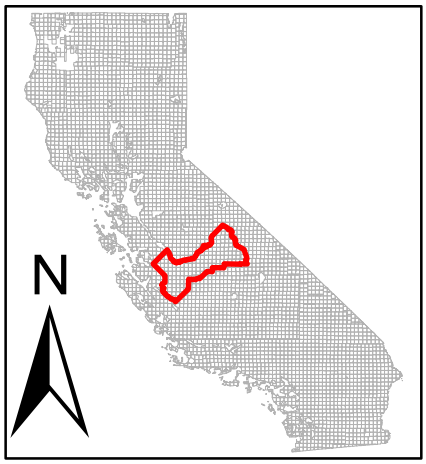
1.2 REGULATORY JURISDICTION AND BACKGROUND

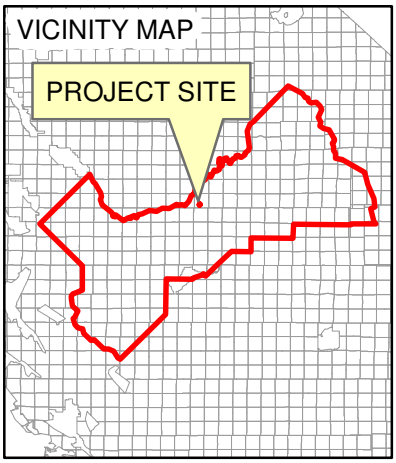
Regulatory jurisdiction over biological resources within the Study Area is shared by several agencies. The following is a brief description of the primary agencies and their respective jurisdiction.

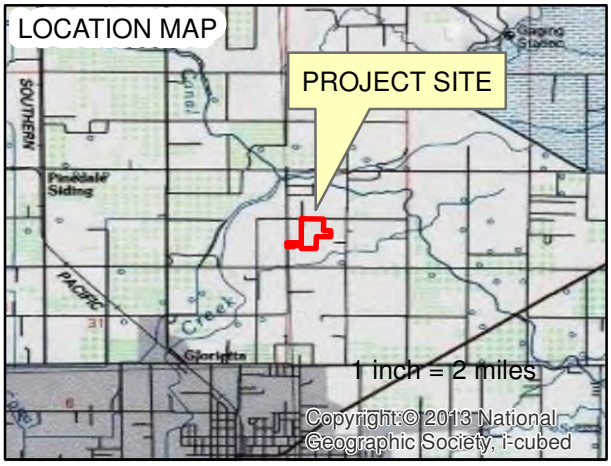
VICINITY AND LOCATION MAP- Figure 2

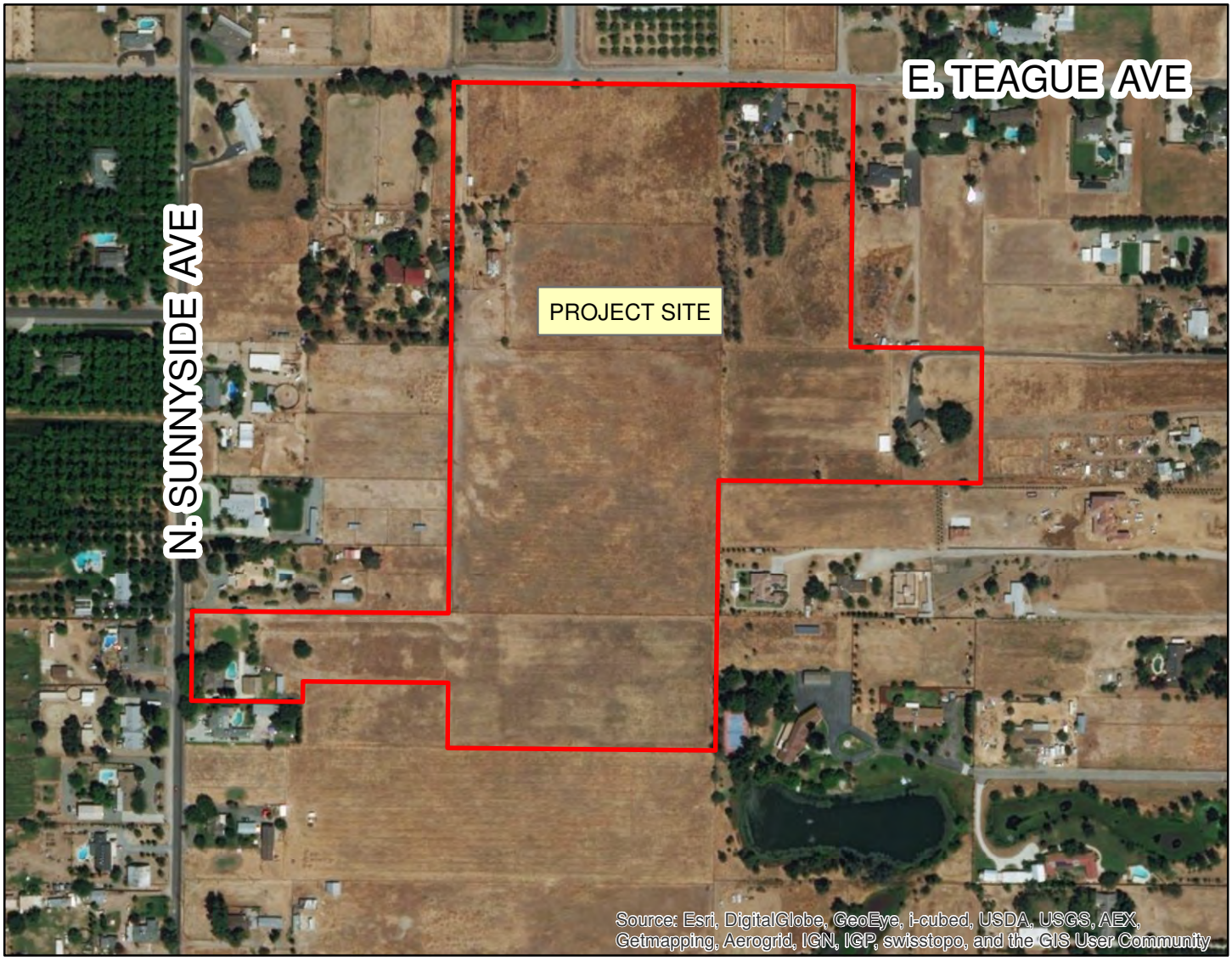
CLIENT NAME: Woodside Homes PROJECT NAME: Teague & Fowler Prop
PROJECT LOCATION: Part of Sections 28, T. 12S., R.21E., Mount Diablo Base a
Fresno County California,

AGENDA ITEM NO. 4.









Legend

APPROXIMATE BOUNDARY (37.1 AC.)

400 200 0 400 Feet

1 in = 400 ft

ARGONAUT ECOLOGICAL CONSULTING, INC.

Date: 5/17/2019

Wetland Protection

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Army Corps) and the U.S. Environmental Protection Agency regulates placement of fill into the Waters of the U.S under Section 404 of the Federal Clean Water Act and Section 10 of the Rivers and Harbor Act. The term "Waters of the U.S."

Include wetlands, special aquatic sites, and other non-wetland waters such as bays, rivers, and lakes. The jurisdictional limit of tidal Waters of the U.S. under Section 10 of the Rivers and Harbor Act is the Mean High Water line. However, Section 404 of the Federal Clean Water Act extends the jurisdictional limit to the High Tide line. The High Tide Line is the highest elevation of the tide in a normal year, excluding storm events. Wetlands adjacent to the Mean High Water line or High Tide Line are also under the USACE jurisdiction. For purposes of this document, the term "Waters of the U.S." is legally defined under Section 404 of the Federal Clean Water Act. It includes seasonal drainages that have a defined channel and support wetland species but lack positive indicators of wetland soils.

As previously stated Waters of the U.S. includes wetlands. The Army Corps defines wetland as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory 1987). Seasonally inundated areas that meet the criteria of all three wetland parameters as defined in the recently issued Wetland Delineation Manual for the Arid West (USACE 2006) are also considered jurisdictional wetlands. However, drainage ditches excavated on dry land that do not convey flows from historical streams and/or channels are usually considered non-jurisdictional as defined in Title 33 CFR Part 328.3 (a). A determination of whether any particular area is considered non-jurisdictional varies on a case-by-case basis.

Since 2001, the U.S. Supreme Court found in several court rulings that regulation of isolated intrastate waters by the Army Corps under the Migratory Bird Rule and other arguments is unconstitutional and impinges on state rights to regulate intrastate commerce. The decisions, which include both *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) and *Rapanos v. United States* (Rapanos) limited the scope of federal jurisdiction under the Federal Clean Water Act and excluded many California wetlands from federal regulation.

In May 2015 the U.S. Environmental Protection Agency and the U.S. Army finalized the "Clean Water Rule "with the intent of clarifying what constitutes a waters of the U.S., and presumably, acts to more precisely define and making permitting more predictable, thus less costly and easier. The rule was not intended to create any new permitting requirements for agriculture and maintains all previous exemptions and exclusions. However, many in the regulated community believe the rule is really intended to expand the definition of waters/wetlands and broaden the Federal government's regulatory reach. The new Clean Water Rule went in effect at the end of August, 2015. On October 9, 2015 the Sixth U.S. Circuit Court of Appeals issued a nationwide stay of the rule pending further court action. Therefore, currently, application of the Clean Water Rule is not

enforced in 11 states and the current regulatory definition of waters of the U.S. remains unchanged in 22 states. California is one of the states where the rule is in effect.

Executive Order 11990

Executive Order 11990 (signed May 24, 1977) directs all federal agencies to refrain from assisting in or giving financial support to projects that encroach on publicly or privately-owned wetlands. It further requires that federal agencies support a policy to minimize the destruction, loss, or degradation of wetlands. A project that encroaches on wetlands may not be undertaken unless the agency in question has determined that: (1) there are no practicable alternatives to such construction; (2) the project includes all practicable measures to minimize harm to wetlands that would be affected by the project; and (3) the resulting impact will be minor.

The Executive Order, the Order does not apply to issuance by Federal Agencies of permits, licenses, or allocation to private parties for activities involving wetland on non-Federal property. Executive Order 1190 is also not intended to be applied on a project by project basis. Section 1 of the order states the following: "*This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property."*

California State Water Resources Control Board

Since 1993, California has had a Wetlands Conservation Policy (a.k.a., the Executive Order W-51 59-93). Commonly referred to as the *No Net Loss Policy* for wetlands, this order establishes for the State the mandate that it develops and adopts a policy framework and strategy to protect the State's wetland ecosystems. However, contrary to common belief, and the State Water Resources Control Board's insistence, this policy was only meant to be implanted on a voluntary basis and is was expressly not to be implemented on a "project-by-project" basis (See EO W-59-93, Section III).

After 11 years of trying to find a means to regulate wetlands in CA, in April 2019 the State adopted its proposed *State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State*. According to the State, these new procedures" (i.e., regulation by anyone's definition but the State's) conform with EO W-59-93. However, in conflict with EO W-59-93 there is nothing "voluntary" about the procedures and they are, in fact, applied on a project by project basis. The newly adopted "procedure" is intended to bring uniformity throughout the state with respect to wetland regulation and to capture those waters/wetland not subject to jurisdiction under Section 404. The procedure is also supposed to use the same definition of "wetlands" as the federal definition, but it does not (it's much broader).

Not surprisingly at the end of April 2019 a coalition consisting of several California water suppliers and the city of San Francisco sued the State Water Board in state court. The premise of the suit is "

"By regulating previously unregulated wetland features as waters of the state…the procedures set new regulatory requirements that stand to impact farmers' and ranchers' agricultural activities by mandating compliance with new and costly water quality regulations".

The lawsuit also asserts that the state's Porter-Cologne Act does not mention dredge or fill material as waste, therefore the State Water Board has no authority to mandate waste discharge requirements.

The new requirements (the "Procedures") will be implemented through the existing state permitting structures. Most often they will be applied through regional water board sign-off (or "certification") of Corps of Engineers wetland permits. They will also be applied where the federal government has no jurisdiction.

The application requirements are detailed which increase the regulatory complexity and will make it hard to get applications deemed complete by the regional boards. Coordination with the Corps will be difficult and the regional water boards do not yet have the staffing or resources to implement the program effectively. The regulations likely will not become effective until the end of 2020, but one can expect the regional water boards to begin gravitating towards these standards in the near future.

Listed Protected Species and Habitat Protection

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) implements the Migratory Bird Treaty Act (16 USC Section 703-711), Bald and Golden Eagle Protection Act (16 United States Code [USC] Section 668), and Federal Endangered Species Act (FESA; 16 USC § 153 *et seq.)*. Projects that would result in "take" of any federally-listed threatened or endangered species are required to obtain authorization from the USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project. The authorization process is used to determine if a project would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species.

The **Migratory Bird Treaty Act (MBTA**) was first enacted in 1916 in order to implement the convention for protection of migratory birds between the United States and Great Britain (acting on behalf of Canada). The MBTA makes it illegal for anyone to take, possess, import, transport, purchase, barter or offer for sale or purchase any migratory birds, its nests or eggs unless a permit has been issued by the federal agency. The USFWS has statutory authority and responsibility for enforcing the MBTA. In accordance with the MBTA Reform Act (MBTARA) of 2004 all species native to the U.S. or its territories which occur as a result of natural biological or ecological processes (70 FR 12710, March 15, 2005) and does not include nonnative species whose occurrences in the US are solely the result of intentional or unintentional human introduction. The USFWS maintains a list of bird species protected under the MCTA and the MBTRA. However, on December 22, 2017 the Deputy Solicitor General issued an opinion (Order 3345) that the MBTA does not prohibit "incidental take" of a migratory bird as the result of an otherwise lawful activity.

Federal Endangered Species Act prohibits "take" of any federally listed species**.** "Take" under the federal definition means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. "Candidate species" do not have the full protection of FESA. However, the USFWS advises project applicants that it is prudent to address these species since they could be elevated to "listed status" prior to completion of projects with long planning or development schedules. "Incidental" take" is take that may occur during implementation of an otherwise lawful activity.

Under the Endangered Species Act (federal or state), an Incidental Take Permit or Take Permit is required when an activity would either kill, harm, harass, or interrupt the breeding or nesting of a listed species or remove a known population of endangered plants. However, the ESA definition of "harm" has been somewhat less definitive in that it captures activities that are more ubiquitous. In 1999 the USFWS published in the Federal Register a clarification of the term "harm" as it applies to the ESA. As stated, the final ruled defined the term "harm" to include any act which actually kills or injures fish or wildlife and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Further clarification within the Federal Register includes the following: "In order for a modification to be significant, it must be capable of resulting in the death or injury of fish or wildlife. Habitat modification or degradation may be considered significant even if it is of limited physical extent, if it causes injury or death to fish or wildlife", however the mere potential for harm is not in and of itself "take". Assessing the significance of a given act of habitat modification or degradation will depend on an evaluation of all the related factors.

The Federal ESA that allows an individual to obtain legal coverage from prosecution and allow "take" under either Section 7 or Section10 of the ESA. Section 7 is triggered when there is a federal nexus that requires a federal agency to initiate consultation with the USFWS under Section 7 of the ESA. If there is no federal agency involvement (i.e., a landowner does not need a federal entitlement or is not receiving federal funding) then an Incidental Take permit can be obtained through Section 10(a)(1)(B) of the Act.

The USFWS cannot require or compel a landowner to obtain an Incidental Take permit, especially under Section 10. On April 25, 2018, the USFWS issued a guidance memorandum that was intended to help the USFWS' Regional Directors clarify the appropriate trigger for an incidental take permit (ITP) under the Endangered Species Act (ESA). While this guidance was directed internally to USFWS staff to aid in determination of whether project-related habitat modification is likely to result in "take" of a listed species, it also provides a tool for project proponents to determine whether to seek an ITP. The guidance emphasizes that the decision to pursue an ITP or whether to cover a species is the project proponent's choice to make and is not up to the USFWS. Further, the guidance recognizes that "[t]he biological, legal, and economic risk assessment regarding whether to seek a permit belongs with the private party determining how to proceed."

Of significance is that the guidance provides that habitat modification, in and of itself, does not constitute "take" unless the three components of "harm" are met. Thus, in order to find that habitat modification constitutes an incidental take of listed species, the following questions must all be answered in the affirmative:

- Is the modification of habitat significant?

- Does that modification also significantly impair an essential behavior pattern of a listed species?
- Is the significant modification of the habitat likely to result in the actual killing or injury of wildlife?

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), formally known as the California Department of Fish and Game, is a Trustee Agency with responsibility under the CEQA for commenting on projects that could impact plant and wildlife resources. In addition, pursuant to the Fish and Game Code Section 1802, the CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. The California Fish and Game Code also provide authority for the CDFW to regulate projects that could result in the "take" of any species listed by the State as threatened or endangered (Section 2081).

Perennial and intermittent streams also fall under the jurisdiction of CDFW pursuant to Sections 1601-1603 of the Fish and Game Code (Streambed Alteration Agreements). The CDFW's jurisdiction over work within the stream zone includes, but is not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake. Prior to issuing a 1601 or 1603 Streambed Alteration Agreement, the CDFW must demonstrate compliance with CEQA. In most cases, CDFW relies on the CEQA review performed by the local lead agency. However, in cases where no CEQA review was required for the project, CDFW would act as the lead agency under CEQA.

The CDFW also has authority for protection state-listed species issues Section 2081 Incidental Take Permit if a project has the potential to negatively affect state-protected plant or animal species or their habitats, either directly or indirectly. Protected species include those "listed" by the state as endangered or threatened. Besides listed species, there are other categories of species protection, including "fully protected" and California Species of Special Concern (CSC). Adverse impacts to species that have the "fully protected" designation are prohibited.

Under current California Fish & Game Code (FGC Section 3503) "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird…" Birds of prey (falcons, hawks, owls, and eagles) get extra protection under the law (FGC Section 3503.5). As is the case with USFW, CDFW does not have the authority to require a landowner to apply for an Incidental Take Permit (ITP) authorizing take. Instead, it is the landowner that has the legal obligation to avoid any take of CTS if it does not seek an ITP, or to apply for and receive an ITP which authorizes take. That said, CDFW (and USFWS) can initiate an enforcement action if they believe that illegal take has occurred or will occur.

California Endangered Species Act

The California Endangered Species Act (CESA) provides protection for candidate plants and animal species as well as those listed as rare, threatened, or endangered by the California

Department of Fish and Game (CDFG). This act prohibits the take of any such species unless authorized. Section 2081 authorizes the state to issue incidental take permits. The state definition of take applies only to acts that result in the death of or adverse impacts to protected species. The CAESA mirrors the federal regulation as it relates to "take", however, there is no state equivalent definition of "harm" or "harass". Incidental take is also not defined by the CAESA statute or regulation. Unlike the federal ESA, CAESA does qualify that "accidental take" is not prohibited "if it is the result of an act that occurs on a farm or ranch in the course of an otherwise lawful routine and ongoing agricultural activity". Where disagreement occurs (and in some cases this has been the subject of court cases) is in the common understanding of "routine and ongoing agricultural activity."

California Environmental Quality Act

The CEQA Guidelines require review of projects to determine their environmental effects and to identify mitigation for significant effects. The Guidelines state an effect may be significant if it affects rare and endangered species. Section 15380 of the Guidelines defines *rare* to include listed species and allows agencies to consider rare species other than those designated as State or federal threatened or endangered, but that meet the standards for rare under the federal or State endangered species acts. On this basis, plants designated as rare by non-regulatory organizations (e.g., California Native Plant Society), species of special concern as defined by CDFW, candidate species as defined by USFWS and other designations may need to be considered in CEQA analyses.

Lane Use Entitlements

City of Clovis

The Study Area falls within Dry Creek Preserve Area in for the City of Clovis, California. The City is responsible for all local land use decisions within its jurisdictional boundary. However, for general discussion, any project review would require the local land use agency as defined by CEQA to perform an environmental review.

SECTION 2 METHODS

The following section describes the methods used to assess the Study Area, which includes a combination of data review and evaluation, field studies, and aerial photograph interpretations.

2.1 DATA AND LITERATURE REVIEW

The approximately 37 acres Study Area is located within an historically developed with rural residential and agricultural that has been undergoing redevelopment into higher density residential within the City of Clovis, California. The following documents and/or sources were used in preparing this report.

- U.S. Department of Agricultural, Natural Resources Conservation Service, Soil Survey of Fresno Area (Soils mapper)
- Aerial photography (Google Earth®, Bing®, and historic aerials dating back to 1983)
- The California Department of Fish and Game, California Natural Diversity Database (CNDDB/RareFind - Recent version with updates)
- U.S. Fish and Wildlife Service National Wetland Inventory Map
- Previous experience with biological studies, CEQA reviews, and wetland delineation work on lands adjacent to the Study Area
- U.S. Geologic Survey, Historic topographic Map, Clovis Quadrangle, 1919, University of Texas, Austin, Perry-Castañeda Map Collection
- Henry Madden Library, Fresno State University. Historic Aerial Photography collection dating back to 1940
- Dry Creek Annexation Area. Biological Habitat Assessment Report. May 2016
- Dry Creek Preserve Master Plan, Biological Habitat Assessment, January 2018

2.2 AERIAL PHOTOGRAPHY AND WETLAND MAPPING

A series of aerial photographs of the Study Area were reviewed to assess changes in land use over time, dating back to 1998. Black and white and color aerial photographs ranging in resolution from 0.5 meters to 1.0 meters were review as were historical topographic maps and historic aerials. We also reviewed wetland mapping and the aerials to determine if the Study Area recently supported wetlands.

2.3 FIELD REVIEW

Prior to conducting a site review, we reviewed the California Natural Diversity Database/ Rarefind (CNDDB/Rarefind). The CNDDB includes records of reported observations for special status plant and animal species. A search radius that included up to nine USGS quadrangles was employed. The results of the CNDDB/RareFind were reviewed to identify which species would present the greatest likelihood of being present on the site based on the distance of the site from known records and the similarity in habitats between the Study Area and the habitats that the

species required and/or preferred. Also prior to the field work, a high-resolution aerial was reviewed to determine if there are any areas on the site that appear to support waters of the U.S., or other water features.

On April 18, 2019 a site review was conducted. The entire site was inspected. The primary objective of the field work was to identify any habitat types on the site or unique biological resources present that to the site that potentially supports habitat for sensitive species or aquatic species. The survey included surveying for two listed plant species.

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SECTION 3 RESULTS AND CONCLUSIONS

The following section describes the physical (i.e., topography, drainage, and soils) and the biological resources present, or potentially present, within the Study Area. Section 3.1 describes the physical components (i.e., soils, hydrology, etc.) of the Study Area. The physical components strongly influence the types of plants and animals present. Section 3.2, is an overview of the resources and habitats present within the Study Area, including descriptions of the specific biological resources observed. Appendix A includes photographs taken during the biological field review.

The information presented is not an exhaustive inventory of plants or animals present. Rather it is designed to provide sufficient information to identify what, if any, biological resources are present that may be considered unique, sensitive, or protected by current law and the potential impacts to those resources if the site is developed.

3.1 PHYSICAL RESOURCES AND ELEMENTS

Land Use and Habitat Types

Based on the aerials, the site has been developed as rural residential since before 1998. Only minor changes have occurred within the Study Area since that time. Portions of the property appears to have been used for livestock grazing, or periods of agricultural uses, or allowed to remain fallow. At the time of the site inspection, no livestock were observed, and the habitat is characteristic of residential landscaping (around the homes) and non-native grassland (the majority of the Study Area). The homes that are within the smaller parcels that make up the Study Area have been there at least since before 1998. There are a few outbuilding and landscaped areas surrounding the homes. The Study Area is surrounded by rural residential that has likewise undergone relative minor changes since at least 1998.

There is a large stand of eucalyptus trees and pine located in the northeast corner of the Study Area. The trees are mature and are located near a residence. There are also some palm trees and on the far west side of the Study Area, old orchard trees, landscape scrubs and trees and mowed landscaped areas.

Site Topography

The property lies within the Central Valley. The Study Area flat with very little slope.

Drainage and Watershed

The study area has historically drained to the southwest. The project lies within the Dry Creek Watershed. The site is fairly flat and there are no historical drainages shown crossing through the Study Area. A topographic map from 1919 (right) shows general vicinity of the Study Area.

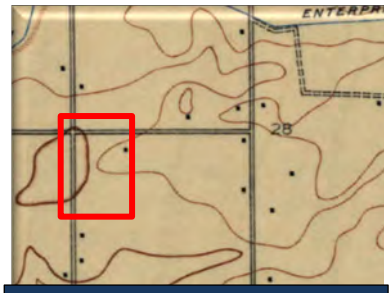

Figure 2 – 1919 Historic Topographic Map

The project site historically drained to the west. A query of the National Wetland Inventory Map does not show any stream or creeks in the Study Area. There are several man-made landscape ponds shown as freshwater ponds located immediately southeast of the Study Area. These ponds are managed and landscaped as water features. The National Wetland Inventory Map code is "PUBHx" which correlates to "palustrine, unconsolidated bottom, permanently flooded, excavated". There is one small area located on the eastern edge of the Study Area (shown in green) that is listed as a freshwater emergent wetland. This features is no longer present and appears to have been filled in and plowed several years ago (around 2010). No wetland feature is present. The portion that appears to lie within the Study Area is part of a residential home yard.

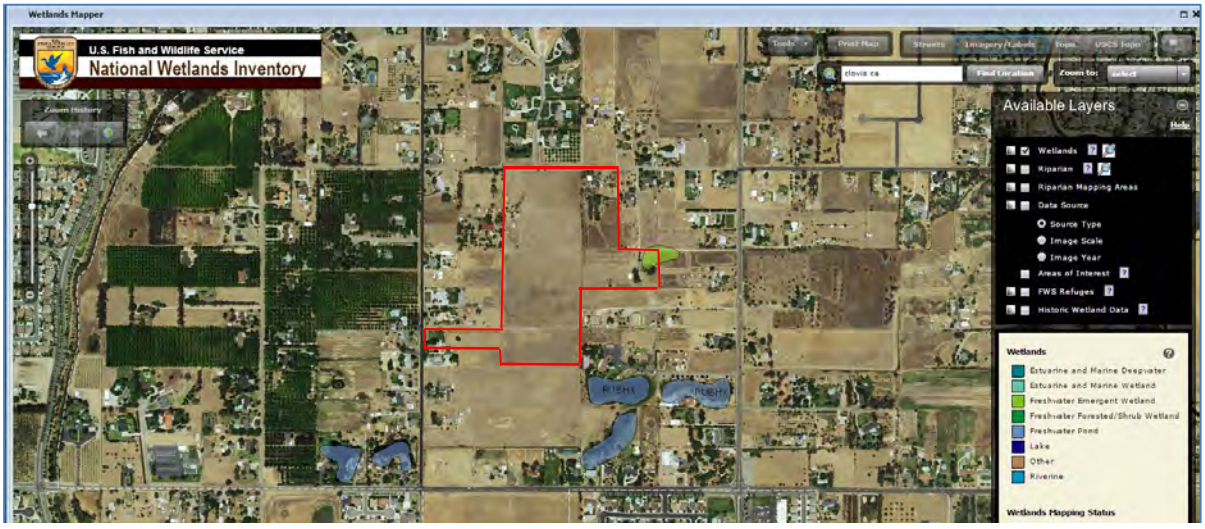

Figure 3 – National Wetland Inventory Map

Climate/Soils

Climate in the Study Area is typical of the central San Joaquin Valley with summers that are long, hot, and dry and winters that are cool and mild. Rainfall in the winter averages approximately 10.9 inches per year, falling mainly between November and April (Western Regional Climate Center, 2004).

The Natural Resources Conservation Service (NRCS) soil survey mapped three soils types within the Study Area. None of the mapped soils are considered hydric soils. Hydric soil is readily formed under ponded condition and is a strong indicator of areas experiencing prolonged ponding (e.g., wetlands). The presence of mapped hydric soils may indicate that the soils could support wetlands; but, there is no a direct correlation. Wetlands can occur in areas where no hydric soil are mapped and may be absent in areas mapped as hydric soils. Their hydric indicator status.

Map Unit Symbol	Map Unit Name with E. Teague Study Area	Acres in AOI	Percent of AOI
AoA	Atwater loamy sand, 0 to 3 percent slopes, MLRA 17. Not hydric	12.3	34.0%
AoB	Atwater loamy sand, 3 to 9 percent slopes. Not hydric.	0.8	2.2%
AtA	Atwater sandy loam, moderately deep, 0 to 3 percent slopes. Not hydric	10.2	28.2%
Ra	Ramona sandy loam. Not hydric	10.2	28.4%
ScA	San Joaquin sandy loam, 0 to 3 percent slopes, MLRA 17. Hydric	2.6	7.2%
Totals for Area of Interest		**36.0**	**100.0%**

Vegetation Community

Nearly the entire Study Area is made up of fallow pasture, and non-native grassland (some of which is mowed). The remainder is composed farm residence, out buildings, landscaping, horse paddock(s), parking areas (compacted ground) and access roads. Edges of the properties have some weedy species (ruderal plant community) including wild oats (*Avena* sp.), filaree (*Erodium* sp.), fiddleneck (*Amsinckia* sp.), bermuda grass (*Cynodon dactylon),* brome, star thistle, storksbill, etc. There is several large trees near the homes.

Waters of US/State and Wetlands

Based on a review of historical records, readily available wetland mapping databases, and a site review, our field investigation confirmed the accuracy of the U.S. Fish and Wildlife Service's Wetland Inventory Map with the exception of a small feature shown on the mapping that is no longer present (filled and graded). No wetlands, waters, or any aquatic habitat is present within the Study Area. It appears portions of the property are irrigated for horse pasture at times but there are no waters of the U.S., including wetlands or waters of the state present within the Study Area. Various irrigation lines and sprinkler heads were found and the vegetation near those area was more robust and greener than the surrounding grasses.

Special Status Species

A search of the California Natural Diversity Database (CNDDB) was reviewed to determine which special status species could be present within the Study Area. There is no critical habitat for any

listed species within or near the Study Area. Table 2 provides a summary of the species identified in the CNDDB and by the by the U.S. Fish and Wildlife Service that would have the highest likelihood of being present based on habitat requirements. Species that are dependent on the presence of seasonal water bodies, such as vernal pool or other seasonal wetlands, for breeding or completion of their life cycle are not included in the table present because no wetland, vernal pools, or seasonal wetland are present within the Study Area.

Two rare plant species shown in Table 2 are associated with Rocklin series soils and Centerville soil series (Live Oak 2009). Neither soil series are found within the Study Area.

Although the database did not include all migratory birds/ and raptors, such species could use the site to forage for food or nesting in the large trees adjacent to the residential homes. No evidence of any active nest sites for raptors was observed. Parts of the Study Area could provide suitable nesting habitat for burrowing owls. Burrowing owls are opportunistic nesters and will nest in any area that provides suitable prey base and sufficient ground cover.

Figure 4 shows the results of the CNDDB Bios map query showing species locations based on known records. The lack of a record does not mean a species is absent if suitable habitat is present. The red box indicate th approximate Study Area. The Study Area is known to be in a location of known records for the State and Federally listed California tiger salamander; however, no suitable habitat is present within the Study Area for the species since there is no suitable breeding habitat. The red dot also indicates a known occurrence for Western pond turtle, but again the species is aquatic and there is no aquatic habitat within the Study Area.

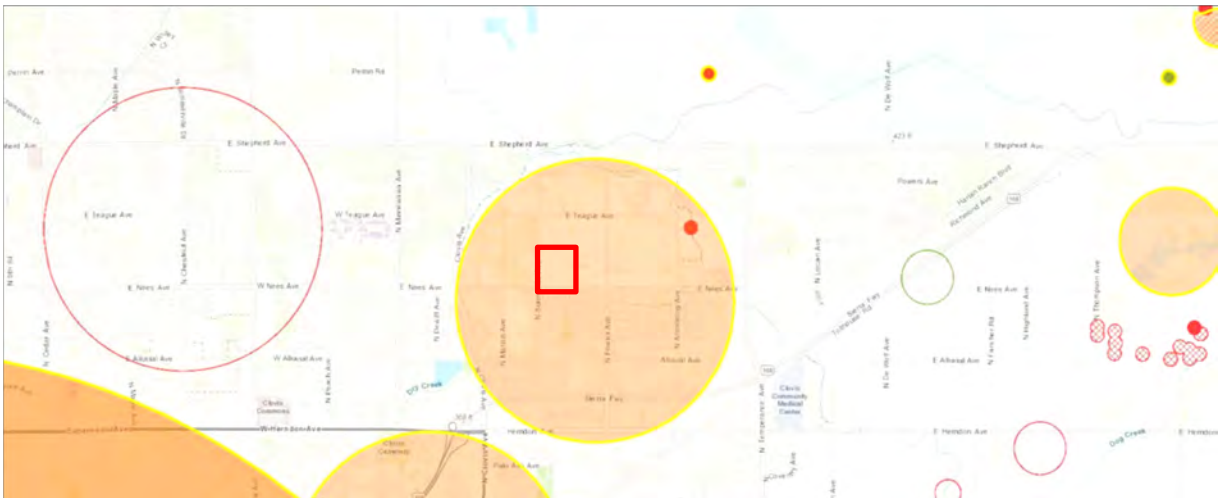

Figure 4- CNDDB Bio Mapping Showing Records of Known Species

Table 2
Summary of Potential Special Status Species Impacts- E. Teague Properties

Common Name	*Scientific Name*	*Status*[1]	*Effects*[2]	*Occurrence in the Study Area*[3]
Birds				
Burrowing owl	*Athene cunicularia*	BCC	ME	**Potentially Present.** No individuals in area of effect but possible habitat for burrows is present
Swainson's hawk	*Buteo swainsoni*	CT	ME	**Absent.** No individuals in area of effect but suitable foraging, breeding, and migratory habitat is present
Tricolored blackbird	*Agelaius tricolor*	BCC	ME	**Absent.** No suitable breeding or nesting habitat present.
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CE, FT	NE	**Absent.** No individuals in area of effect or suitable habitat.
Mammals				
San Joaquin kit fox	*Vulpes macrotis mutica*	CT, FE	NE	**Absent**. No individuals in area of effect. No suitable habitat present to support species, no dens, and small habitat unit within rural residences
Plants Hartweg's golden sunburst	*Pseudobahia bahiifolia*	CE, FE 1B	NE	**Absent.** No individuals observed during bloom period. Species occurs in grasslands of the western foothills of the Sierra in volcanic pumice soils. Often found in Rocklin series soils. No Rocklin soils present within Study Area.
San Joaquin adobe sunburst	*Pseudobahia peirsonii*	CE, FT 1B	NE	**Absent.** Occurs in Centerville and Porterville heavy clay soils in valley and foothill grassland habitat; blooms March to April. None of the soils present are part of the Centerville and Porterville series No individuals observed but suitable habitat present.

1 Status= Listing of special status species, unless otherwise indicated
CE: California listed as Endangered
CT: California listed as Threatened
FE: Federally listed as Endangered
FT: Federally listed as Threatened
BCC: Bird of Conservation Concern in
2 Effects = Effect determination
NE: No Effect
ME: May effect, not likely to adversely affect
3 Definition of Occurrence Indicators
Present: Species recorded in area
Absent/Likely Absent: Species not recorded in study area and/or
CNDDB = California Natural Diversity Database provided by CDFG
CNPS Categories for Plant Species:
1B - Rare or endangered in California and elsewhere;

Based on the habitat present, the only species potentially present would be Western burrowing owl and Swainson's hawk, although none were observed during the field survey. There is no aquatic habitat present within the Study Area and the nearest aquatic habitat is on adjacent parcels but those are man-made and highly managed ponds as residential landscape features.

3.2 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Study Area has been in continuous developed as rural residential for several decades and a variety of activities have occurred within the study area, such as crop production, grazing, equestrian uses, etc. Minor changes have occurred since 1998. Portions of the Study Area have been maintained as rural residential and mowed. The following are the conclusion made regarding the Study area and recommendations for avoidance and minimization of any potential impacts to biological resources.

- The Study Area does not support any Federal or State waters or wetlands.
- No rare plants were found during the April field survey. The species were not expected to be found given the site does not support soil types commonly associated with the species.
- The eucalyptus/pin tree stand within the northeast portion of the Study Area could support raptor nesting, although no nests (occupied or otherwise) were found during the survey.
- No evidence of burrowing owl occupation was found but the species could occupy the Study Area in the future.

Recommendations for Avoidance and Impact Minimization

- A preconstruction survey for potential occupation of the site by Western burrowing owl and nesting Swainson's hawk is recommended if ground disturbing activities are scheduled during the nesting period (Feb – August). This species, although not observed during the field review, could occupy the site in the near future. The survey should be performed within 30-45 days prior to construction (ground disturbance).
- The only suitable nesting habitat for Swainson's hawk is in the northeast portion near Teague Avenue and on properties adjacent to the Study Area. No active nests were found. A nest survey should be conducted prior to removal (if needed) of the eucalyptus/pine stand or individual trees in the northeast corner of the Study Area if tree removal is to occur during the nesting season of February 1 – August 31).

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CDFG (California Department of Fish and Game). 2009. California Natural Diversity Data Base (CNDDB). Wildlife and Habitat Data Analysis Branch, Sacramento, CA.

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Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final Report to the California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA. 225 pp.

Live Oak Associates, Inc. Final Biological Evaluation Report and Supplement, Friant Ranch Specific Plan, Fresno County, California. Supplement reported February 12, 2009.

Appendix A - Photographs

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographs

Location: E. Teague Properties.
Photograph Date: April 18, 2019

Photograph No. 1

Direction: West

Description: View facing west toward Sunnyside Avenue at landscaped area.

Photograph No. 2

Direction: South

Description: View looking across field.

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographs

Location: E. Teague Properties.
Photograph Date: April 18, 2019

Photograph No. 3

Direction: North

Description:
View taken along fenceline area looking north.

Photograph No. 4

Direction: Northeast

Description:
View of large stand of trees.

ARGONAUT ECOLOGICAL CONSULTING, INC.

Photographs

Location: E. Teague Properties.
Photograph Date: April 18, 2019

Photograph No. 5

Direction: North

Panoramic view of Study Area.

Appendix B – Soils Report

United States Department of Agriculture

NRCS

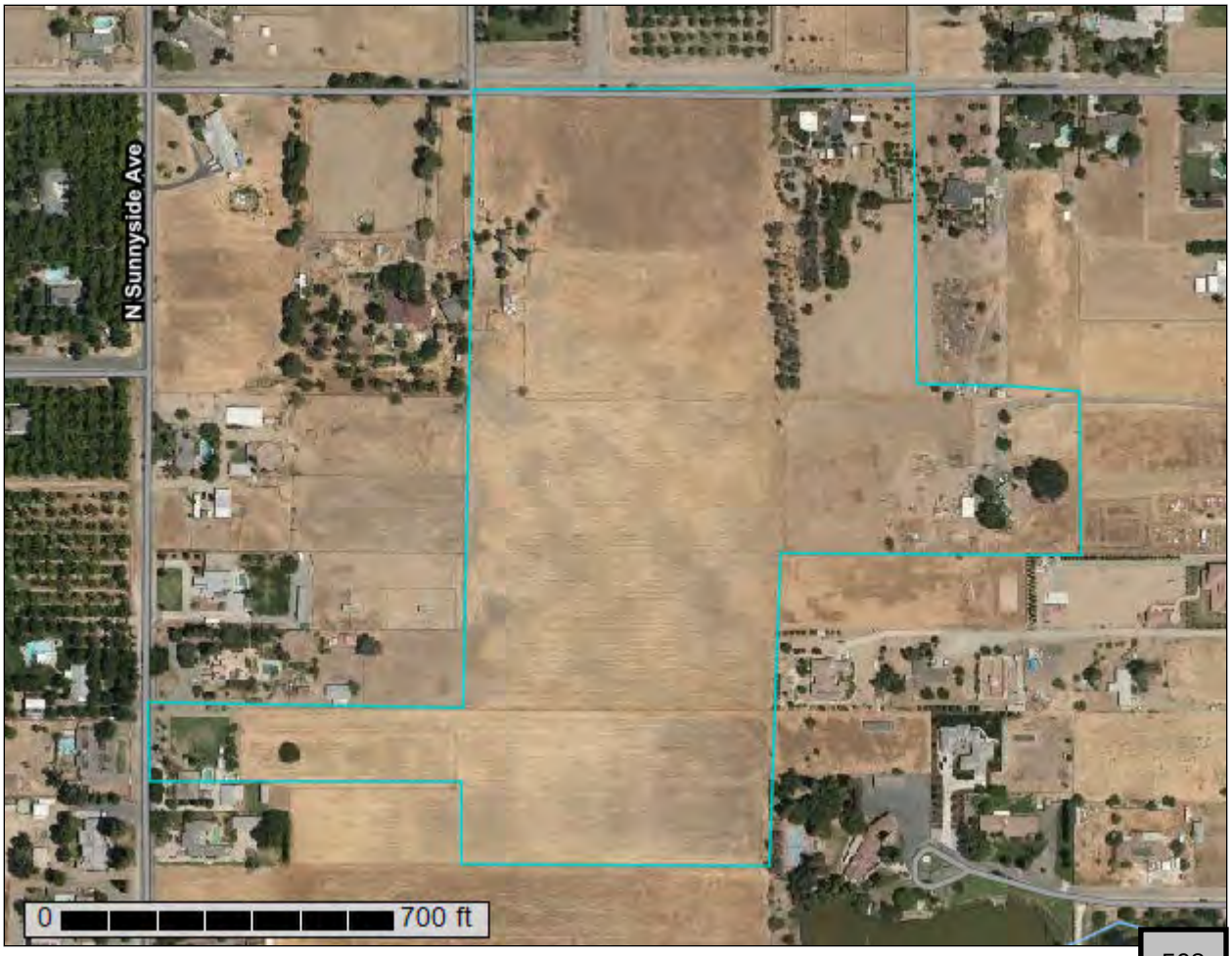
Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

AGENDA ITEM NO. 4.

Custom Soil R
Report for
Eastern Fresno Area, California

E. Teague Properties, Clovis CA



May 30, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

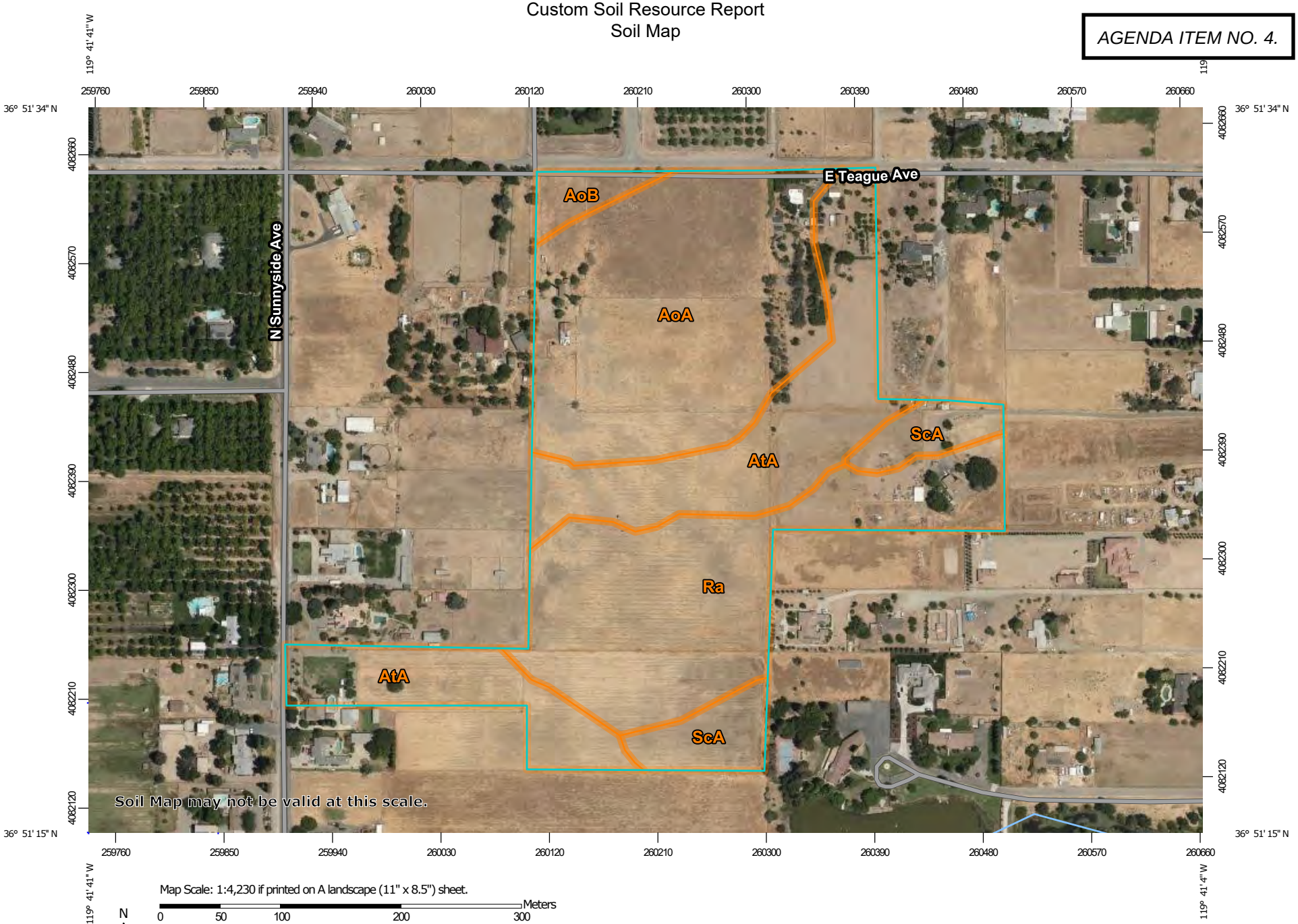
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:4,230 if printed on A landscape (11" x 8.5") sheet.

N

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 11, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 1, 2018—Jul 1, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AoA	Atwater loamy sand, 0 to 3 percent slopes, MLRA 17	12.3	34.0%
AoB	Atwater loamy sand, 3 to 9 percent slopes	0.8	2.2%
AtA	Atwater sandy loam, moderately deep, 0 to 3 percent slopes	10.2	28.2%
Ra	Ramona sandy loam	10.2	28.4%
ScA	San Joaquin sandy loam, 0 to 3 percent slopes, MLRA 17	2.6	7.2%
Totals for Area of Interest		**36.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Fresno Area, California

AoA—Atwater loamy sand, 0 to 3 percent slopes, MLRA 17

Map Unit Setting

National map unit symbol: 2vnd0
Elevation: 110 to 430 feet
Mean annual precipitation: 11 to 14 inches
Mean annual air temperature: 62 to 64 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Atwater and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atwater

Setting

Landform: Dunes
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from alluvium derived from granite

Typical profile

Ap - 0 to 24 inches: loamy sand
Bt - 24 to 55 inches: sandy loam
C - 55 to 73 inches: loamy sand
2Bq - 73 to 79 inches: cemented loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 60 to 79 inches to cemented horizon
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.02 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Sodium adsorption ratio, maximum in profile: 3.0
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Delhi

Percent of map unit: 5 percent
Landform: Dunes

Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

San joaquin

Percent of map unit: 4 percent
Landform: Terraces, fan remnants
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rocklin

Percent of map unit: 4 percent
Landform: Terraces, fan remnants
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Whitney

Percent of map unit: 2 percent
Landform: Fan remnants, terraces
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

AoB—Atwater loamy sand, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: hl0v
Elevation: 250 to 450 feet
Mean annual precipitation: 9 to 14 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Atwater and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atwater

Setting

Landform: Dunes on fan remnants
Landform position (two-dimensional): Shoulder, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear

Across-slope shape: Linear
Parent material: Eolian deposits derived from alluvium derived from granite

Typical profile

A - 0 to 24 inches: loamy sand
Bt - 24 to 43 inches: sandy loam
C - 43 to 60 inches: loamy sand

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Delhi

Percent of map unit: 5 percent
Landform: Dunes on fan remnants
Hydric soil rating: No

Unnamed, hardpan substratum

Percent of map unit: 5 percent
Landform: Dunes on fan remnants
Hydric soil rating: No

Unnamed, steeper slopes

Percent of map unit: 5 percent
Landform: Dunes on fan remnants
Hydric soil rating: No

AtA—Atwater sandy loam, moderately deep, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: hl10
Elevation: 250 to 450 feet
Mean annual precipitation: 9 to 14 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Atwater and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atwater

Setting

Landform: Dunes on fan remnants
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from alluvium derived from granite

Typical profile

A - 0 to 24 inches: sandy loam
Bt - 24 to 40 inches: sandy loam
Cqm - 40 to 50 inches: cemented

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 40 to 60 inches to duripan
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Unnamed, sandy clay loam subsoil

Percent of map unit: 12 percent
Landform: Dunes on fan remnants
Hydric soil rating: No

Delhi

Percent of map unit: 3 percent
Landform: Dunes on fan remnants
Hydric soil rating: No

Ra—Ramona sandy loam

Map Unit Setting

National map unit symbol: hl8k
Elevation: 250 to 500 feet
Mean annual precipitation: 9 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 225 to 275 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ramona and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ramona

Setting

Landform: Alluvial fans, stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

A - 0 to 12 inches: sandy loam
BAt - 12 to 24 inches: sandy loam
Bt - 24 to 38 inches: sandy clay loam
C - 38 to 60 inches: coarse sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Unnamed, coarse sandy loam

Percent of map unit: 10 percent
Landform: Alluvial fans, stream terraces
Hydric soil rating: No

Unnamed, fine sandy loam

Percent of map unit: 5 percent
Landform: Stream terraces, alluvial fans
Hydric soil rating: No

ScA—San Joaquin sandy loam, 0 to 3 percent slopes, MLRA 17

Map Unit Setting

National map unit symbol: 2vncw
Elevation: 90 to 520 feet
Mean annual precipitation: 9 to 17 inches
Mean annual air temperature: 62 to 64 degrees F
Frost-free period: 240 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

San joaquin and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Joaquin

Setting

Landform: Terraces, fan remnants
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

Ap - 0 to 9 inches: sandy loam
Bt1 - 9 to 15 inches: sandy clay loam
2Bt2 - 15 to 21 inches: clay
2Bkqm - 21 to 37 inches: cemented material
2C - 37 to 79 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: About 15 inches to abrupt textural change; 19 to 25 inches to duripan
Natural drainage class: Moderately well drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: About 8 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 4.0
Available water storage in profile: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Snelling

Percent of map unit: 5 percent
Landform: Terraces, fan remnants
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve, tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Alamo

Percent of map unit: 4 percent
Landform: Terraces, fan remnants
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve, tread
Microfeatures of landform position: Open depressions, open depressions
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, hydric

Percent of map unit: 1 percent
Landform: Terraces, open depressions on fan remnants
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve, tread
Microfeatures of landform position: Open depressions
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

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CULTURAL RESOURCE ASSESSMENT

FOR THE TEAGUE AND FOWLER

PROPERTIES, CLOVIS

FRESNO COUNTY CALIFORNIA

Prepared by

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2985 N. Burl Avenue #101
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May 17, 2019
(Job #19-045)

APPENDIX C

INTRODUCTION

The project consists of single-family residential development at a maximum density of 2.3 units per acre. Teague Avenue will be widened across the project frontage per City of Clovis General Plan Circulation Element and Master EIR and also per the Dry Creek Preserve (DCP) Master Plan and Mitigated Negative Declaration (approved last June 2018). Per the total acreage to be purchased, the planned unit total at this time is 74 residential lots. Two of the building complexes in the project area will be retained, and not directly impacted by the project: 5137 E. Teague Avenue and 8210 N. Sunnyside Avenue.

Improvements will include residential streets onsite with water, sewer and storm drain facilities per City of Clovis and Fresno Metropolitan Flood Control District approved utility master plans. Project will also install dry utilities for PG&E (gas and electricity) along with cable TV, internet and phone lines.

The project area lies in the southwest quarter of section 28, Township 12 South, Range 21 East, mapped on the Clovis USGS topographic quadrangle (Figure 1 and 2). The area is bounded in part by Sunnyside Avenue on the west and Teague Avenue on the north.

Melinda A. Peak, senior historian/archeologist with Peak & Associates, Inc. served as principal investigator for the study with Michael Lawson (resumes, Appendix 1), completing the field survey. Neal Neuenschwander prepared the site forms for the three recorded residential complexes.

CALIFORNIA REGULATIONS

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code sections 21083.2 and 21084.1 and sections 15064.5 and 15126.4 (b) of the CEQA Guidelines). CEQA Section 15064.5 requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. Public Resources Code Section 21098.1 further cites: A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

An “historical resource” includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript that is historically or archaeologically significant (Public Resources Code section 5020.1).

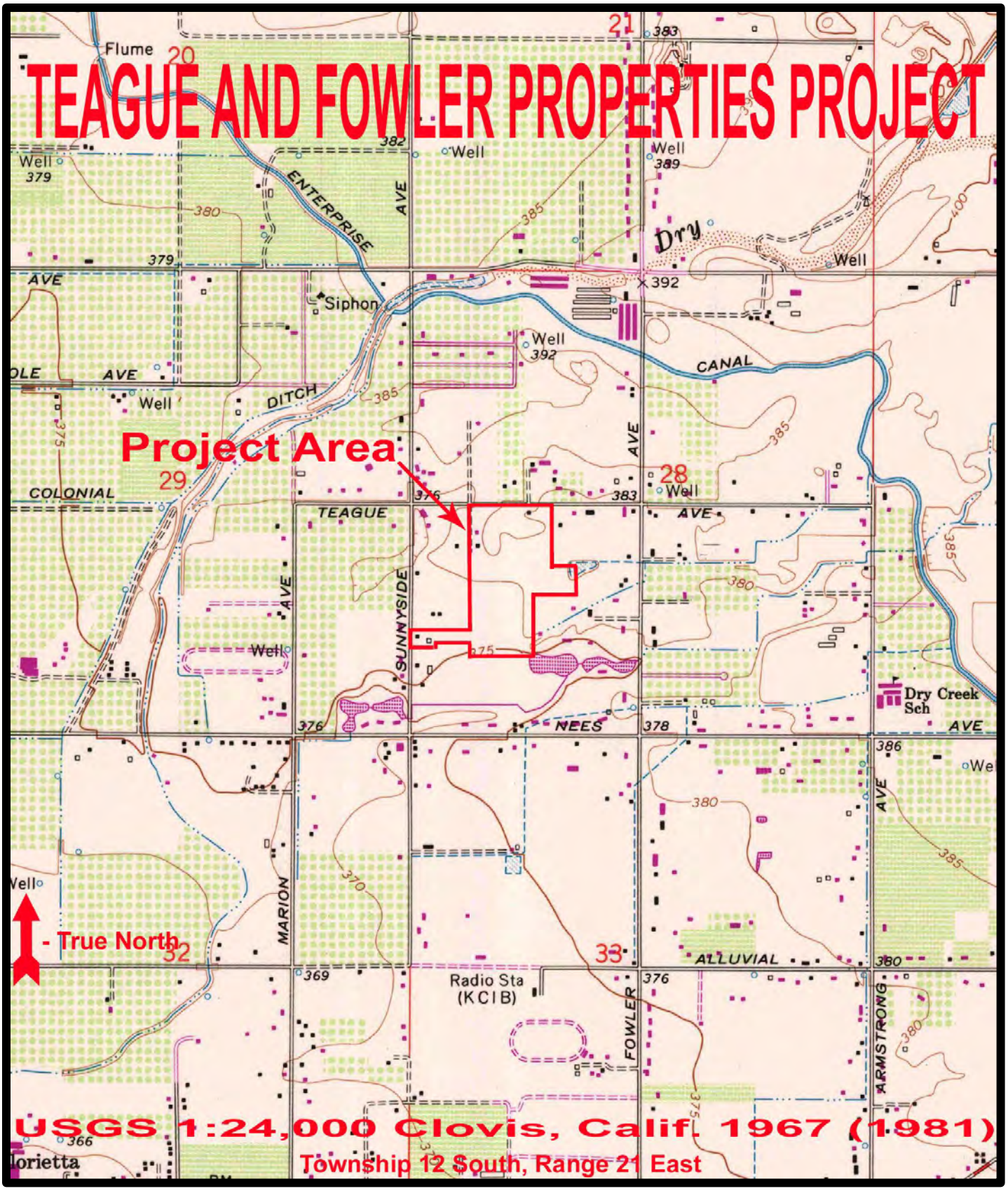
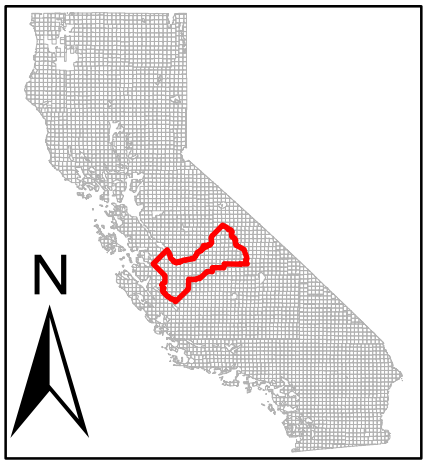

TEAGUE AND FOWLER PROPERTIES PROJECT
Project Area
- True North
USGS 1:24,000 Clovis, Calif. 1967 (1981)
Township 12 South, Range 21 East
Flume
Well
Siphon
Dry
Dry Creek Sch
Radio Sta (KCIB)
ENTERPRISE
CANAL
DITCH
TEAGUE
NEES
ALLUVIAL
COLONIAL
SUNNYSIDE
MARION
FOWLER
ARMSTRONG
AVE

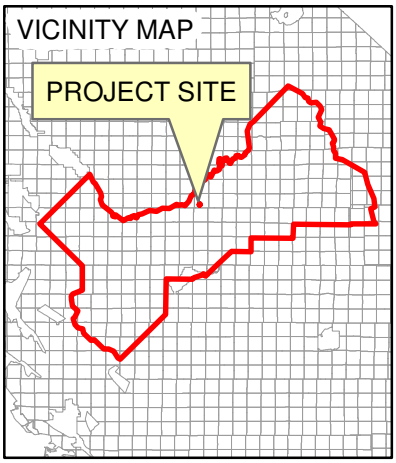
Figure 1

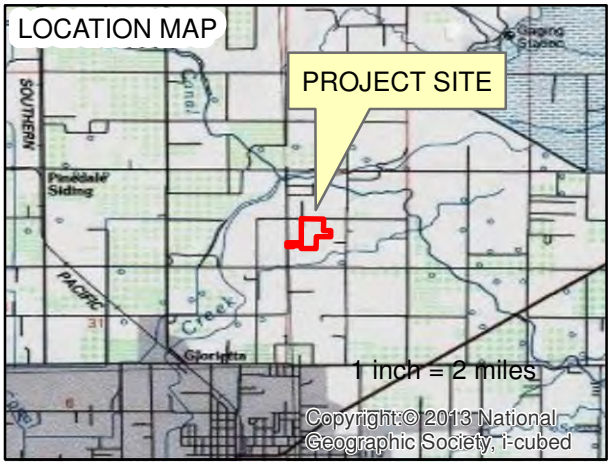
VICINITY AND LOCATION MAP- Figure 2

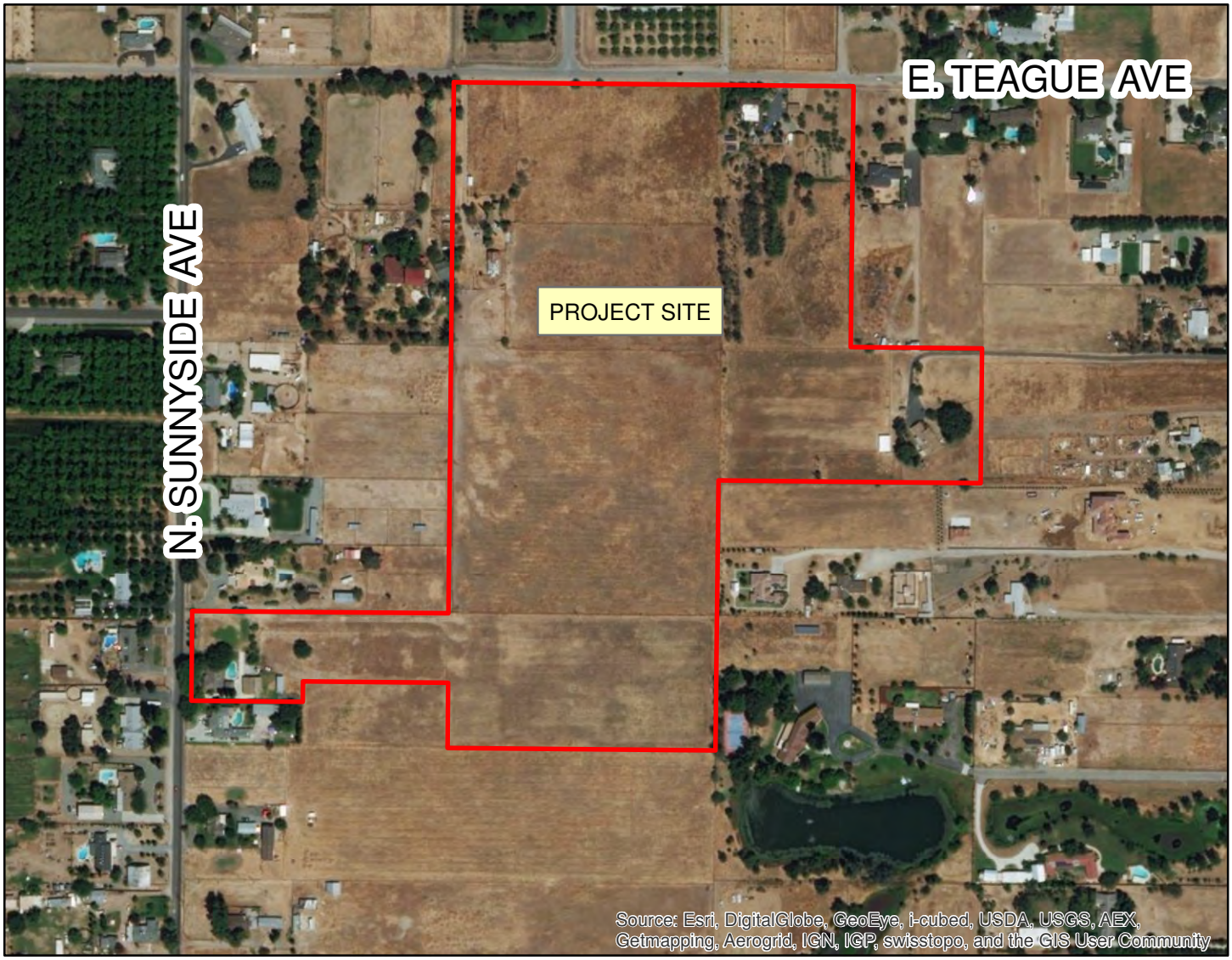
CLIENT NAME: Woodside Homes PROJECT NAME: Teague & Fowler Prop
PROJECT LOCATION: Part of Sections 28, T. 12S., R.21E., Mount Diablo Base a
Fresno County California,

AGENDA ITEM NO. 4.









Legend

APPROXIMATE BOUNDARY (37.1 AC.)

400 200 0 400 Feet

1 in = 400 ft

ARGONAUT ECOLOGICAL CONSULTING, INC.

532

Date: 5/17/2019

Advice on procedures to identify such resources, evaluate their importance, and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR), *CEQA and Archaeological Resources,* 1994. The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including, but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains, and associated grave goods regardless of the antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Codes Sections 5097.94 et al).

The California Register of Historical Resources (Public Resources Code Section 5020 et seq.)

The State Historic Preservation Office (SHPO) maintains the California Register of Historical Resources (CRHR). Properties listed, or formally designated as eligible for listing, on the National Register of Historic Places are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources. When a project will impact a site, it needs to be determined whether the site is an historical resource. The criteria are set forth in Section 15064.5(a) (3) of the CEQA Guidelines, and are defined as any resource that does any of the following:

A. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

B. Is associated with the lives of persons important in our past;

C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the CEQA Guidelines, Section 15064.5(a) (4) states:

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant

to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

California Health and Safety Code Sections 7050.5, 7051, And 7054

These sections collectively address the illegality of interference with human burial remains, as well as the disposition of Native American burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code Section 15064.5(e)

This law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction. The section establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project and establishes the Native American Heritage Commission as the entity responsible to resolve disputes regarding the disposition of such remains.

Assembly Bill 52

Assembly Bill (AB) 52 establishes a formal consultation process for California tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts. AB 52 defines a "California Native American Tribe" as a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission. AB 52 requires formal consultation with California Native American Tribes prior to determining the level of environmental document if a tribe has requested to be informed by the lead agency of proposed projects. AB 52 also requires that consultation address project alternatives, mitigation measures, for significant effects, if requested by the California Native American Tribe, and that consultation be considered concluded when either the parties agree to measures to mitigate or avoid a significant effect, or the agency concludes that mutual agreement cannot be reached. Under AB 52, such measures shall be recommended for inclusion in the environmental document and adopted mitigation monitoring program if determined to avoid or lessen a significant impact on a tribal cultural resource.

CULTURAL SETTING

Archeology

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data, but the emphasis has been in the northern portion of the valley. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-SAC-107), suggested two temporally distinct cultural traditions.

Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

In the southern San Joaquin Valley, with the exception of Hewes's excavation at CA-FRE-48 (the Tranquility Site), the foci of early investigations have been the old shorelines of the interior lakes: Tulare, Kern, and Buena Vista. In 1899, Dr. P. M. Jones directed fieldwork in the Buena Vista-Tulare Lake area of Kern County. Jones investigated 150 mounds and conducted trenching of several sites including CA-KER-53. In 1909, N. C. Nelson investigated prehistoric Site CA-KER-49, which is located to the west of Buena Vista Lake. Later, four surveys and excavations were conducted in the same locale under the auspices of the University of California. A compilation of these investigation results was published in 1926 by Gifford and Schenck.

As a result of this early work, an elaborate culture complex was defined for the late prehistoric period. This complex can be ascribed probably to the Yokuts and their direct ancestors. The material culture of this late temporal period complex included steatite vessels and beads, finely-made projectile points, pottery, shaped stone mortars, *Tivela* disc beads, use of asphaltum, and the presence of metates and manos. Flexed burials were the predominant interment mode. Earlier complexes underlying the late cultural expressions were represented by chipped stone crescents, large projectile points, atlatl spurs, and weights. Mortuary practices, generally thought to be related, include extended rather than flexed burial position, a situation analogous to that of the northern valley (Gifford and Schenck 1926; Lillard, Heizer, and Fenenga 1939; Moratto 1972).

Presence of "Early Man," although not found in direct association with extinct animals, is demonstrated by the frequency of chipped stone crescents and fluted points similar to those of the Clovis-Folsom Complex in the American Southwest. Although fluted points have been found near the shores of Tulare Lake, an area that has also produced surface finds of extinct mammal bone of Pleistocene age, the association is not substantiated by controlled excavations and remains speculative (Riddell and Olsen 1969). Most of the point collection had been acquired by D. Witt over a period of 30 years.

Under the direction of Wedel (1941), the Civil Works Administration, in conjunction with the Smithsonian Institution, initiated the first major excavations using stratigraphic controls. Investigations of CA-KER-39 and CA-KER-60 as well as several smaller sites near Buena Vista Lake produced evidence of two distinct cultural entities or occupation periods. Wedel lacked methods for dating these two entities by cross-comparison of the assemblages, he tentatively stated that the early occupation at Buena Vista Lake appeared to be temporally older and less developed than the Early Horizon (Windmiller Pattern) of the Delta region. He compared this early component to the Oak Grove or Milling Stone culture of the Santa Barbara area (Rogers 1939). He divided the later cultural entity into two distinct phases, both clearly distinguished from the earlier cultural phase by artifact types. Wedel (1941:144-145) estimated that neither of these cultural periods exceeded 1500 B.P. (years Before the Present). Later, other investigators proposed far earlier ages for these early occupations, with dates ranging from 2000 to 7000 B.P. (Baumhoff and Olmstead 1963, 1964; Heizer 1964; Meighan 1959).

Later investigations in 1963 and 1964 at CA-KER-116 near Buena Vista Lake produced materials similar to Wedel's early occupation. These materials occurred in the lower levels of the "upper deposit," while an even deeper cultural deposit yielded materials similar to those of the San Dieguito Complex. Artifacts included a chipped stone crescent, crude point fragments, and an atlatl spur. Radiocarbon age determinations on shell from the lowest cultural levels returned a date of circa 8200 B.P. (Fredrickson and Grossman 1966, 1977; Fredrickson 1967).

Despite the previously mentioned investigations, the prehistory of the southern San Joaquin remains as yet poorly understood, without a tightly defined chronological sequence of cultural development.

Ethnology

Ethnographic literature is often uncertain in definition of cultural boundaries for Indian groups. Early displacement by white intrusion resulted in population shifts to avoid conflict with the Spanish, and later with the miners and settlers. The ravages of disease and warfare decimated the native people, further weakening cultural identity. Informants were often uncertain of original territories of the various tribal groupings.

The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs which formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925). The housepit depressions ranged in diameter from between 3 to 18 meters.

Latta (1949:99) reported that a village of 200 to 300 Yokuts might have four or five large houses that were used for ten or twelve years or until a family member died, at which time the Indians burned the house in which the death had occurred. If a sick or aged person died outside the dwelling, the family did not burn the house. When a Northern Yokuts died, his body was cremated or buried in a flexed position. Southern tribes normally buried their dead, although they did cremate shamans, persons who died away from their village and, among the Tachi, persons of great importance.

The Yokuts experienced severe depopulation after contact with the Spanish and subsequent explores. The most devastating impacts of the Spanish colonization effort were not the result of military conflicts, but came from Old World diseases newly introduced to the native people.

Historical Context

Early Explorations

The early recorded inhabitants of the region were members of the Yokuts tribe. Although the Spanish missions were established closer to the Pacific coast between 1769 and 1817, the general project area was first visited in the early 1800s by Spanish explorers, who visited the San Joaquin Valley with three goals: to search for runaway neophytes from the missions in the coastal regions, to punish the Indian raiders, and to select sites for new missions. In 1806, a group led by Gabriel Moraga and Father Pedro Muñoz, left Mission San Juan Bautista heading north to about the Mokelumne River**.** They then turned south, and travelled along the edge of the mountains crossing the San Joaquin River and passing through Tejon Pass, arriving at Mission San Fernando. In 1815, José Dolores Pico marched an expedition group from Monterey into the region. Following the San Joaquin River, he passed through the area in search of runaways, traveling as far south as the Kern River. The expedition returned to the starting point in Monterey with nine prisoners and a number of horses.

After control of California passed from Spain to Mexico in 1822, Mexican explorations into the interior continued, with José Dolores Pico conducting a major expedition along the San Joaquin River in 1825-1826. This expedition was considered successful in that some neophytes were captured, hostile Indians killed, some of the tribal groups intimidated, and some stolen horses recovered. In 1828, Sebastián Rodríguez led a similar expedition into the same region. His expedition captured a number of neophytes as well as some of the stolen horses, an item that had become an important dietary staple for the Indian tribes in the San Joaquin Valley region (Beck and Haase 1974).

The expeditions did not leave physical evidence, but there were definitely effects to the Native American populations. Causing even more of an effect on the native population were the diseases brought in to the Native populations of the Central Valley in the early 1830s.

Ranchos

In Fresno County, there was only one early land grant, a rancho along the current southern border of the county: Laguna de Tache. The era of the Spanish and Mexican land grants did not directly affect the project area.

Clovis

The extension of the railroad system throughout the San Joaquin Valley allowed the increased expansion of a market for the agricultural production of the region. A branch line of the Southern

Pacific Railroad (first known as the Pollasky Railroad or the San Joaquin Railroad) was built through this region circa 1891. Marcus Pollasky served as the promoter, and monies were raised locally for the construction costs. Clovis Cole, the owner of the large wheat ranch, donated land for the route, and a station was established here on the line and named Clovis (Gudde 1969; City of Clovis 1962).

After the completion of the railroad, the construction of the flume from Shaver Lake to the east was soon completed by the Fresno Flume and Irrigation Company. The 45 mile long flume could deliver 200,000 board feet of lumber through the v-shaped watercourse in a 24 hour period. At the end of the flume, there was a finishing and distributing plant. Other, better grade lumber was delivered to Clovis down Tollhouse Grade, hauled by ox and horse teams. In the early years, 140 men were employed by the lumber company, with an annual payroll of $450,000. The Clovis lumber plant occupied a 40 acre site. The factory, warehouse, planing mill and engine house all burned to the ground in 1898, but were soon rebuilt. As many as 400 men were employed by the company. The mill was located on the south side of Fifth Street (City of Clovis 1962; Clovis Centennial Book Committee 2011).

The mill in Clovis produced "ordinary lines of lumber," shakes, trays, sweat boxes, raisin boxes, orange boxes, cedar posts, ties, poles, and also pine and oak cordwood (*Fresno Republican* 1897: 96). The ever increasing agricultural use of the San Joaquin Valley, due to improvements and expansion of irrigation systems, led to a large market for the fruit packing boxes, allowing shipment of the produce to a wider marketplace.

Clovis was laid out by a licensed surveyor, working for the co-owners of the land: Clovis Cole, Clarence Pallos and George Owen. Early homes were utilitarian, and the streets were ungraded (City of Clovis 1962).

The town's population expanded rapidly from about 500 residents in 1905 to about 1,000 in 1910. Nearby, the population was increasing within the local rural agricultural colonies, with large acreages broken up into 20 acre tracts advertised for sale to Midwesterners. By 1919, local population had grown to 1,500. At this point, the lumber business is still the main support of the economy, but the area produced huge crops of Malaga grapes and figs (Clovis Centennial Book Committee 2011; Vandor 1919:269)

For the first 21 years, there was no organized government in Clovis. Late in 1911, and election was held, and the City incorporated in 1912. Most of the early businesses in town were located on Front Street, now known as Clovis Avenue, on the west side of the tracks (City of Clovis 1962). In recent years, the residential development has increased throughout the region.

Project Area Historical Background

The early use of land in the Big Dry Creek region was for cultivation of wheat. Improvements such as the development of the railroad, allowing marketing of more perishable crops, and irrigation canals, providing a steady source of water year round, also encouraged the growth of crops such as grapes. The establishment of orchards and vineyards allowed more profitability with smaller tracts of land, and many pieces of land were subdivided as portions of agricultural colonies.

Early maps of the project vicinity show a roadway crossing the section through the more easterly portion, outside the project area (Official Map of Fresno County 1886, 1892). The Enterprise Canal had been constructed by 1891, about ½ mile north of the current project area (Thompson 1891). R.T. Cole was the landowner, with 160 acres of section 28, the southwest quarter of the section. No buildings were present in the Annexation Area or within the section.

By 1898, a road had been formally installed on the line of Fowler Avenue (Official Map of Fresno County 1898) just east of the project area. In 1907, the southwest quarter of the section containing the project area had been acquired and subdivided as the Nees Colony, an agricultural colony. This area had been divided into 20 acre parcels. The colony included three more quarter sections in section 33 to the south, with the north half and the southeast quarter of the section divided into 20 acre parcels. For the increased population of families, the Nees Colony School was established between 1907 and 1915 at the junction of Fowler Avenue and Nees Avenue in section 27.

RESEARCH

A record search was conducted for the project area at the Southern San Joaquin Valley Archaeological Information Center of the California Historical Resources Information System on December 15, 2015 (RS#19-133, Appendix 2).

There are no known sites within a 0.125-mile radius of the project area. A portion of the project area has been previously surveyed for prehistoric period cultural resources (Peak & Associates 2015). Another survey covers an area to the south of the project area within the search radius (Wren and Crist 1975).

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission was contacted on April 11, 2019 for a check of the sacred lands file and a list of individuals suitable for SB18 consultation for the general area of the project. Their reply indicated that no properties in the vicinity of the project had been recorded as cultural resources.

The NAHC on May 6, 2019, identified several organizations as suitable contacts for information and opinion on the project. They were contacted as follows:

Organization/Individual	First Contact		Follow-up		Comments
	Type	Date	Type	Date	
Dumna Wo-Wah Tribal Government Robert Ledger, Sr.	email	5/7/19	email	5/14/19	No reply to date
Kings River Choinumne Farm Tribe Stan Alec	USPS	5/7/19	phone	5/14/19	No reply to date No phone answer
Santa Rosa Rancheria Tachi Yokut Tribe Reuben Barrios, Sr.	fax	5/7/19	fax	5/14/19	No reply to date
Table Mountain Rancheria Leanne Walker-Grant	email	5/7/19	email	5/14/19	No reply to date
Table Mountain Rancheria Bob Pennell	email	5/7/19	email	5/14/19	No reply to date
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow	email	5/7/19	email	5/14/19	No reply to date

Appendix 3 includes copies of all Native American communication.

FIELD ASSESSMENT

Mike Lawson completed a field survey of the project area on April 9, 2019, using complete inspection, transects of 10 to 15 meters wide (Figure 3). Occasional overlapping of transects and closer scrutiny of soil occurred in areas of exceptional visibility, notable abrupt color change, or significant change in elevation such as a pit or a hill. Locations of rodent excavations were also carefully checked.

The project area shows its long-term agricultural use with leveling, irrigation, fencing and general agricultural use evident. The land is currently used as pasturage for horses. Throughout the acreage, native and nonnative weeds, bushes and other plants were observed, sparse in some areas and dense in others, resulting from the animal grazing and heavy spring rain.

The observed soils range from yellow sand to tan loamy sand to light brown loam, sporadically distributed throughout the acreage, with the more organic soil associated with close proximity to

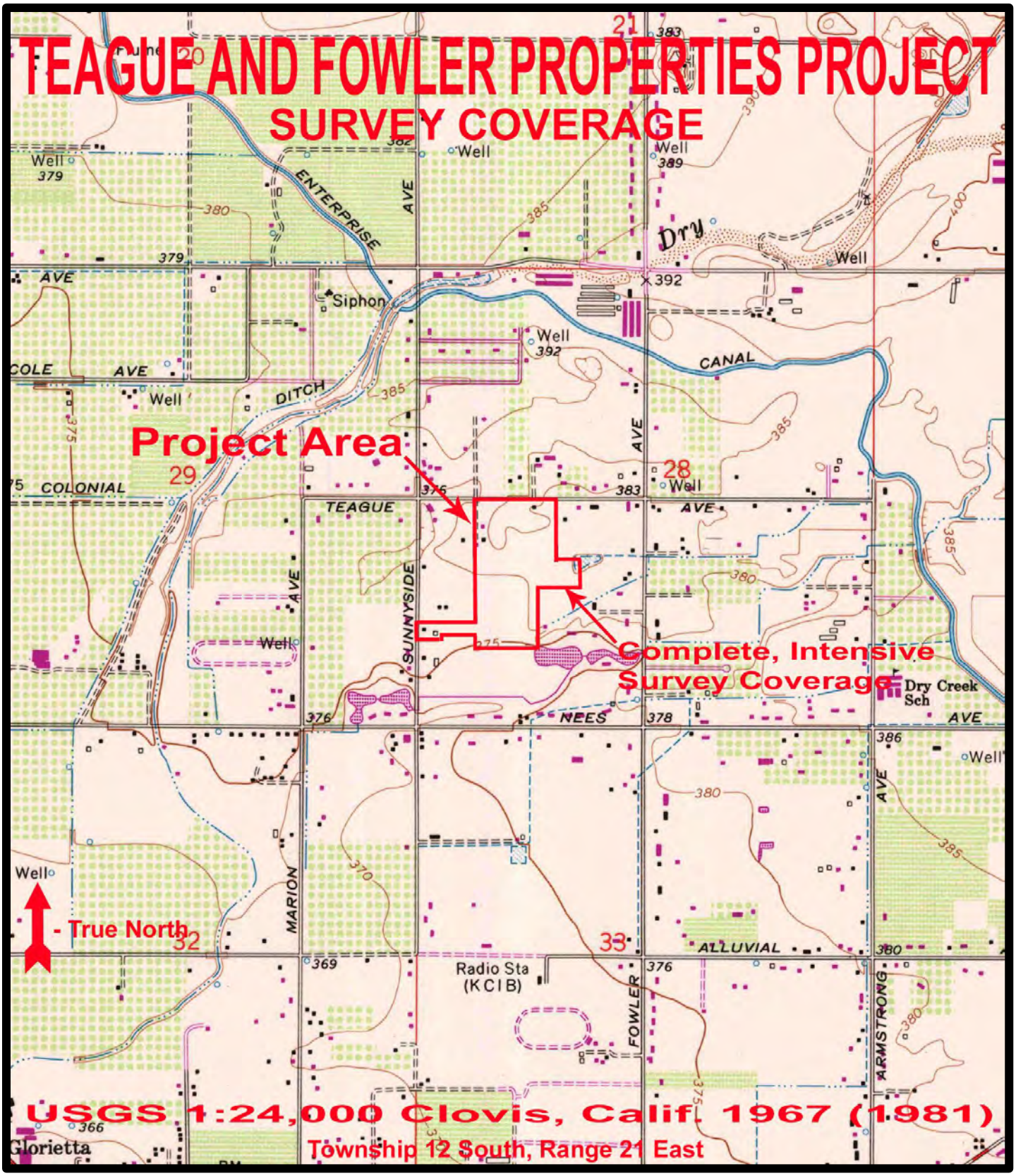

TEAGUE AND FOWLER PROPERTIES PROJECT
SURVEY COVERAGE
Project Area
Complete, Intensive
Survey Coverage
- True North
USGS 1:24,000 Clovis, Calif. 1967 (1981)
Township 12 South, Range 21 East
ENTERPRISE AVE
DITCH
CANAL
TEAGUE
NEES
SUNNYSIDE
MARION
FOWLER
ARMSTRONG
COLONIAL
COLE AVE
Siphon
Well
Dry
Dry Creek Sch
Radio Sta (KCIB)
ALLUVIAL
Glorietta

Figure 3

barns, corrals or near water troughs or heavy irrigated areas. Due to varying plant growth, observation of soil was fair to excellent. Some light scraping was required for adequate inspection in few areas. Stone includes some metamorphic alluvial gravels, with addition of undetermined types, but nothing of suitable size or structure for making tools.

There is no evidence of prehistoric period cultural resources within the project area. Three buildings complexes with a residence over 50 years in age, were recorded in the property.

BUILDING DESCRIPTIONS

5137 E. Teague Avenue

The resource consists of two buildings; and single-family residence and a barn. The single-family residence is rectangular shaped, one and one-half story with a steeply pitched gable roof. The roof eaves are close and the rafter tails are exposed. The roof is covered with asphalt shingles. The siding is stucco. Windows are both fixed and double sash, divided horizontally. They are enclosed with a plain slip sill. Doors are solid wood.

The barn is rectangular shaped, single story, with a gable roof, and dates to between 1964 and 1980. The roof is covered with galvanized sheet metal and the sides are covered with vertical board and batten wood siding.

The single-family residence was constructed in 1936 according to Fresno County Assessor Office records. In form, it most closely fits the common form of the Gable-Front Family of the National Style that was popular nationwide between 1850 and 1930. The style was inspired by Cape Cod shape of Colonial Revival movement, and is almost identical to a photograph of a 1935 example (McAlester 2017:34-47).

5261 E. Teague Avenue

The resource consists of a single-family residence and two outbuildings. The single-family residence is irregular shaped, single story with a cross hipped roof. The eaves are wide and enclosed with a plain soffit. The roof is covered with asphalt shingles and the sides are covered with horizontal wood boards. Windows are both fixed and double sash divided vertically.

Outbuilding #1 is located to the east of the single-family residence and is rectangular shaped, single story with a low-pitched gable roof with exposed rafter tails. The roof is covered with asphalt shingles and the sides are covered with horizontal wood boards. Windows are double sash divided vertically and there is a plain wood door on the south facing façade.

Outbuilding #2 is located to the south of the single-family residence. It is rectangular shaped, two story with a moderately pitched gable roof. Along the west facing side a single-story addition has a shed roof with two bays and is used as a double garage.

The single-family residence was constructed in 1952 according to Fresno County Assessor Office records. It is a Crossed Hipped Roof variant of a Ranch Style home, a common style for Ranch Style homes from between 1935-75. About 40 percent of the Ranch Style homes are Cross Hipped Roof subtypes (McAlester 2017:596-611).

8210 N. Sunnyside Avenue

The resource consists of a single-family home and two outbuildings. The single-family residence is rectangular shaped, single story, with a cross hipped roof. The eaves are wide and enclosed with a plain soffit. The roof is covered with wood shingles and the sides are covered with horizontal wood boards. Windows are both fixed and double and triple sash divided vertically.

Outbuilding #1 is irregular shaped, single story and is located to the east of the single-family residence. Outbuilding #1 consists of two buildings which abut one another. The western portion has a gable roof covered with asphalt shingles with sides covered with stucco. The eastern portion is shorter in length, has a flat roof covered with rolled asphalt roofing and has sides covered with horizontal wood boards.

Outbuilding #2 is rectangular shaped, single story and is located to the east of Outbuilding #1 and the single-family residence. It has a flat roof covered with rolled asphalt roofing and the sides, except for the upper couple of feet, are enclosed with horizontal wood boards.

The single-family residence was constructed in 1960 according to Fresno County Assessor Office records. It is a Crossed Hipped Roof variant of a Ranch Style home, a common style for Western homes from between 1935-75. About 40 percent of the Ranch Style homes are Cross Hipped Roof subtypes (McAlester 2017:596-611).

BUILDING EVALUATIONS

5137 E. Teague Avenue

The residential building dates to 1936, and is not distinctive in design. The date of the construction of the barn is between 1964 and 1981, so the two buildings are not unified by date or style elements. There is no apparent association with the complex and important individuals or events in history. This is not an uncommon style of building for the Depression era, and provide no further

understanding or research value for the history of the region. There are no archeological values associated with the buildings. The building complex does not meet the criteria of the California Register of Historical Resources as important site.

5261 E. Teague Avenue and 8210 N. Sunnyside Avenue

The residential buildings relate to later period use of the property, after 1950, and are essentially modern features. There is no apparent association with important individuals or events in history. They are not uncommon styles of Post-World War II buildings, and provide no further understanding or research value for the history of the region. There are no archeological values associated with the buildings. The sites do not meet the criteria of the California Register of Historical Resources as important sites.

There are no resources eligible for the California Register of Historical Resources within the project area.

RECOMMENDATIONS

Although no prehistoric sites were found during the survey, there is a slight possibility that a site may exist and be totally obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for on-the-spot evaluation of the finding. If the bone appears to be human, state law requires that the Fresno County Coroner be contacted. If the Coroner determines that the bone is human and is most likely Native American in origin, he must contact the Native American Heritage Commission (916-322-7791).

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APPENDIX 1

Resumes

PEAK & ASSOCIATES, INC.
RESUME

MELINDA A. PEAK **January 2019**
Senior Historian/Archeologist
3941 Park Drive, Suite 20 #329
El Dorado Hills, CA 95762
(916) 939-2405

PROFESSIONAL EXPERIENCE

Ms. Peak has served as the principal investigator on a wide range of prehistoric and historic excavations throughout California. She has directed laboratory analyses of archeological materials, including the historic period. She has also conducted a wide variety of cultural resource assessments in California, including documentary research, field survey, Native American consultation and report preparation.

In addition, Ms. Peak has developed a second field of expertise in applied history, specializing in site-specific research for historic period resources. She is a registered professional historian and has completed a number of historical research projects for a wide variety of site types.

Through her education and experience, Ms. Peak meets the Secretary of Interior Standards for historian, architectural historian, prehistoric archeologist and historic archeologist.

EDUCATION

M.A. - History - California State University, Sacramento, 1989
Thesis: *The Bellevue Mine: A Historical Resources Management Site Study in Plumas and Sierra Counties, California*
B.A. - Anthropology - University of California, Berkeley

RECENT PROJECTS

Ms. Peak completed the cultural resource research and contributed to the text prepared for the DeSabla-Centerville PAD for the initial stage of the FERC relicensing. She also served cultural resource project manager for the FERC relicensing of the Beardsley-Donnells Project. For the South Feather Power Project and the Woodleaf-Palermo and Sly Creek Transmission Lines, her team completing the technical work for the project.

In recent months, Ms. Peak has completed several determinations of eligibility and effect documents in coordination with the Corps of Engineers for projects requiring federal permits, assessing the eligibility of a number of sites for the National Register of Historic Places. She has also completed historical research projects on a wide variety of topics for a number of projects including the development of navigation and landings on the Napa River, wineries, farmhouses dating to the 1860s, bridges, an early roadhouse, Folsom Dam and a section of an electric railway line.

In recent years, Ms. Peak has prepared a number of cultural resource overviews and predictive models for blocks of land proposed for future development for general and specific plans. She has been able to direct a number of surveys of these areas, allowing the model to be tested.

She served as principal investigator for the multi-phase Twelve Bridges Golf Club project in Placer County. She served as liaison with the various agencies, helped prepare the historic properties treatment plan, managed the various phases of test and data recovery excavations, and completed the final report on the analysis of the test phase excavations of a number of prehistoric sites. She is currently involved as the principal investigator for the Teichert Quarry project adjacent to Twelve Bridges in the City of Rocklin, coordinating contacts with Native Americans, the Corps of Engineers and the Office of Historic Preservation.

Ms. Peak has served as project manager for a number of major survey and excavation projects in recent years, including the many surveys and site definition excavations for the 172-mile-long Pacific Pipeline proposed for construction in Santa Barbara, Ventura and Los Angeles counties. She also completed an archival study in the City of Los Angeles for the project. She also served as principal investigator for a major coaxial cable removal project for AT&T.

Additionally, she completed a number of small surveys, served as a construction monitor at several urban sites, and conducted emergency recovery excavations for sites found during monitoring. She has directed the excavations of several historic complexes in Sacramento, Placer and El Dorado Counties.

Ms. Peak is the author of a chapter and two sections of a published history (1999) of Sacramento County, *Sacramento: Gold Rush Legacy, Metropolitan Legacy*. She served as the consultant for a children's book on California, published by Capstone Press in 2003 in the Land of Liberty series.

PEAK & ASSOCIATES, INC.
RESUME

MICHAEL LAWSON **January 2019**
Archeological Specialist
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95672
(916) 939-2405

PROFESSIONAL EXPERIENCE
Mr. Lawson has compiled an excellent record of supervision of excavation and survey projects for both the public and private sectors over the past twenty-two years. He has conducted a number of surveys throughout northern and central California, as well as serving as an archeological technician and crew chief for a number of excavation projects.

EDUCATION
B.A. - Anthropology - California State University, Sacramento

Special Course: Comparative Osteology. University of Tennessee, Knoxville. Forensic Anthropology Center. January 2018.

Intensive lab and outdoor study with human example from outdoor research facility, including typical and non-metric examples, compared with fifty non-human species most commonly confused with human remains. Outdoor research facility "The Body Farm" study included survey, photography, collection and identification of faunal and human bone fragments, with a Power Point presentation discussing finds.

EXPERIENCE
- Extensive monitoring of open space, streets and project development areas for prehistoric period and historic period resources. Areas monitored include Sutter Street in Folsom; Mud Creek Archeological District in Chico; Camp Roberts, San Luis Obispo County; Avila Beach, San Luis Obispo County; Edgewood Golf Course, South Lake Tahoe; Davis Water Project, Davis; Star Bend levee section, Sutter County; Feather River levees, Sutter County; Bodega Bay, Sonoma County; San Jose BART line extension, Santa Clara County; and numerous sites for PG&E in San Francisco.
- Over twenty years of experience working in CRM, volunteer, and academic settings in California historic, proto-historic, and prehistoric archaeology.
- Expertise in pedestrian survey, excavation, feature (including burial) exposure, laboratory techniques, research. Field positions include crew chief and lead technician.

APPENDIX 2

Record Search

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joa... Valley Information Center
California State Un...
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

AGENDA ITEM NO. 4.

4/15/2019

Robert Gerry
Peak & Associates, Inc.
3941 Park Drive, Suite 20-329
El Dorado Hills, CA 95762

Re: 5137 E Teague
Records Search File No.: 19-133

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Clovis USGS 7.5' quad. The following reflects the results of the records search for the project area and the 0.125 mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shapefiles

Resources within project area:	None
Resources within 0.125 mile radius:	None
Reports within project area:	None
Reports within 0.125 mile radius:	FR-01130

Resource Database Printout (list):	☐ enclosed	☐ not requested	☒ nothing listed
Resource Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Resource Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Report Database Printout (list):	☒ enclosed	☐ not requested	☐ nothing listed
Report Database Printout (details):	☐ enclosed	☒ not requested	☐ nothing listed
Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☐ enclosed	☐ not requested	☒ nothing listed
Report Copies:	☐ enclosed	☒ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☒ not requested	☐ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see http://historicalmaps.arcgis.com/usgs/

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see http://www.glorecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1 and/or http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items

Shipwreck Inventory: Not available at SSJVIC; please see http://www.slc.ca.gov/Info/Shipwrecks.html

Soil Survey Maps: Not available at SSJVIC; please see http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

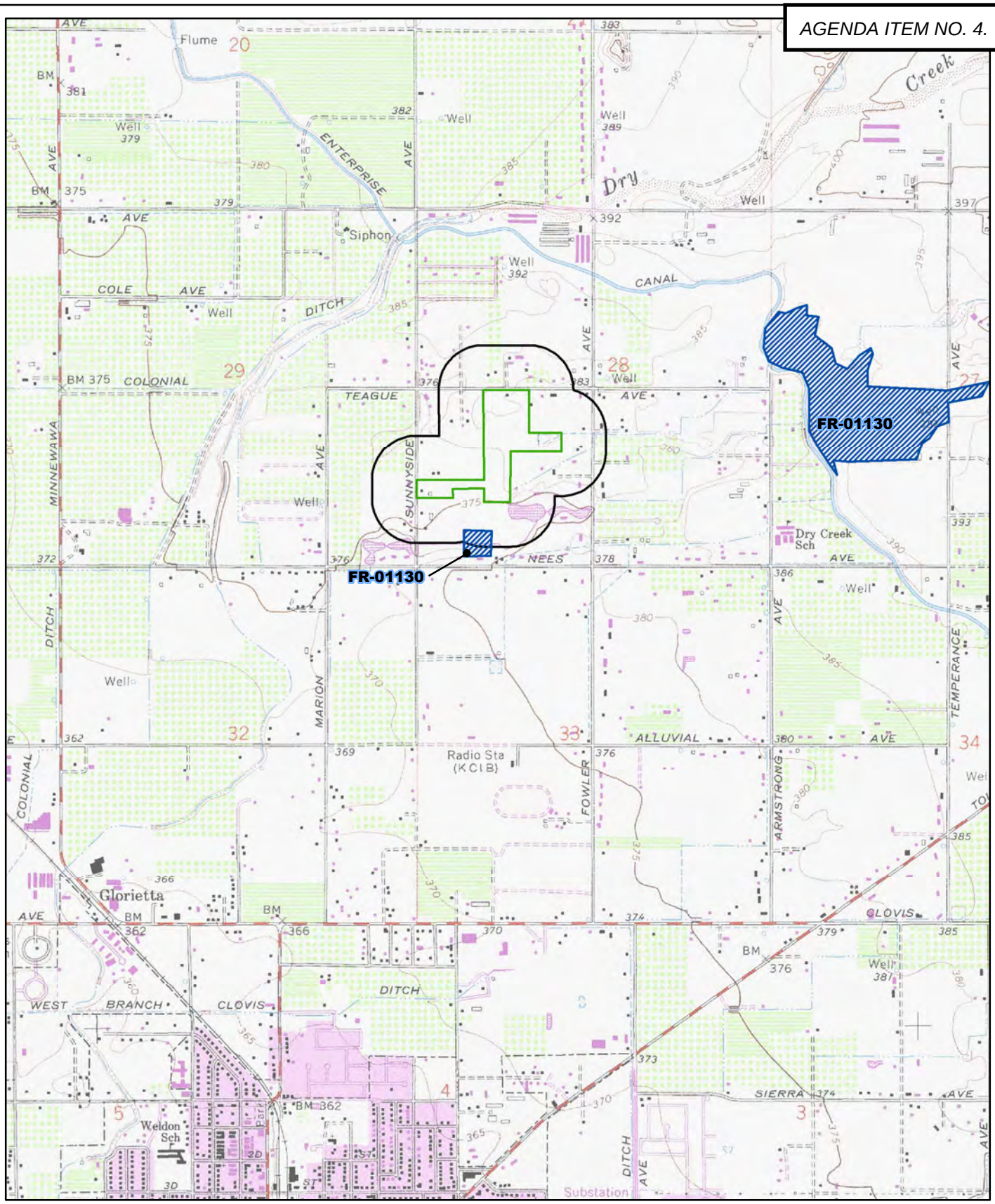
Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Celeste M. Thomson
Coordinator



May depict confidential cultural resource locations.
Do not distribute.

0 0.125 0.25 0.5 Miles

0 0.175 0.35 0.7 Kilometers

N

SSJVIC Record Search 19-133
Clovis 7.5'
Fresno County, CA

Report List

SSJVIC Record Search 19-133

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
FR-01130		1975	Wren, Donald G. and Crist, Michael	Archaeological Reconnaissance of the Redbank and Fancher Creek Investigation Area	Individual Consultant	10-001154, 10-001155

APPENDIX 3

Native American Consultation

STATE OF CALIFORNIA **Gavin Newsom, Governor**

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

May 3, 2019

Mr. Robert Gerry
Peak & Associates, Inc.

VIA Email to: peakinc@surewest.net

RE: 5137 E. Teague Ave., Fresno County.

Dear Mr. Gerry:

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

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

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

Sincerely,

Katy Sanchez

KATY SANCHEZ
Associate Environmental Planner

Attachment

Native American Heritage Commission
Native American Contacts List
5/3/2019

AGENDA ITEM NO. 4.

Dumna Wo-Wah Tribal Goverment
Robert Ledger Sr., Chairperson
2191 West Pico Ave.
Fresno ,CA 93705
ledgerrobert@ymail.com
(559) 540-6346

Dumna/Foothill Yokuts
Mono

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fedora Avenue
Fresno ,CA 93726
(559) 647-3227 Cell

Foothill Yokuts
Choinumni

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore ,CA 93245
(559) 924-1278
(559) 924-3583 Fax

Tache
Tachi
Yokut

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 822-2587
(559) 822-2693 Fax

Yokuts

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 325-0351
(559) 325-0394 Fax

Yokuts

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas ,CA 93906
kwood8934@aol.com
(831) 443-9702

Foothill Yokuts
Mono
Wuksache

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans Tribes for the proposed: 5137 Teague Ave., Fresno County.

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

May 7, 2019

Project: Notification of the Proposed 5137 E Teague Subdivision in Clovis, Fresno County, CA
Dear Chairperson [Addressee]:

Woodside Homes is proposing to construct a residential subdivision on 37.71 acres on the south side of E. Teague Avenue, to the west of North Fowler. The project will require a General Plan Amendment, requiring SB 18 consultation. The project area lies in T12S, R21E, Section 28. It is mapped on the Clovis 7.5' USGS quadrangle, which is the base for the attached map. Woodside Homes is the project proponent and the City of Clovis is the lead agency.
Work on the project would include grading of lots, installation of streets, trenching for utility lines (relatively shallow) and home construction.
SB 18 establishes responsibilities for local governments to contact, provide notice to, refer plans to, and consult with tribes. The provisions of SB 18 apply only to city and county governments and not to other public agencies. The following list briefly identifies the contact and notification responsibilities of local governments, in sequential order of their occurrence.

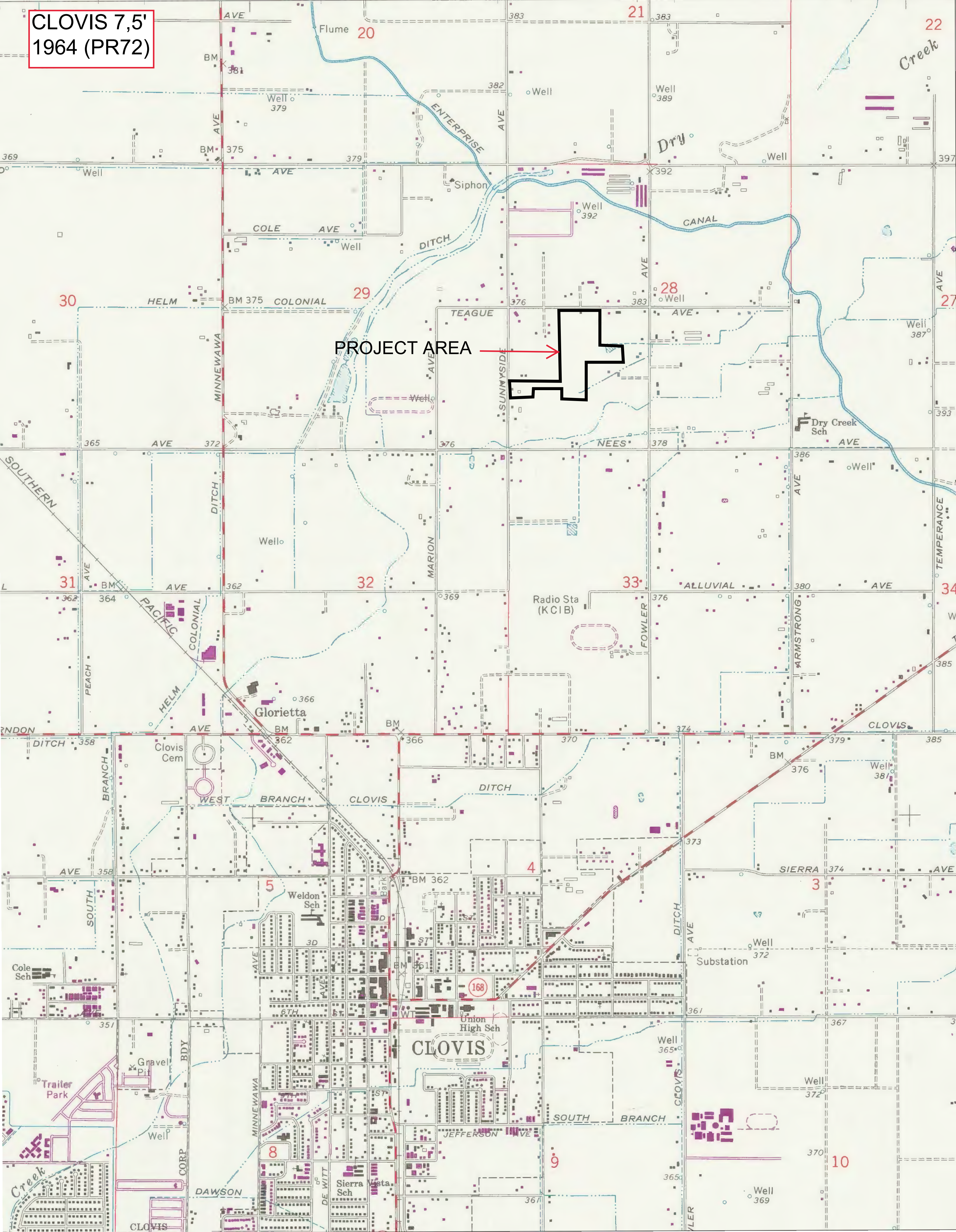
Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

If you have questions, need additional information, or wish to comment, please contact me at the address provided below, or call me at (916)283-5238 or email at peakinc@surewest.net. We are consultants, not decision makers, on the project, but we can forward your message to the appropriate contacts.

Sincerely,
Robert A. Gerry
Robert A. Gerry
Consulting Archeologist
Peak & Associates, Inc.

peakinc@surewest.net

Enclosed: project area map



CLOVIS 7,5'
1964 (PR72)
PROJECT AREA
Flume
ENTERPRISE
Dry Creek
Siphon
CANAL
DITCH
COLE AVE
HELM
COLONIAL
TEAGUE
AVE
SUNNYSIDE
MARION AVE
NEES AVE
MINNEWAWA
Dry Creek Sch
ALLUVIAL AVE
Radio Sta (KCIB)
FOWLER
ARMSTRONG
TEMPERANCE AVE
SOUTHERN PACIFIC
PEACH AVE
Glorietta
CLOVIS
Clovis Cem
WEST BRANCH
CLOVIS DITCH
SIERRA AVE
Weldon Sch
Union High Sch
Substation
SOUTH BRANCH
JEFFERSON AVE
Cole Sch
Gravel Pit
Trailer Park
DAWSON
DE WITT
Sierra Vista Sch
CORP
168

PEAK & ASSOCIATES, INC.
CONSULTING ARCHEOLOGY

May 14, 2019

Subject: Notification of the Proposed 5137 E Teague Subdivision in Clovis, Fresno County, CA
Dear Chairperson [Addressee]:

Woodside Homes is proposing to construct a residential subdivision on 37.71 acres on the south side of E. Teague Avenue, to the west of North Fowler. The project will require a General Plan Amendment, requiring SB 18 consultation. The project area lies in T12S, R21E, Section 28. It is mapped on the Clovis 7.5' USGS quadrangle, which is the base for the attached map. Woodside Homes is the project proponent and the City of Clovis is the lead agency.

Work on the project would include grading of lots, installation of streets, trenching for utility lines (relatively shallow) and home construction. A recent pedestrian survey of the property failed to identify any resources related to Native American use or occupation of the property.

SB 18 establishes responsibilities for local governments to contact, provide notice to, refer plans to, and consult with tribes. The provisions of SB 18 apply only to city and county governments and not to other public agencies. The following list briefly identifies the contact and notification responsibilities of local governments, in sequential order of their occurrence.

Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code §65352.3).

If you have questions, need additional information, or wish to comment, please contact me at the address provided below, or call me at (916)283-5238 or email at peakinc@surewest.net. We are consultants, not decision makers, on the project, but we can forward your message to the appropriate contacts.

Sincerely,
Robert A. Gerry
Robert A. Gerry
Consulting Archeologist
Peak & Associates, Inc.
peakinc@surewest.net

Enclosed: project area map

APPENDIX 4

Site Records

*Resource Name or #: 5137 E. Teague Avenue, Clovis

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** X **Unrestricted** ***a. County:** Fresno

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Clovis **Date:** 1964 (1981) **T** 12S;**R** 20E; NW ¼ **of** SW ¼ **of Sec** 28 **;** M.D.B.M.

c. Address: 5137 E. Teague Avenue City: Clovis Zip: 93619-8689

d. UTM: Zone: 10 ; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 383 Feet. The resource is located at 5137 E. Teague Avenue, approximately 0.15 miles east of the intersection of North Sunnyside Avenue and East Teague Avenue.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The resource consists of two buildings; and single-family residence and a barn. The single-family residence is rectangular shaped, one and one-half story with a steeply pitched gable roof. The roof eaves are close and the rafter tails are exposed. The roof is covered with asphalt shingles. The siding is stucco. Windows are both fixed and double sash, divided horizontally. They are enclosed with a plain slip sill. Doors are solid wood.

The barn is rectangular shaped, single story, with a gable roof. The roof is covered with galvanized sheet metal and the sides are covered with vertical board and batten wood siding.

The single-family residence was constructed in 1936 according to Fresno County Assessor Office records. In form, it most closely fits the Gable-Front Family of the National Style that was popular nationwide between 1850 and 1930 (McAlester 2017:34-47). The design of the residence at 5137 E, Teague Avenue, Clovis was apparently inspired by the so-called Cape Cod shape home associated with the Colonial Revival movement (McAlester 2017:137).

***P3b. Resource Attributes:** (List attributes and codes) HP2 – Single-family property

***P4. Resources Present:** **X** Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) View looking southeast of the west and north facing facades of the residence. 4-30-19. Acc. #201904fr2995

***P6. Date Constructed/Age and Sources:** X Historic ☐Prehistoric ☐Both

Built in 1936 according to Fresno County Assessor Office records.

***P7. Owner and Address:**

Unknown

***P8. Recorded by:** (Name, affiliation, and address) Michael Lawson, Peak & Associates, Inc. 3941 Park Drive Suite 20 #329, El Dorado Hills, CA 95762

***P9. Date Recorded:** 4-30-2019

***P10. Survey Type:** (Describe)

Complete, Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Cultural Resource Assessment of the Teague and Fowler Properties, City of Clovis, Fresno County, California.* Peak & Associates, Inc. 2019

***Attachments:** ☐NONE X Location Map X Sketch Map X Continuation Sheet X Building, Structure, and Object ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Z

*Resource Name or # (Assigned by recorder) 5137 E. Teague Avenue, Clovis

B1. Historic Name:
B2. Common Name:
B3. Original Use: Single-family residence B4. Present Use: Same
*B5. Architectural Style: National, Gable-Front Family
*B6. Construction History: (Construction date, alterations, and date of alterations) 1936, no obvious alterations.

*B7. Moved? X No ☐Yes ☐Unknown Date: Original Location:
*B8. Related Features: Barn to south constructed at a later date than residence.

B9a. Architect: Unknown b. Builder: Unknown
*B10. Significance: Theme: Residential architecture Area: Great Central Valley, California
Period of Significance: 1900 - 1968 Property Type: Single-family Applicable Criteria: a - d
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The residential building dates to 1936 and is a relatively common Gable-Front Family subtype of the National Style in design. The date of the construction of the barn is between 1964 and 1981, so the two buildings are not unified by date or style elements. There is no apparent association with the complex and important individuals or events in history. This is not an uncommon style of building for the Depression era, and provide no further understanding or research value for the history of the region. There are no archeological values associated with the buildings. The building complex does not meet the criteria of the California Register of Historical Resources as important site.

B11. Additional Resource Attributes: (List attributes and codes)

*B12. References: County of Fresno, Tax Assessors Office

B13. Remarks:

*B14. Evaluator: Melinda Peak

*Date of Evaluation: May, 2019

(This space reserved for official comments.)

A) View looking northeast of the west and south facing facades. April 30, 2019. Acc. #201904fr2885

B) View looking north with the south facing façade of the residence. April 30, 2019. Acc. #201904fr2994

C) View looking southwest of the east and north facing facades. April 30, 2019. Acc. #201904fr2997

D) View looking west of the east facing facade. April 30, 2019. Acc. #201904fr2998

E) View looking northwest of the south and east facing facades of the barn. April 30, 2019. Acc. #201904fr2993

F) View looking southeast of the north and west facing facades of the barn. April 30, 2019. Acc. #201904fr2985

G) View looking north of the south facing facade of the barn. April 30, 2019. Acc. #201904fr2992

H) View of siding and window along the west facing facade of the barn. April 30, 2019. Acc. #201904fr2990


RESIDENCE
BARN
- TRUE NORTH
SCALE
10 fEET

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

AGENDA ITEM NO. 4.

Page 9 **of** 9 ***Resource Name or #:** 5137 E. Teague Avenue, Clovis

***Map Name:** Clovis, Calif. ***Scale:** 1:24,000 ***Date of Map:** 1964 (1981)

DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 of 8 *Resource Name or #: 5261 E. Teague Avenue, Clovis

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** X **Unrestricted** ***a. County:** Fresno
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Clovis **Date:** 1964 (1981) **T** 12S;**R** 20E; NE ¼ **of** SW ¼ **of Sec** 28 **;** M.D.B.M.
c. Address: 5161 E. Teague Avenue City: Clovis Zip: 93619-8689
d. UTM: Zone: 10; mE/ mN (G.P.S.)
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 385 Feet. The resource is located at 5261 East Teague Avenue approximately 0.25 miles east of the intersection of North Sunnyside Avenue and East Teague Avenue.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The resource consists of a single-family residence and two outbuildings. The single-family residence is irregular shaped, single story with a cross hipped roof. The eaves are wide and enclosed with a plain soffit. The roof is covered with asphalt shingles and the sides are covered with horizontal wood boards. Windows are both fixed and double sash divided vertically.

Outbuilding #1 is located to the east of the single-family residence and is rectangular shaped, single story with a low-pitched gable roof with exposed rafter tails. The roof is covered with asphalt shingles and the sides are covered with horizontal wood boards. Windows are double sash divided vertically and there is a plain wood door on the south facing façade.

Outbuilding #2 is located to the south of the single-family residence. It is rectangular shaped, two story with a moderately pitched gable roof. Along the west facing side a single-story addition has a shed roof with two bays and is used as a double garage.

The single-family residence was constructed in 1952 according to Fresno County Assessor Office records. It is a Crossed Hipped Roof variant of a Ranch Style home, a common style for Ranch Style homes from between 1935-75. About 40 percent of the Ranch Style homes are Cross Hipped Roof subtypes (McAlester 2017:596-611).

***P3b. Resource Attributes:** (List attributes and codes) HP2 – Single-family property
***P4. Resources Present:** **X** Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) View looking southwest of the north facing façade of the residence. 4/30/19. Acc. #201904fr3012

***P6. Date Constructed/Age and Sources:** X Historic
☐Prehistoric ☐Both
Built in 1952 according to Fresno County Assessor Office records.

***P7. Owner and Address:**
Unknown

***P8. Recorded by:** (Name, affiliation, and address) Michael Lawson, Peak & Associates, Inc. 3941 Park Drive Suite 20 #329, El Dorado Hills, CA 95762

***P9. Date Recorded:** 4-30-2019
***P10. Survey Type:** (Describe)
Complete, Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Cultural Resource Assessment of the Teague and Fowler Properties, City of Clovis, Fresno County, California.* Peak & Associates, Inc. 2019

***Attachments:** ☐NONE X Location Map X Sketch Map X Continuation Sheet X Building, Structure, and Object ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art ☐Artifact Record ☐Photograph Record ☐ Other (List):

DPR 523A (1/95) *Required information

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) **5261 E. Teague Avenue, Clovis**

B1. Historic Name:
B2. Common Name:
B3. Original Use: Single-family residence B4. Present Use: Same

***B5. Architectural Style:** Ranch, Crossed-Hipped Roof variant

***B6. Construction History:** (Construction date, alterations, and date of alterations) 1952, date of alterations (new siding, roofing, windows) unknown.

***B7. Moved? X No ☐Yes ☐Unknown Date: Original Location:**

***B8. Related Features:** Two outbuildings located to east and south of residence.

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** Residential architecture **Area:** Great Central Valley, California
Period of Significance: 1900 - 1968 **Property Type:** Single-family **Applicable Criteria:** a - d
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The residential building relates to later period use of the property, after 1950, and is an essentially modern feature. There is no apparent association with important individuals or events in history. The residence and outbuildings are not uncommon styles of Post-World War II buildings and provide no further understanding or research value for the history of the region. There are no archeological values associated with the buildings. The resource does not meet the criteria of the California Register of Historical Resources as an important site.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** County of Fresno, Tax Assessors Office

B13. Remarks:

***B14. Evaluator:** Melinda Peak

***Date of Evaluation:** May, 2019

(This space reserved for official comments.)

A) View looking south of the north facing façade of the residence. April 30, 2019. Acc. #201904fr3012

B) View looking southeast of the north facing façade. April 30, 2019. Acc. #201904fr3014

C) View looking southwest of the northwest corner of the residence. April 30, 2019. Acc. #201904fr3013

D) View looking southeast of the cross-gable section of the residence. April 30, 2019. Acc. #201904fr3015

E) View looking south of the north facing side of Outbuilding #1. April 30, 2019. Acc. #201904fr3011

F) View looking north of the south facing side of Outbuilding #1. April 30, 2019. Acc. #201904fr3010

G) View looking southwest of the north and east facing sides of Outbuilding #2. April 30, 2019. Acc. #201904fr3009

H) View looking south of the north facing side of Outbuilding #2. April 30, 2019. Acc. #201904fr3008

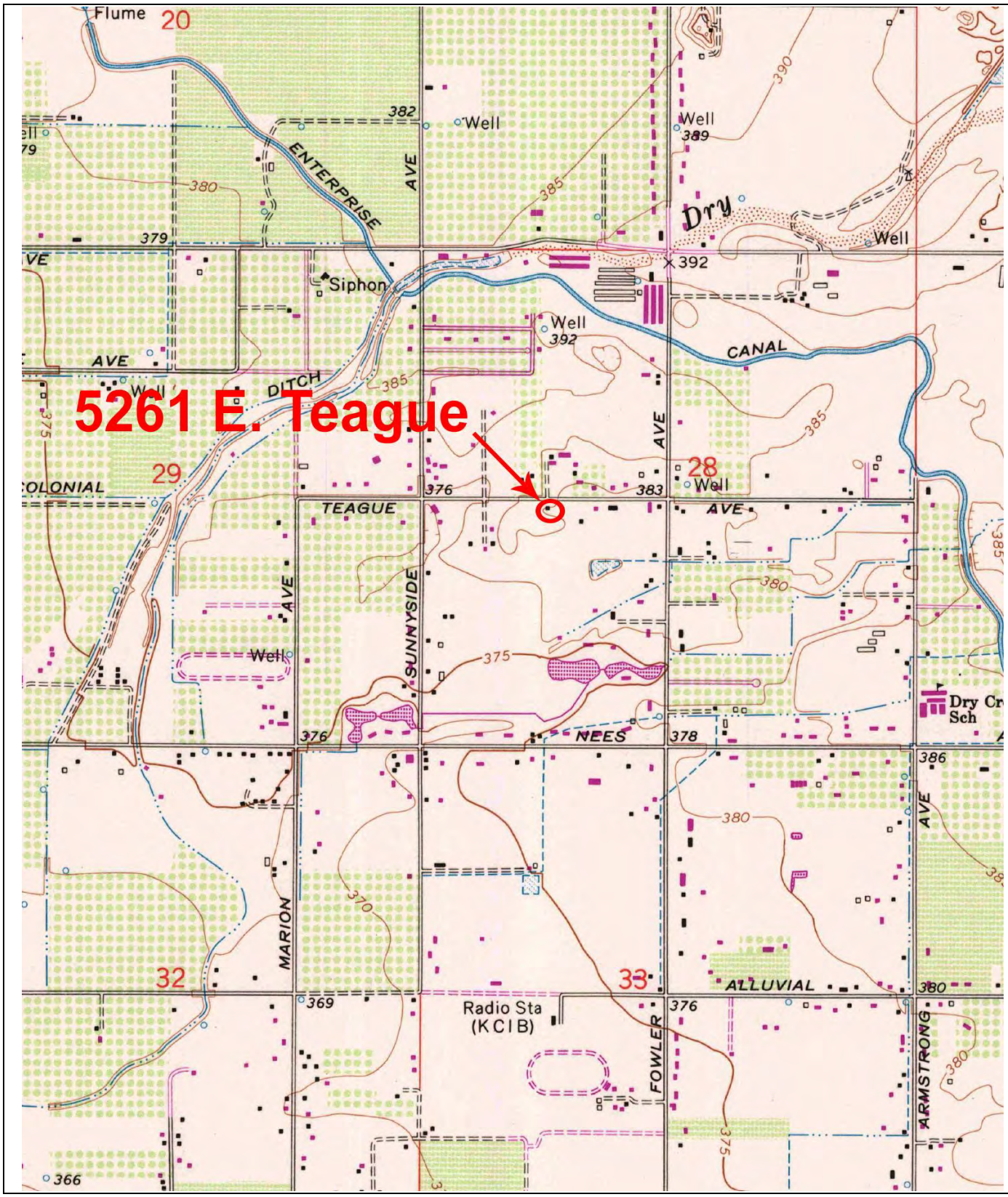

RESIDENCE
OUTBUILDING #1
OUTBUILDING #2
TRUE NORTH
SCALE
20 FEET

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

AGENDA ITEM NO. 4.

Page 8 **of** 8 ***Resource Name or #:** 5261 E. Teague Avenue, Clovis
***Map Name:** Clovis, Calif. ***Scale:** 1:24,000 ***Date of Map:** 1964 (1981)



DPR 523J (1/95) *Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

*Resource Name or #: 8210 N. Sunnyside Avenue, Clovis

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** X **Unrestricted** ***a. County:** Fresno

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Clovis **Date:** 1964 (1981) **T** 12S;**R** 20E; SW ¼ **of** SW ¼ **of Sec** 28 **;** M.D.B.M.

c. Address: 8210 N. Sunnyside Avenue City: Clovis Zip: 93619-8689

d. UTM: Zone: 10; mE/ mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:377 Feet. The resource is located at 8210 North Sunnyside Avenue approximately 0.3 miles south of the intersection of North Sunnyside Avenue and East Teague Avenue.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The resource consists of a single-family home and two outbuildings. The single-family residence is rectangular shaped, single story, with a cross hipped roof. The eaves are wide and enclosed with a plain soffit. The roof is covered with wood shingles and the sides are covered with horizontal wood boards. Windows are both fixed and double and triple sash divided vertically.

Outbuilding #1 is irregular shaped, single story and is located to the east of the single-family residence. Outbuilding #1 consists of two buildings that abut one another. The western portion has a gable roof covered with asphalt shingles with sides covered with stucco. The eastern portion is shorter in length, has a flat roof covered with rolled asphalt roofing and has sides covered with horizontal wood boards.

Outbuilding #2 is rectangular shaped, single story and is located to the east of Outbuilding #1 and the single-family residence. It has a flat roof covered with rolled asphalt roofing and the sides, except for the upper couple of feet, are enclosed with horizontal wood boards.

The single-family residence was constructed in 1960 according to Fresno County Assessor Office records. It is a Crossed Hipped Roof variant of a Ranch Style home, a common style for Western homes from between 1935-75. About 40 percent of the Ranch Style homes are Cross Hipped Roof subtypes (McAlester 2017:596-611).

***P3b. Resource Attributes:** (List attributes and codes) HP2 – Single-family property

***P4. Resources Present:** **X** Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) View looking east of the west facing façade of the residence. 4-30-19. Acc. #201904fr3012

***P6. Date Constructed/Age and Sources:** X Historic ☐Prehistoric ☐Both
Built in 1960 according to Fresno County Assessor Office records.

***P7. Owner and Address:**
Unknown

***P8. Recorded by:** (Name, affiliation, and address) Michael Lawson, Peak & Associates, Inc. 3941 Park Drive Suite 20 #329, El Dorado Hills, CA 95762

***P9. Date Recorded:** 4-30-2019

***P10. Survey Type:** (Describe)
Complete, Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") *Cultural Resource Assessment of the Teague and Fowler Properties, City of Clovis, Fresno County, California.* Peak & Associates, Inc. 2019

***Attachments:** ☐NONE X Location Map X Sketch Map X Continuation Sheet X Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) **8210 N. Sunnyside Avenue, Clovis**

B1. Historic Name:
B2. Common Name:
B3. Original Use: Single-family residence B4. Present Use: Same

***B5. Architectural Style:** Ranch, Crossed-Hipped Roof variant

***B6. Construction History:** (Construction date, alterations, and date of alterations) 1960, date of alterations (new siding, roofing, windows) unknown.

***B7. Moved? X No ☐Yes ☐Unknown Date: Original Location:**

***B8. Related Features:** Two outbuildings located east of the residence.

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** Residential architecture **Area:** Great Central Valley, California
Period of Significance: 1900 - 1968 **Property Type:** Single-family **Applicable Criteria:** a - d
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The residential building relates to later period use of the property, after 1960, and is an essentially modern feature. There is no apparent association with important individuals or events in history. The residence and outbuildings are not uncommon styles of Post-World War II buildings and provide no further understanding or research value for the history of the region. There are no archeological values associated with the buildings. The resource does not meet the criteria of the California Register of Historical Resources as an important site.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** County of Fresno, Tax Assessors Office

B13. Remarks:

***B14. Evaluator:** Melinda Peak

***Date of Evaluation:** May, 2019

(This space reserved for official comments.)

A) View looking east of the west facing facade of the residence, North Sunnyside Avenue. April 30, 2019. Acc. #201904fr3021

B) View looking east of the west facing facade of the residence. April 30, 2019. Acc. #201904fr3022

C) View looking northwest of the south and east facing facades of Outbuilding #1 April 30, 2019. Acc. #201904fr3021

D) View looking northwest with Outbuilding #2 (left) and Outbuilding #1 (right). April 30, 2019. Acc. #201904fr3005


RESIDENCE
OUTBUILDING #2
OUTBUILDING #1
TRUE NORTH
SCALE
12 FEET

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

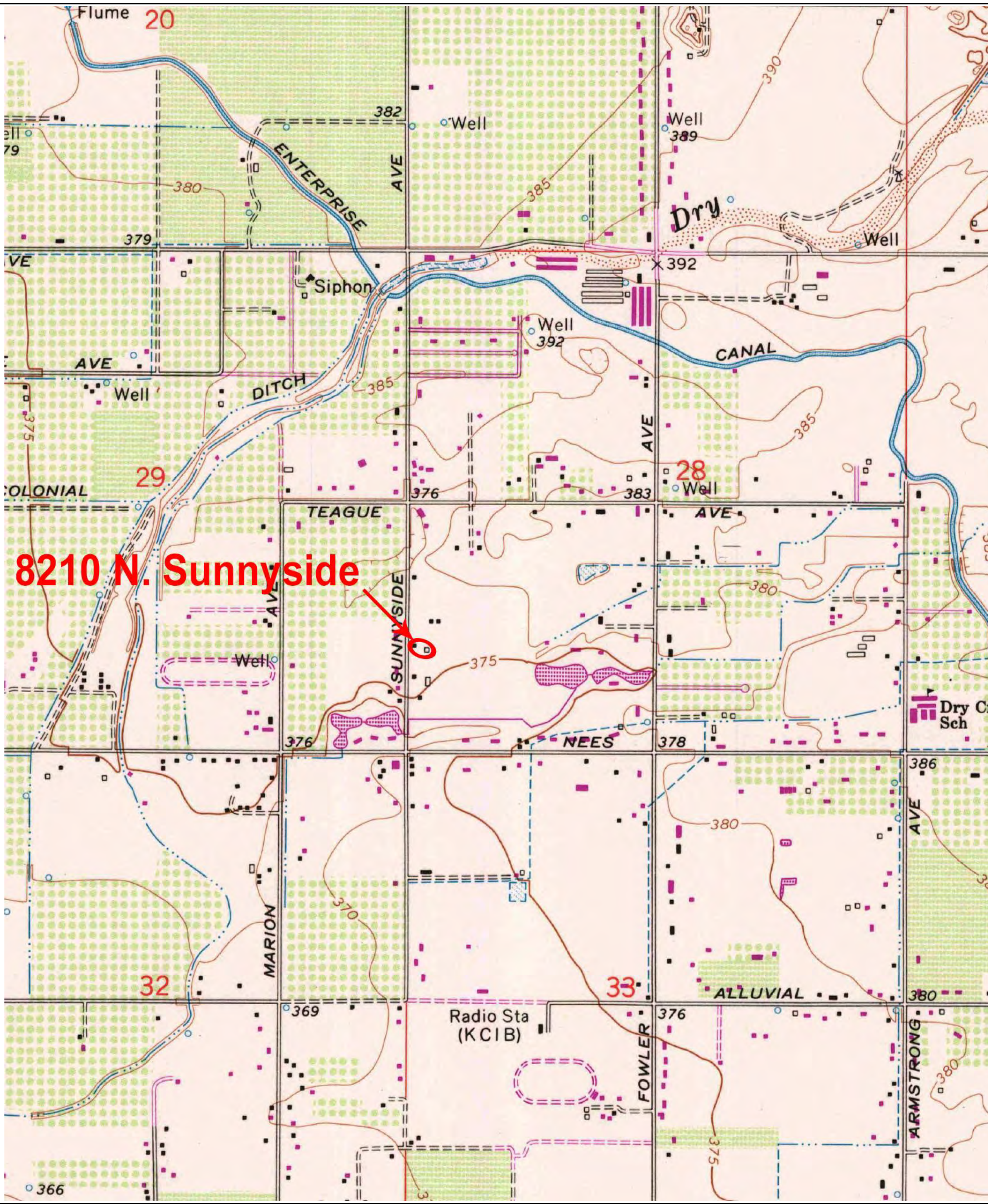
LOCATION MAP

Primary #
HRI#
Trinomial

AGENDA ITEM NO. 4.

***Resource Name or #:** 8210 N. Sunnyside Avenue, Clovis

***Map Name:** Clovis, Calif. ***Scale:** 1:24,000 ***Date of Map:** 1964 (1981)



Traffic Impact Study

Proposed McKenney Assemblage

Clovis, California

Prepared For:

Woodside 06N, LP
9 River Park Place East, Suite 430
Fresno, California 93720

Date:

February 4, 2020

Job No.:

19-046.01

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EXECUTIVE SUMMARY

This report presents the results of a traffic impact study for a proposed single-family residential development in Clovis, California. This report supersedes a previous Traffic Impact Study report dated September 18, 2019 and addresses comments received from the City of Clovis and County of Fresno. This analysis focuses on the anticipated effect of vehicle traffic resulting from the Project. The traffic impact study was performed in general conformance with the *City of Clovis Traffic Impact Study Guidelines* approved August 25, 2014.

The proposed McKenney Assemblage project will be located on the south side of Teague Avenue near Purdue Avenue in Clovis, California. The project includes 74 single-family residences with access via a local street connecting to Teague Avenue near Purdue Avenue. In the near-term condition, an emergency access will connect to Sunnyside Avenue but will not be accessible to the public. In the future, consideration may be given to converting the emergency access to a public street.

This report includes traffic counts and analyses of the following intersections:

1. Teague Avenue / Sunnyside Avenue
2. Teague Avenue / Fowler Avenue
3. Nees Avenue / Sunnyside Avenue
4. Nees Avenue / Fowler Avenue

This report includes analysis of the following road segments:

1. Fowler Avenue between Teague and Nees Avenues
2. Sunnyside Avenue between Teague and Nees Avenues

The Memorandum of Understanding (MOU) dated July 10, 2018 between the City of Clovis and County of Fresno also requires that traffic signal warrants analyses be performed at the following intersections:

A. Shepherd Avenue / Sunnyside Avenue
B. Shepherd Avenue / Fowler Avenue
C. Teague Avenue / Fowler Avenue
D. Nees Avenue / Fowler Avenue
E. Teague Avenue / Sunnyside Avenue
F. Nees Avenue / Armstrong Avenue

Intersections B and D have already signalized. The City has already determined that traffic signals are warranted at intersections A and F and has either conditioned other projects to construct the signals (Shepherd/Sunnyside Avenues) or obtained CMAQ funding to construct signals (Nees/Armstrong Avenues, approximately 2022). Therefore, further analyses as described in the MOU are not needed and are not included in this study for those intersections.

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours were analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term With Project Conditions (includes approved projects)
- Cumulative Year 2040 With-Project Conditions

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the project, and to analyze the traffic conditions that are expected to occur in the future. The conclusions of the study are summarized in the following sections.

Existing Conditions

The study intersections are currently operating at acceptable levels of service with calculated 95^{th}-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project. The study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. peak hour. The other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues as described in this report is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. peak hour and LOS B during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Cumulative Year 2040 With-Project Conditions

The following study intersections are expected to operate below (i.e., worse than) the target LOS, with excessive queues that accompany the long delays:

- Teague Avenue / Fowler Avenue
- Nees Avenue / Sunnyside Avenue
- Nees Avenue / Fowler Avenue

The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F.

The intersection of Sunnyside and Teague Avenues is expected to operate at acceptable levels of service. The Sunnyside Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The intersection of Teague and Fowler Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS C during the a.m. peak hour and LOS D during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues would require additional lanes to operate at acceptable levels of service. With the following lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues.

PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

Mr. Matt Smith
Woodside 06N, LP
9 River Park Place East, Suite 430
Fresno, California 93720

February 4, 2020

Subject: Revised Traffic Impact Study
Proposed McKenney Assemblage
South of Teague Avenue Between Sunnyside and Fowler Avenues
Clovis, California

Dear Mr. Smith:

Introduction

This report presents the results of a traffic impact study for a proposed single-family residential development in Clovis, California. This report supersedes a previous Traffic Impact Study report dated September 18, 2019 and addresses comments received from the City of Clovis and County of Fresno. This analysis focuses on the anticipated effect of vehicle traffic resulting from the Project. The traffic impact study was performed in general conformance with the *City of Clovis Traffic Impact Study Guidelines* approved August 25, 2014.

Project Description

The proposed project will be located on the south side of Teague Avenue near Purdue Avenue in Clovis, California. The project includes 74 single-family residences with access via a local street connecting to Teague Avenue near Purdue Avenue. In the near-term condition, an emergency access will connect to Sunnyside Avenue but will not be accessible to the public. In the future, consideration may be given to converting the emergency access to a public street.

A site vicinity map is presented in the attached Figure 1 following the text of this report and illustrates the general vicinity of the assumed residential development described above. A site plan is presented in Figure 2.

Study Area and Time Period

This report includes analysis of the following intersections:

1. Teague Avenue / Sunnyside Avenue
2. Teague Avenue / Fowler Avenue
3. Nees Avenue / Sunnyside Avenue
4. Nees Avenue / Fowler Avenue

This report includes analysis of the following road segments:

1. Fowler Avenue between Teague and Nees Avenues
2. Sunnyside Avenue between Teague and Nees Avenues

The Memorandum of Understanding (MOU) dated July 10, 2018 between the City of Clovis and County of Fresno also requires that traffic signal warrants analyses be performed at the The Memorandum of Understanding (MOU) dated July 10, 2018 between the City of Clovis and County of Fresno also requires that traffic signal warrants analyses be performed at the following intersections:

A. Shepherd Avenue / Sunnyside Avenue
B. Shepherd Avenue / Fowler Avenue
C. Teague Avenue / Fowler Avenue
D. Nees Avenue / Fowler Avenue
E. Teague Avenue / Sunnyside Avenue
F. Nees Avenue / Armstrong Avenue

Intersections B and D have already signalized. The City has already determined that traffic signals are warranted at intersections A and F and has either conditioned other projects to construct the signals (Shepherd/Sunnyside Avenues) or obtained CMAQ funding to construct signals (Nees/Armstrong Avenues, approximately 2022). Therefore, further analyses as described in the MOU are not needed and are not included in this study for those intersections.

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours are analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term With Project Conditions (includes approved projects)
- Cumulative Year 2040 With-Project Conditions

Lane Configurations and Intersection Control

The existing lane configurations and intersection control at the study intersections are illustrated in Figure 3, Existing Lane Configurations and Intersection Control.

City of Clovis General Plan

The City of Clovis General Plan designates the streets near the study area as follows:

- Sunnyside Avenue: Collector street with two lanes in both the 2035 condition and the ultimate condition.
- Fowler Avenue: Arterial street with two lanes in the 2035 condition and four lanes in the ultimate condition. City staff has indicated that the maximum ultimate lane configuration may include a TWLTL or a median along the center of the roadway.
- Teague Avenue: Collector street between Sunnyside and Armstrong Avenues with two lanes in both the 2035 condition and the ultimate condition. City staff has

indicated that the maximum ultimate lane configuration may include a TWLTL along the center of the roadway. Teague Avenue is designated as a local street with two lanes west of Sunnyside Avenue in all scenarios.

- Nees Avenue: Arterial street with four lanes in both the 2035 condition and the ultimate condition.

Existing Traffic Volumes

Existing traffic volumes were determined by performing manual turning movement counts at the study intersections between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a weekday while school was in session. The traffic count data sheets are presented in Appendix A and include the dates the counts were performed. The existing peak-hour turning movement volumes are presented in Figure 4, Existing Peak-Hour Traffic Volumes.

Project Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, were used to estimate the number of trips anticipated to be generated by the Project. Table 1 presents the trip generation information.

Table 1
Project Trip Generation

Land Use	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Single-Family Detached Housing ITE Code (210)	74	9.44	700	0.75	25:75	14	42	56	0.99	63:37	47	27	74

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

Project Trip Distribution and Assignment

The Project trips were distributed to the adjacent road network considering the results of select zone analyses performed by the Fresno Council of Governments (COG) using the Fresno County travel model as presented in the Traffic Analyses report dated February 13, 2018 for the Dry Creek Preserve Master Plan, engineering judgment considering the distribution of existing traffic volumes, the locations and types of streets in the study area, Peters Engineering Group's familiarity with the Project vicinity, and complementary land uses in the Project vicinity. The percentage distribution of Project trips is presented in Figure 5, Project Trip Distribution Percentages. Project traffic volumes at the study intersections are presented in Figure 6A, Peak-Hour Project Traffic Volumes. An estimate of the project trips that would likely occur at the site access roads if the emergency vehicle access connecting to Sunnyside Avenue were to become a public street at some time in the future is presented in Figure 6B, Project Trips at Site Access Roads – Potential Future Condition.

Existing-Plus-Project Traffic Volumes

Existing-Plus-Project traffic volumes are presented in Figure 7, Existing-Plus-Project Peak-Hour Traffic Volumes. The values in Figure 7 were determined by adding the values in Figures 4 and 6.

Approved Projects

Projects that have been approved but are not yet complete are included in the analyses to assess cumulative impacts. The following projects are considered in the analyses:

- Tract 6154: 95 single-family residential lots located northwest of the intersection of Fowler and Teague Avenues
- Tract 6200: 586 single-family residential lots located northeast of the intersection of Clovis and Shepherd Avenues

Near-Term With-Project Traffic Volumes

Peak-hour near-term with-Project traffic volumes are presented in Figure 8, Near-Term With-Project Peak-Hour Traffic Volumes, and include the trip generation estimates presented in Table 2.

Table 2
Approved Projects Trip Generation

Project	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Tract 6154	95	9.44	898	0.75	25:75	18	54	72	0.99	63:37	60	35	95
Tract 6200	586	9.44	5,532	0.75	25:75	110	330	440	0.99	63:37	366	215	581

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

Cumulative Year 2040 Traffic Volumes

Cumulative traffic volumes for the year 2040 were determined using the Fresno Council of Governments' (COG) Fresno County travel model and the *Increment Method* approved by the COG. The base year and year 2035 travel model output used in the analyses are present in Appendix B. The traffic volumes were extrapolated to the year 2040.

Future turning movements were projected based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled *"Highway Traffic Data for Urbanized Area Project Planning and Design."* The approved projects traffic volumes were included in the resulting turning movements. In addition, trips that are likely to be generated by approximately 88 single-family residences on approximately 38.45 acres located on the east side of Fowler Avenue south of Teague Avenue (Fowler Site) are included in the year 2040 cumulative analyses. This site is considered to be the third developable area within the Dry Creek Preserve. Trip generation calculations are presented in Table 3 for the Fowler Site.

Table 3
Fowler Site Trip Generation

Project	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Fowler Site	88	9.44	832	0.75	25:75	16	50	66	0.99	63:37	55	33	88

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

Cumulative with-Project traffic volumes are presented in Figure 9, Cumulative With-Project Peak-Hour Traffic Volumes.

Significance Criteria

The Transportation Research Board *Highway Capacity Manual*, 2010, (HCM2010) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 4 and 5. Automobile mode LOS characteristics for road segments based on HCM2010 methods were obtained from the City of Clovis General Plan Update and are presented in Table 6.

Table 4
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual,* Transportation Research Board, 2010

Table 5
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is low. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is low. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Table 6
Level of Service Criteria For Roadway Segments

Classification	Median Type	Number of Lanes	Peak Hour LOS Volume Thresholds		
			LOS C	LOS D	LOS E
Expressway	Raised Median	6	3,290	6,120	6,400
		4	2,080	4,060	4,260
Arterial	Raised Median	6	3,060	5,390	5,680
		4	1,950	3,580	3,780
		2	860	1,770	1,880
	TWLTL	4	1,840	3,400	3,590
		2	810	1,680	1,790
	Undivided	4	1,320	2,500	2,640
		2	570	1,230	1,310
Collector	TWLTL	4	1,840	3,400	3,590
		2	810	1,680	1,790
	Undivided	4	1,320	2,500	2,640
		2	570	1,230	1,310
Rural Arterial	Divided	4	1,950	3,580	3,780
	Undivided	2	570	1,230	1,310
Rural Collector/Local	Undivided	2	570	930	1,000

Reference: *General Plan Development Code Update Draft PEIR*, City of Clovis

The City of Clovis General Plan requires a minimum LOS D at intersections under the City's jurisdiction. The *City of Clovis Traffic Impact Study Guidelines* dated August 25, 2014 states the following:

"All City intersections and roadway segments shall operate at a LOS D or better under the near-term conditions, unless a finding of overriding consideration was adopted in the General Plan EIR. Under long-term conditions, all City intersections and roadway segments shall operate at a LOS D or better, except for the roadway segments adopted in the General Plan EIR to operate at LOS E or F. Exceptions to this standard may be allowed on a case by case basis where lower levels of service would result in other public benefits, such as:

a) Preserving agriculture or open space land

b) Preserving the rural/historic character of a neighborhood

c) Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts

d) Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders

e) Where right-of-way constraints would make capacity expansion infeasible"

The document *Guidelines for the Preparation of Traffic Impact Studies Within County of Fresno* dated August 2012 (County Guidelines) identifies LOS A, B, and C as acceptable at County locations and LOS D, E, and F as unacceptable. LOS D is considered acceptable within the sphere of influence (SOI) of the City of Fresno or the City of Clovis. The County Guidelines state:

A project is considered to have a significant impact if its traffic, when added to the traffic of the without-project condition, would cause any of the changes in traffic conditions described below.

1) On roadway segments:

a) Cause a roadway that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR

b) Cause the V/C ratio (on a directional peak hour basis) to increase by more than 0.05 on a roadway that is already operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding V/C ratio increase is greater than 0.05.

2) At signalized intersections:

a) Cause an intersection that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR

b) Cause the average delay to increase by more than 5.0 seconds at a signalized intersection that is operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding delay increase is greater than 5.0 seconds.

3) *At unsignalized intersections, including all-way stop, minor approach stop, and roundabouts:*

   a) *Cause a movement or approach that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR*

   b) *Cause the average delay to increase by more than 5.0 seconds on a movement or approach that is operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding delay increase is greater than 5.0 seconds.*

4) *On roadways with traveled way width of less than 18 feet (essentially one-lane roadways assuming a minimum of 8 feet per travel direction for vehicle width and edge-of-traveled-way clearance, plus 2 feet clearance between vehicles traveling in opposite directions.)*

   a) *Cause a roadway that already carries 100 vehicles per day (vpd) or less to carry more than 100 vpd; OR*

   b) *Cause a roadway that already carries more than 100 vpd to carry any additional traffic.*

The County Guidelines also contain the following statement: "*Although queuing is not included as a significance criterion, the TIS shall include a queuing analysis when appropriate, particularly (but not limited to) left-turn pockets at signalized intersections. The TIS shall include recommendations to correct excessive queuing, blocking, operational problems, or storage deficiencies related to queuing.*"

Vehicle Miles Travelled (VMT)

The select zone analysis performed by COG includes an estimate of the number of vehicle miles travelled (VMT). The modeling revealed that the average length of all trips generated by residential developments within the Dry Creek Preserve is expected to range from 6.6 miles to 7.1 miles. For comparison purposes, the countywide average for all trips, using the same model run, is 8.19 miles.

The City of Clovis has not yet developed significance criteria related to VMT. Therefore, these values are presented for information purposes only.

Intersection Analyses

The intersection levels of service (LOS) were determined using the computer program Synchro 9, which is based on HCM2010 procedures for calculating levels of service. The intersection analysis sheets are presented in Appendix C.

Tables 7 through 10 present the results of the intersection analyses. For signalized intersections and all-way stop controlled intersections, the overall intersection LOS and the average delay per vehicle are presented. Two two-way stop-controlled intersections, the HCM does not define an overall intersection LOS; therefore, the average delay and LOS for the approach with the greatest delay is presented. Delays and LOS worse than the target LOS are presented in bold type.

Table 7
Intersection LOS Summary – Existing Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	11.0	B	9.9	A
Teague / Fowler	Two-way stop	15.6	C	18.1	C
Nees / Sunnyside	All-way stop	29.9	D	16.2	C
Nees / Fowler	Traffic Signals	24.6	C	23.2	C

Table 8
Intersection LOS Summary – Existing-Plus-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	11.1	B	10.2	B
Teague / Fowler	Two-way stop	16.1	C	18.4	C
Nees / Sunnyside	All-way stop	32.8	D	16.7	C
Nees / Fowler	Traffic Signals	25.1	C	23.7	C

Table 9
Intersection LOS Summary – Near-Term With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	13.2	B	12.5	B
Teague / Fowler	Two-way stop	19.1	C	25.9	D
Nees / Sunnyside	All-way stop	**61.1**	**F**	28.8	D
Nees / Fowler	Traffic Signals	31.9	C	30.3	C

Table 10
Intersection LOS Summary – Year 2040 Cumulative With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	21.0	C	23.0	C
Teague / Fowler	Two-way stop	**150.5**	**F**	**219.3**	**F**
Nees / Sunnyside	All-way stop	**>300**	**F**	**>300**	**F**
Nees / Fowler	Traffic Signals	**93.2**	**F**	**87.8**	**F**

The results of the intersection operational analyses include an estimate of the 95th-percentile queue lengths. The existing storage capacity (where applicable) and the calculated 95th-

percentile queue lengths are presented in Table 11. The storage capacities reported in Table 11 are based on measurements from available aerial photographs. Calculated 95th-percentile queue lengths that exceed the storage capacity by at least 25 feet (the average storage space for one vehicle) or that are considered to be excessive are indicated in bold type.

Table 11
Intersection Queuing Summary

Intersection Approach	Existing Storage Capacity (feet)	Calculated 95th-Percentile Queue Length (feet)							
		Existing		Existing Plus Project		Near-Term With-Project		Year 2040 With-Project	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Teague / Sunnyside									
Eastbound LTR	*	3	0	3	0	3	0	23	13
Westbound LTR	*	5	3	8	5	10	8	40	30
Northbound LTR	*	0	0	0	0	0	0	0	0
Southbound LTR	*	0	0	0	0	0	3	3	3
Teague / Fowler									
Eastbound LTR	*	3	5	8	8	10	15	45	125
Westbound LTR	*	15	13	15	13	20	20	180	158
Northbound LTR	*	0	0	0	3	0	3	3	5
Southbound LTR	*	3	3	3	3	3	3	5	3
Nees / Sunnyside									
Eastbound L	90	**	**	**	**	**	**	**	**
Eastbound T	*	38	55	38	58	50	128	138	385
Eastbound TR	370	78	78	78	80	100	118	253	**543**
Westbound L	185+	3	3	3	3	3	3	10	13
Westbound TR	*	285	103	310	105	460	190	**>1,000**	**>1,000**
Northbound LT	*	60	55	63	60	85	128	**328**	**>1,000**
Northbound R	*	3	5	3	5	3	5	5	20
Southbound LTR	*	68	25	78	28	228	78	**703**	**480**
Nees / Fowler									
Eastbound L	235	34	57	34	57	35	63	138	**288**
Eastbound T	*	46	92	46	92	47	95	334	420
Eastbound TR	*	46	92	46	92	47	95	334	420
Westbound L	145	92	48	92	48	92	48	**214**	161
Westbound TR	*	191	143	191	146	197	161	**>1,000**	**>1,000**
Northbound L	250	142	159	142	159	152	186	**428**	**322**
Northbound T	*	136	311	137	321	153	426	333	890
Northbound R	*	0	0	0	0	0	0	0	10
Southbound L	100	50	55	52	55	62	61	**369**	**352**
Southbound TR	*	281	242	295	251	398	322	**965**	601

* Approximately ½ mile to the nearest major intersection.
** Limitations in the analysis technique prevent analysis of three lanes on the same approach.
\+ Connects to a TWLTL that provides a substantial amount of additional storage.

Road Segment Analyses

The road segment analyses were performed using the thresholds presented in Table 6. Tables 12 and 13 present the two-way peak-hour road segment volumes and the corresponding LOS based on the existing lane configurations. Levels of service below (i.e., worse than) the target LOS are presented in bold type.

Table 12
Level of Service Criteria For Roadway Segments - A.M. Peak Hour

Roadway	Classification	Existing Median Type	Existing Number of Lanes	Volume and LOS			
				Existing	Existing Plus Project	Near-Term With-Project	Year 2040 With-Project
Fowler Avenue (Between Teague and Nees)	Arterial	None	2	666 D	683 D	811 D	**1,271** **E**
Sunnyside Avenue (Between Teague and Nees)	Collector	None	2	252 C	269 C	432 C	874 D

Table 13
Level of Service Criteria For Roadway Segments - P.M. Peak Hour

Roadway	Classification	Existing Median Type	Existing Number of Lanes	Volume and LOS			
				Existing	Existing Plus Project	Near-Term With-Project	Year 2040 With-Project
Fowler Avenue (Between Teague and Nees)	Arterial	None	2	832 D	854 D	1,029 D	**1,667** **F**
Sunnyside Avenue (Between Teague and Nees)	Collector	None	2	211 C	233 C	455 C	961 D

Discussion of Analyses

Existing Conditions

The results of the analyses indicate that the study intersections are currently operating at acceptable levels of service with calculated 95th-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project.

The results of the analyses indicate that the study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. peak hour. The other study intersections will

continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. peak hour and LOS B during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Mitigated conditions are summarized in Tables 14 and 15. Mitigated intersection analysis sheets are attached.

Table 14
Mitigated Intersection LOS Summary – Near-Term With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Nees / Sunnyside	Signals	22.3	C	18.1	B

Table 15
Mitigated Intersection Queuing Summary – Near-Term With-Project Conditions

Intersection	95th-Percentile Queue Length (feet)	
Approach	A.M.	P.M.
Nees / Sunnyside		
Eastbound L	24	71
Eastbound TR	80	129
Westbound L	21	26
Westbound TR	290	257
Northbound L	112	90
Northbound TR	59	116
Southbound L	67	39
Southbound TR	193	101

Cumulative Year 2040 With-Project Conditions

The year 2040 cumulative with-Project conditions analyses are based on the assumption that the residential developments considered to be likely within the Dry Creek Preserve have been constructed and that 20 years of growth has occurred in the Clovis, Fresno, and Fresno County region as incorporated into the adopted Fresno County travel model. The analyses indicate that all of the study intersections, with the exception of the Teague Avenue / Sunnyside Avenue intersection, are expected to operate below (i.e., worse than) the target

LOS. Excessive queues would accompany the long delays. The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F. Sunnyside Avenue between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The improvements expected to result in an acceptable LOS at each of the impacted locations are described below.

The intersection of Teague and Fowler Avenues is expected to operate at LOS F during the a.m. and p.m. peak hours with the current two-way stop control and would require signalization to operate at acceptable levels of service. With signalization and the following minimum lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. and p.m. peak hours with the current all-way stop control and would require signalization to operate at acceptable levels of service. With signalization and the following minimum lane configurations the intersection would operate at LOS C during the a.m. peak hour and LOS D during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues is expected to operate at LOS F with the current signalization and lane configurations. The intersection would require additional lanes to operate at acceptable levels of service. With the following minimum lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan and to provide the required lanes at the intersection with Nees Avenue.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues presented in Table 17 as applicable.

Mitigated conditions are summarized in Tables 16 and 17. Mitigated intersection analysis sheets are presented in Appendix D.

Table 16
Mitigated Intersection LOS – Year 2040 Cumulative With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Fowler	Traffic Signals	12.9	B	12.0	B
	Roundabout	7.3	A	8.4	A
Nees / Sunnyside	Traffic Signals	30.2	C	42.7	D
Nees / Fowler	Traffic Signals	42.5	D	37.4	D

Table 17
Mitigated Intersection Queuing Summary - 2040 Cumulative With-Project Conditions

Intersection	95th-Percentile Queue Length (feet)	
Approach	A.M.	P.M.
Teague / Fowler		
Eastbound L	21	31
Eastbound TR	33	32
Westbound L	48	33
Westbound TR	49	40
Northbound L	30	63
Northbound TR	121	241
Southbound L	62	38
Southbound TR	193	178
Nees / Sunnyside		
Eastbound L	56	111
Eastbound TR	237	445
Westbound L	57	69
Westbound TR	373	300
Northbound L	201	387
Northbound TR	216	386
Southbound L	124	73
Southbound TR	431	492
Nees / Fowler		
Eastbound L	78	161
Eastbound TR	218	268
Westbound L	152	104
Westbound T	677	530
Westbound R	56	95
Northbound L	279	211
Northbound TR	136	288
Southbound L	298	212
Southbound TR	305	173

Conclusions and Recommendations

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the project, and to analyze the traffic conditions that are expected to occur in the future. The conclusions of the study are summarized in the following sections.

Existing Conditions

The study intersections are currently operating at acceptable levels of service with calculated 95th-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project. The study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. peak hour. The other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues as described in this report is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. peak hour and LOS B during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Cumulative Year 2040 With-Project Conditions

The following study intersections are expected to operate below (i.e., worse than) the target LOS, with excessive queues that accompany the long delays:

- Teague Avenue / Fowler Avenue
- Nees Avenue / Sunnyside Avenue
- Nees Avenue / Fowler Avenue

The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F.

The intersection of Sunnyside and Teague Avenues is expected to operate at acceptable levels of service. The Sunnyside Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The intersection of Teague and Fowler Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS C during the a.m. peak hour and LOS D during the p.m. peak hour:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues would require additional lanes to operate at acceptable levels of service. With the following lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues.

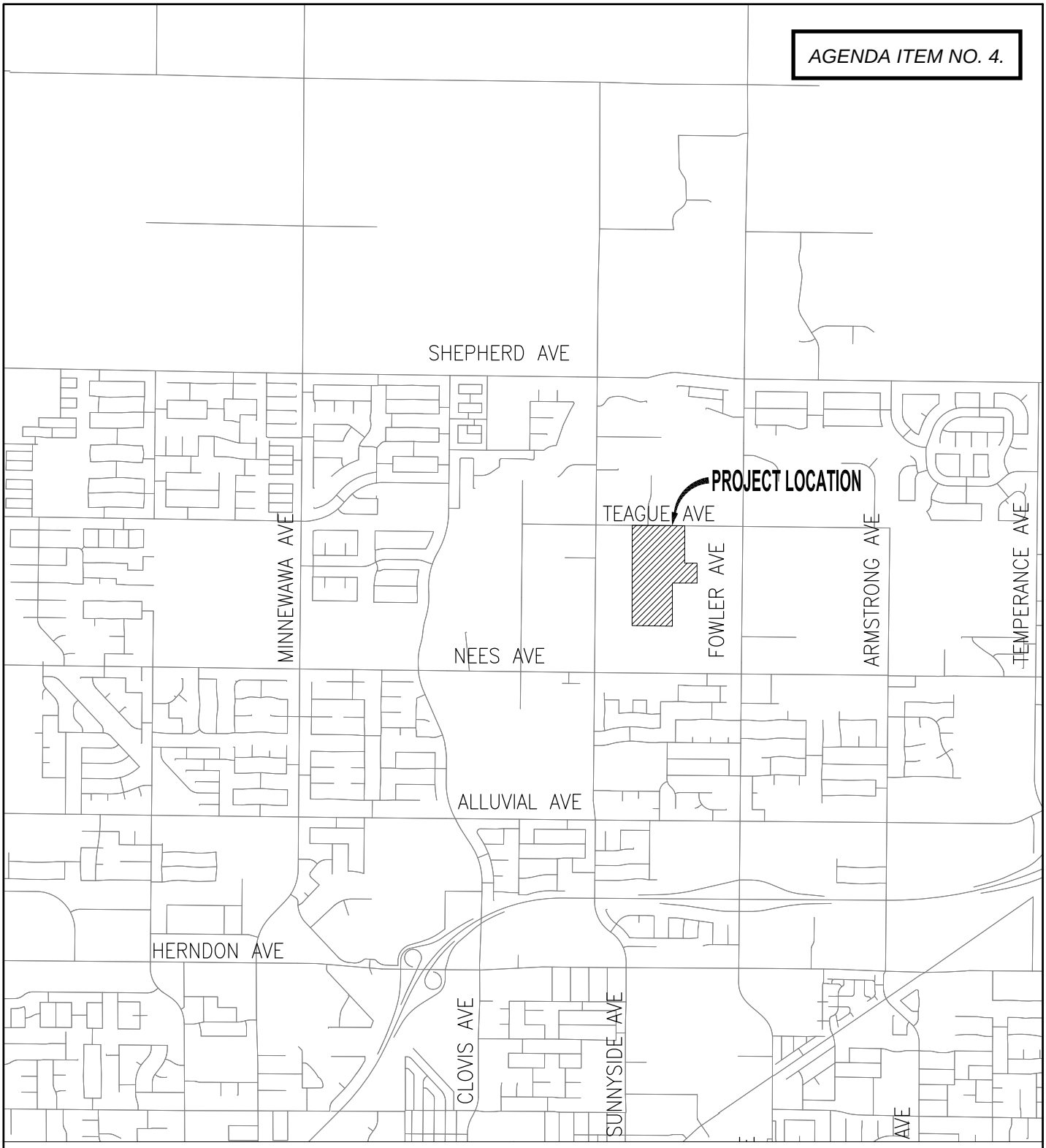
Thank you for the opportunity to perform this Traffic Impact Study. Please feel free to contact me if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures 1 through 9
Appendix A - Traffic Count Data Sheets
Appendix B - Fresno County Travel Model
Appendix C - Intersection Analyses
Appendix D - Mitigated Intersection Analyses

FIGURES

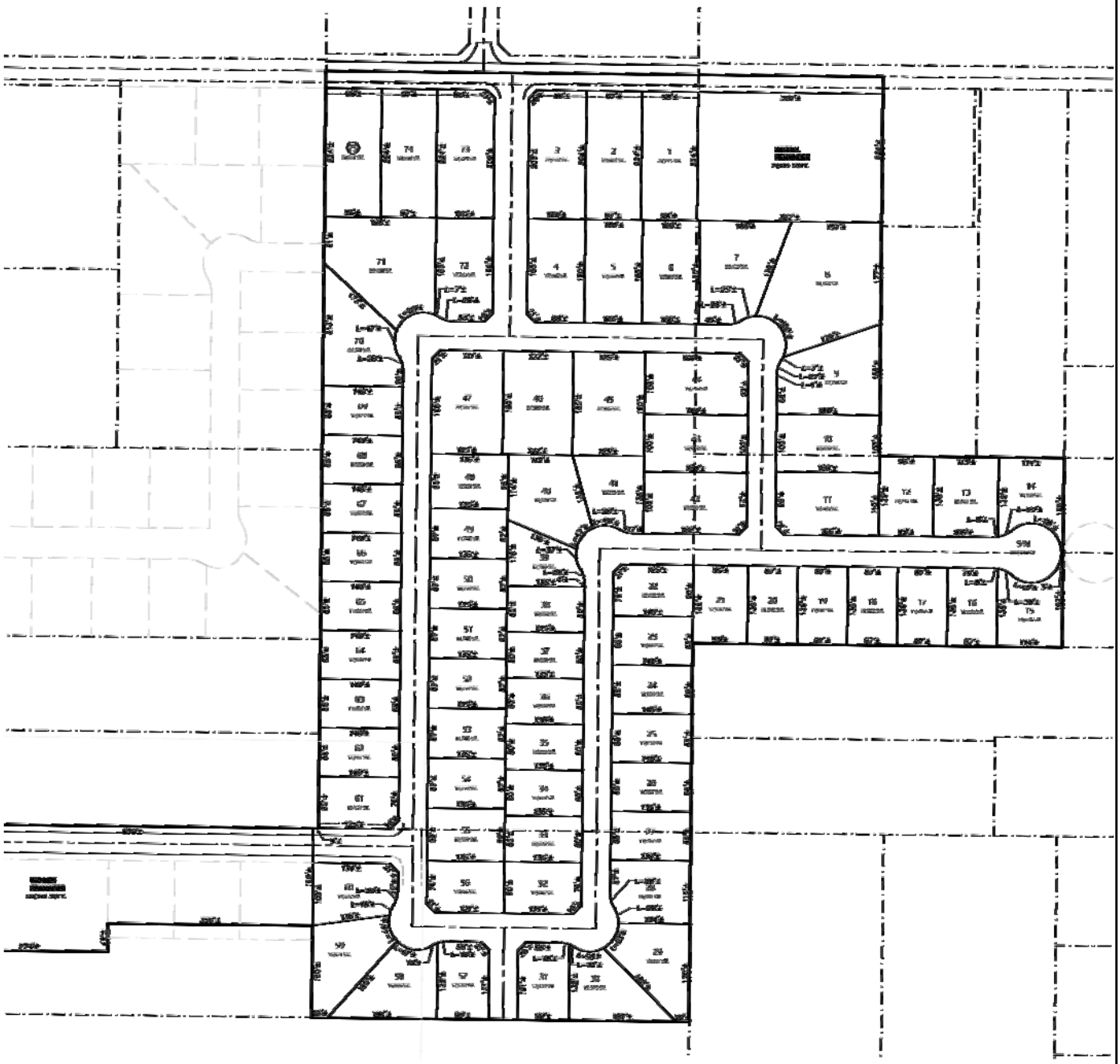


Proposed McKenney Assemblage
Clovis, California

VICINITY MAP

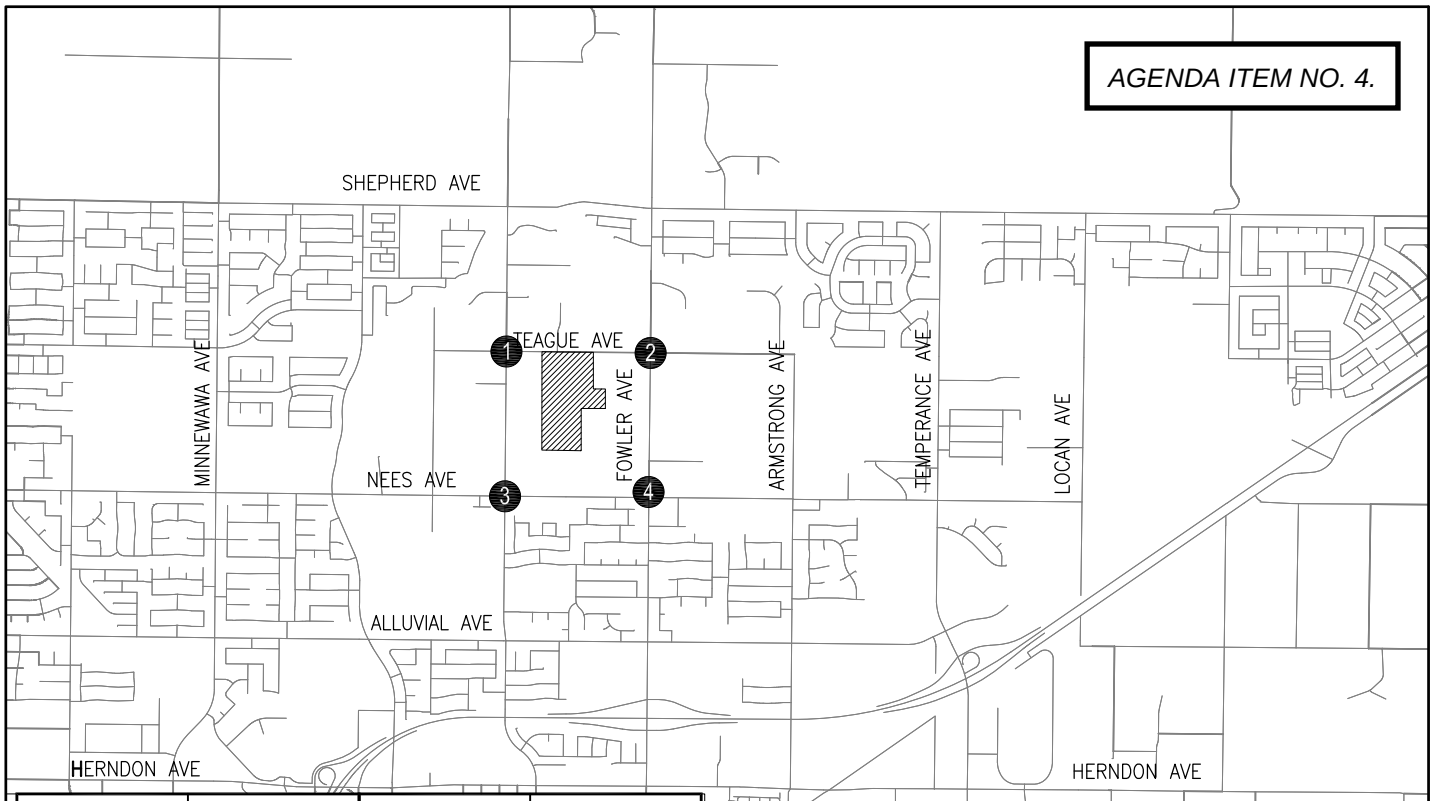
PETERS ENGINEERING GROUP

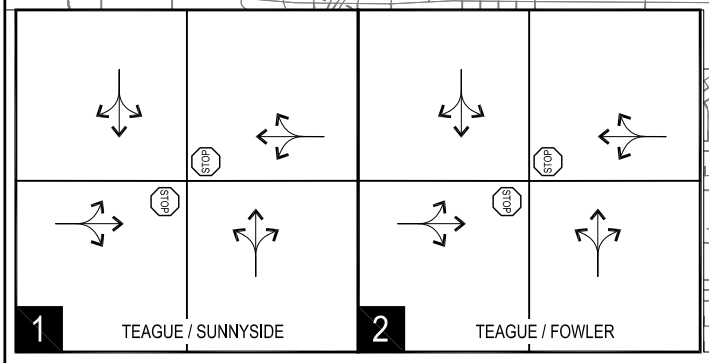
Figure 1

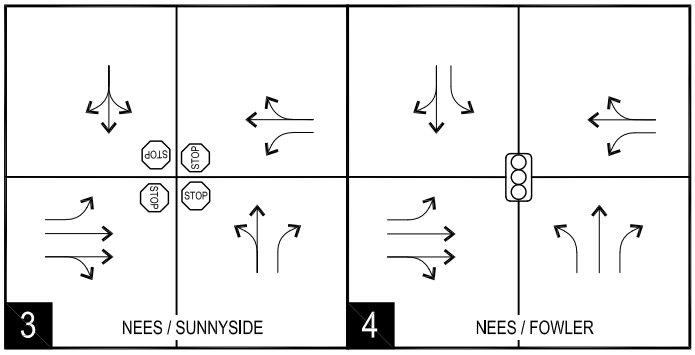


Proposed McKenney Assemblage
Clovis, California

SITE PLAN





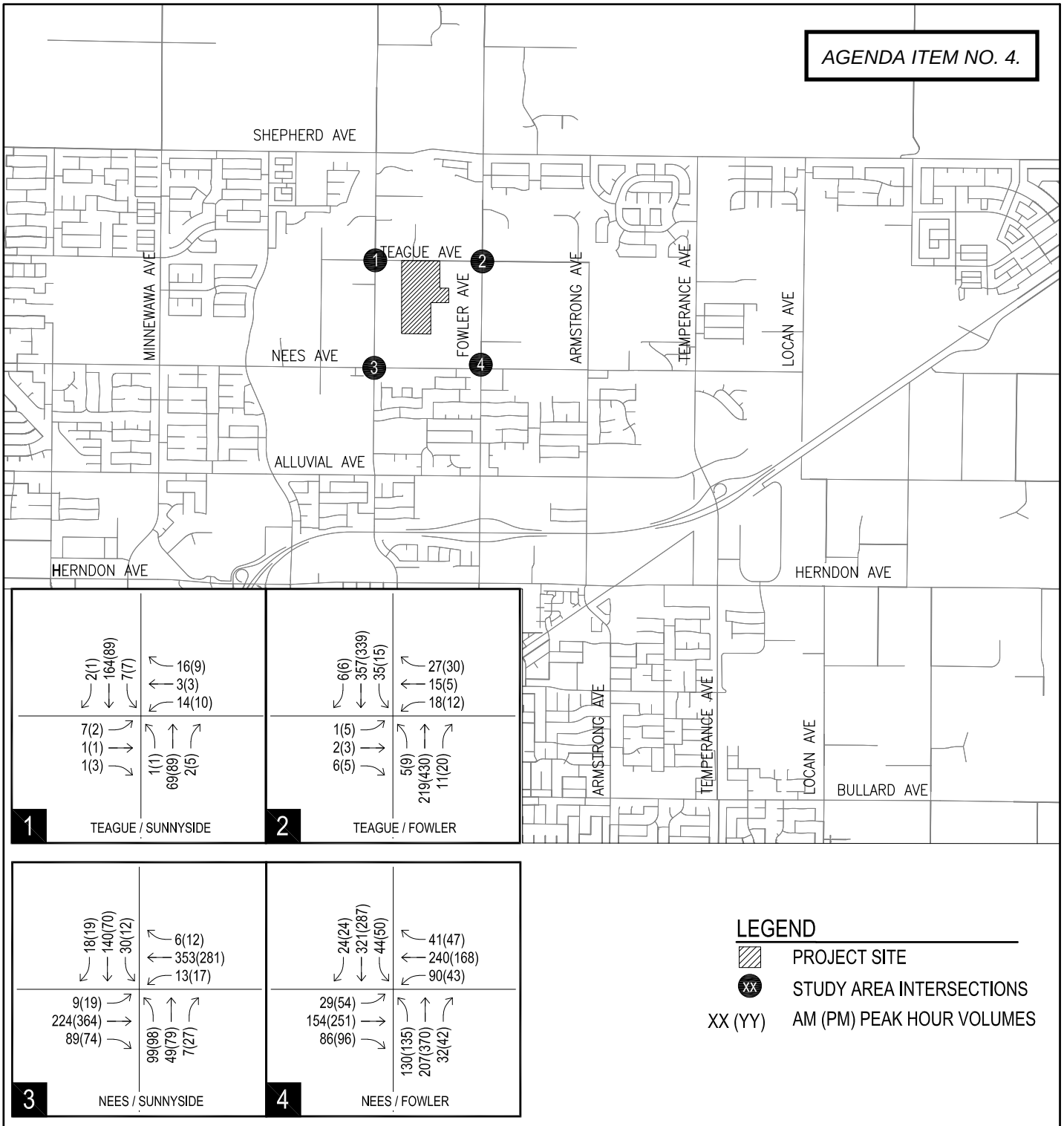


LEGEND

- PROJECT SITE
- XX STUDY AREA INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP STOP SIGN
- DIRECTION OF TRAVEL

Proposed McKenney Assemblage
Clovis, California

EXISTING LANE CONFIGURATIONS AND INTERSECTION CONTROL

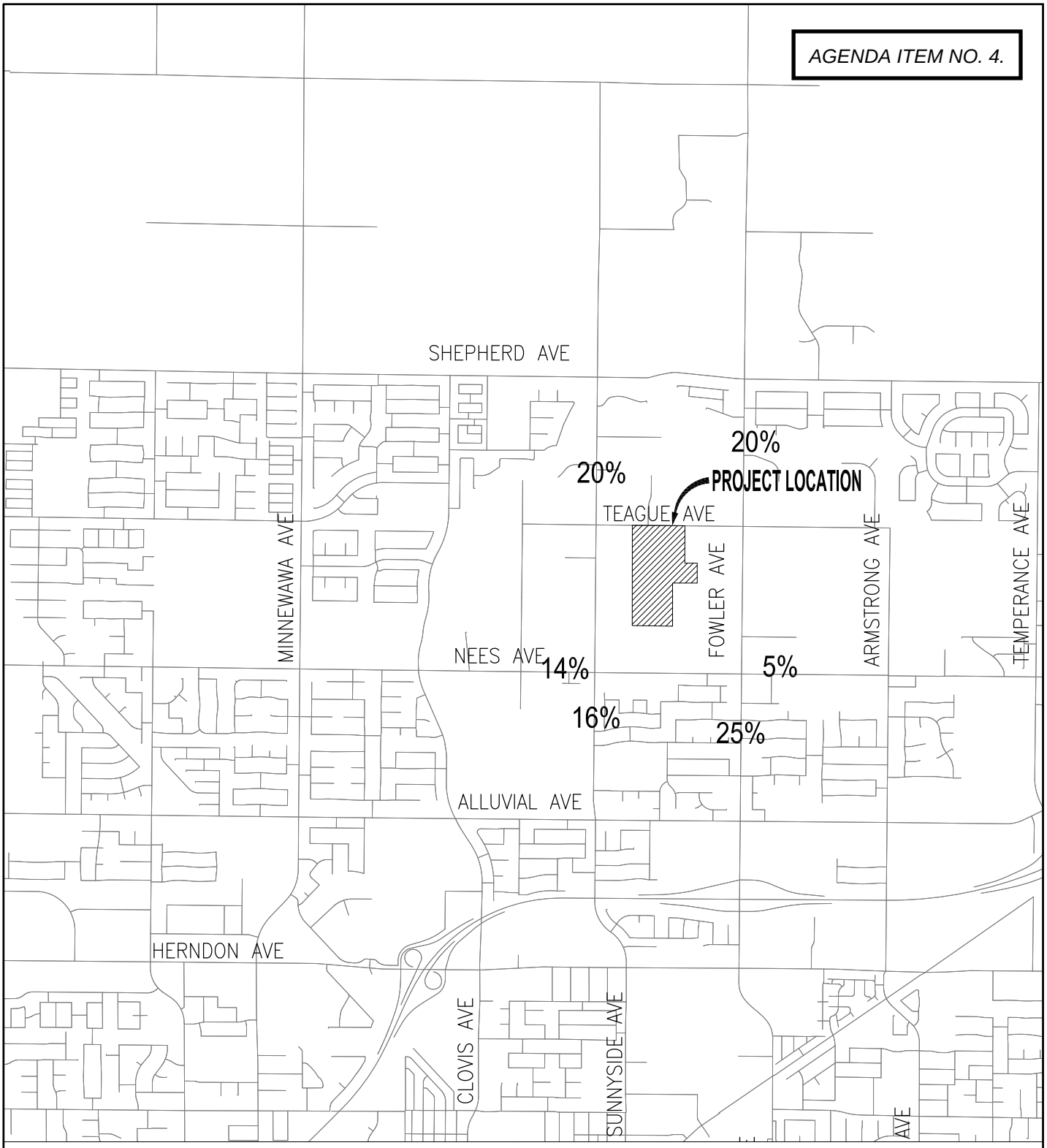


LEGEND

- PROJECT SITE
- (XX) STUDY AREA INTERSECTIONS
- XX (YY) AM (PM) PEAK HOUR VOLUMES

Proposed McKenney Assemblage
Clovis, California

EXISTING PEAK HOUR TRAFFIC VOLUMES

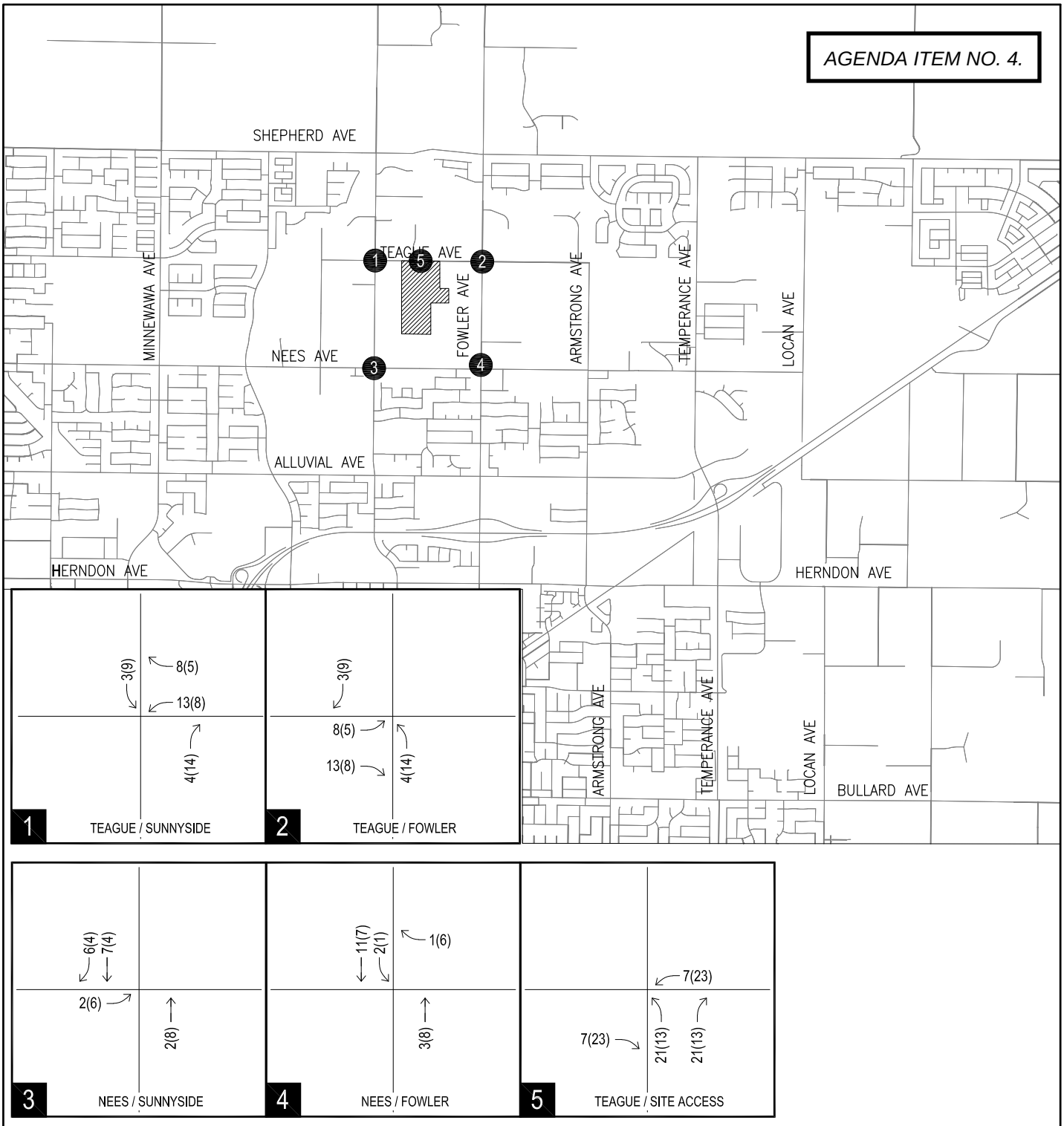


Proposed McKenney Assemblage
Clovis, California

PROJECT TRIP DISTRIBUTION PERCENTAGE

PETERS ENGINEERING GROUP

Figure 5



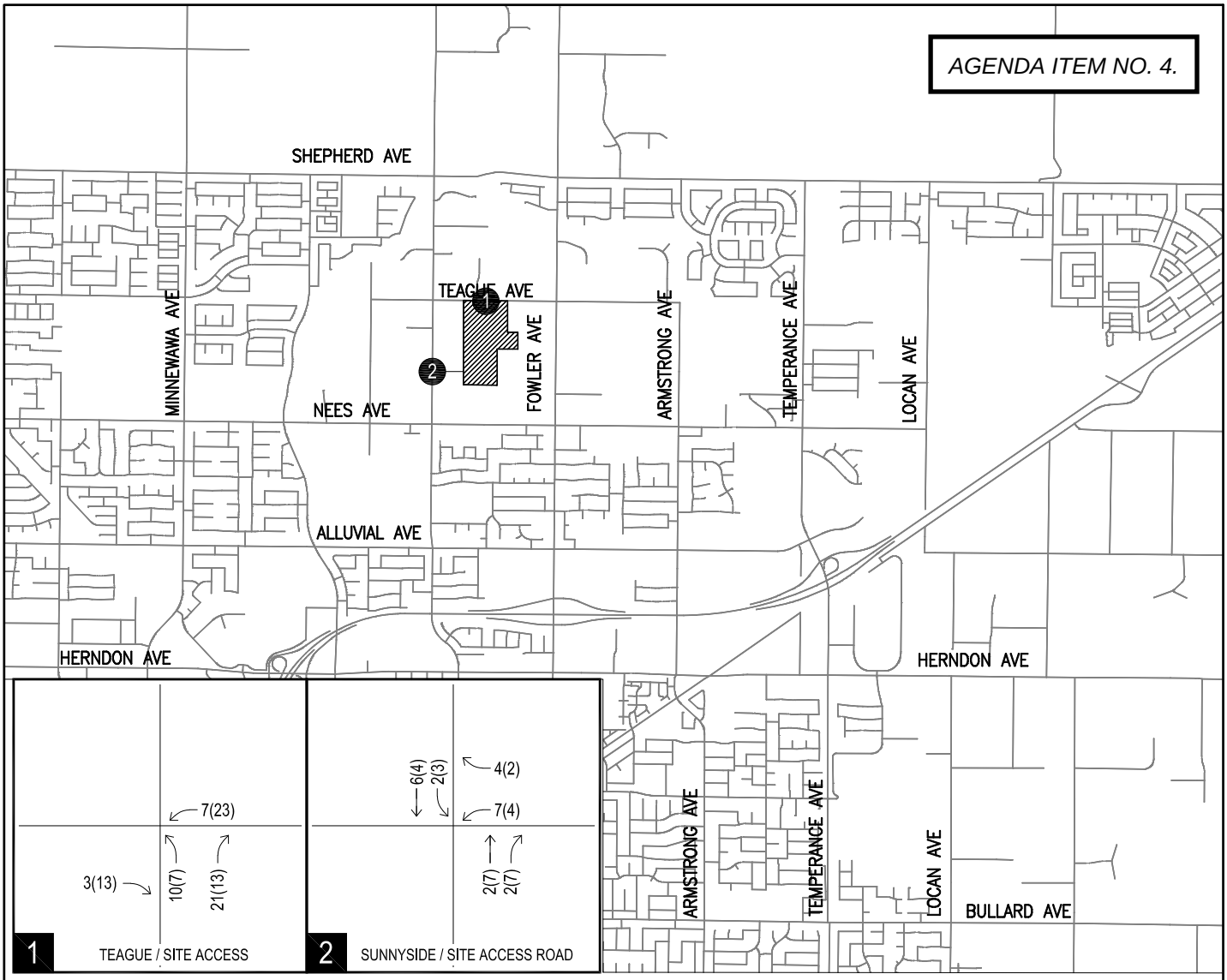
Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

PEAK HOUR PROJECT TRAFFIC VOLUMES

Figure 6a

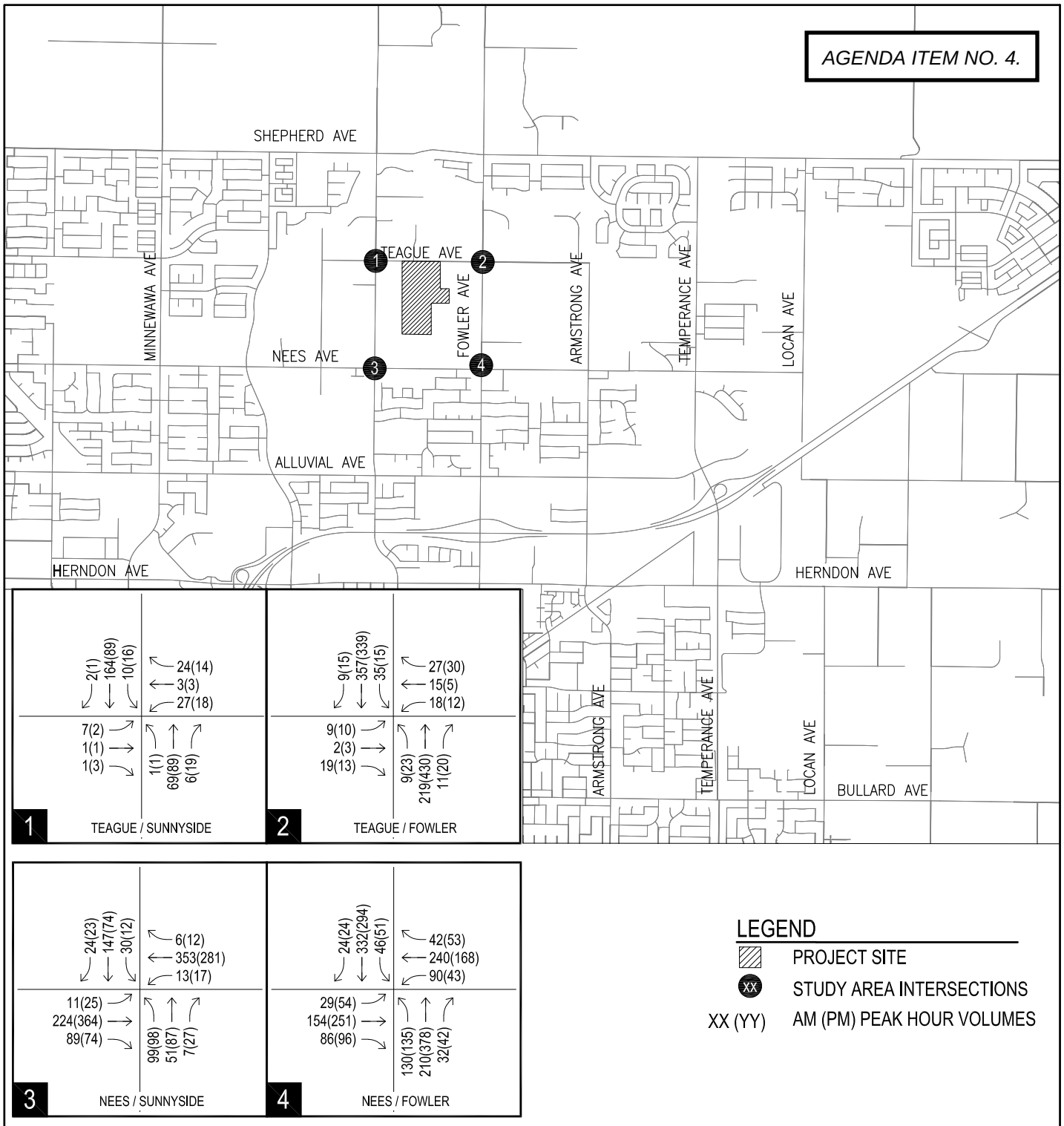


Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

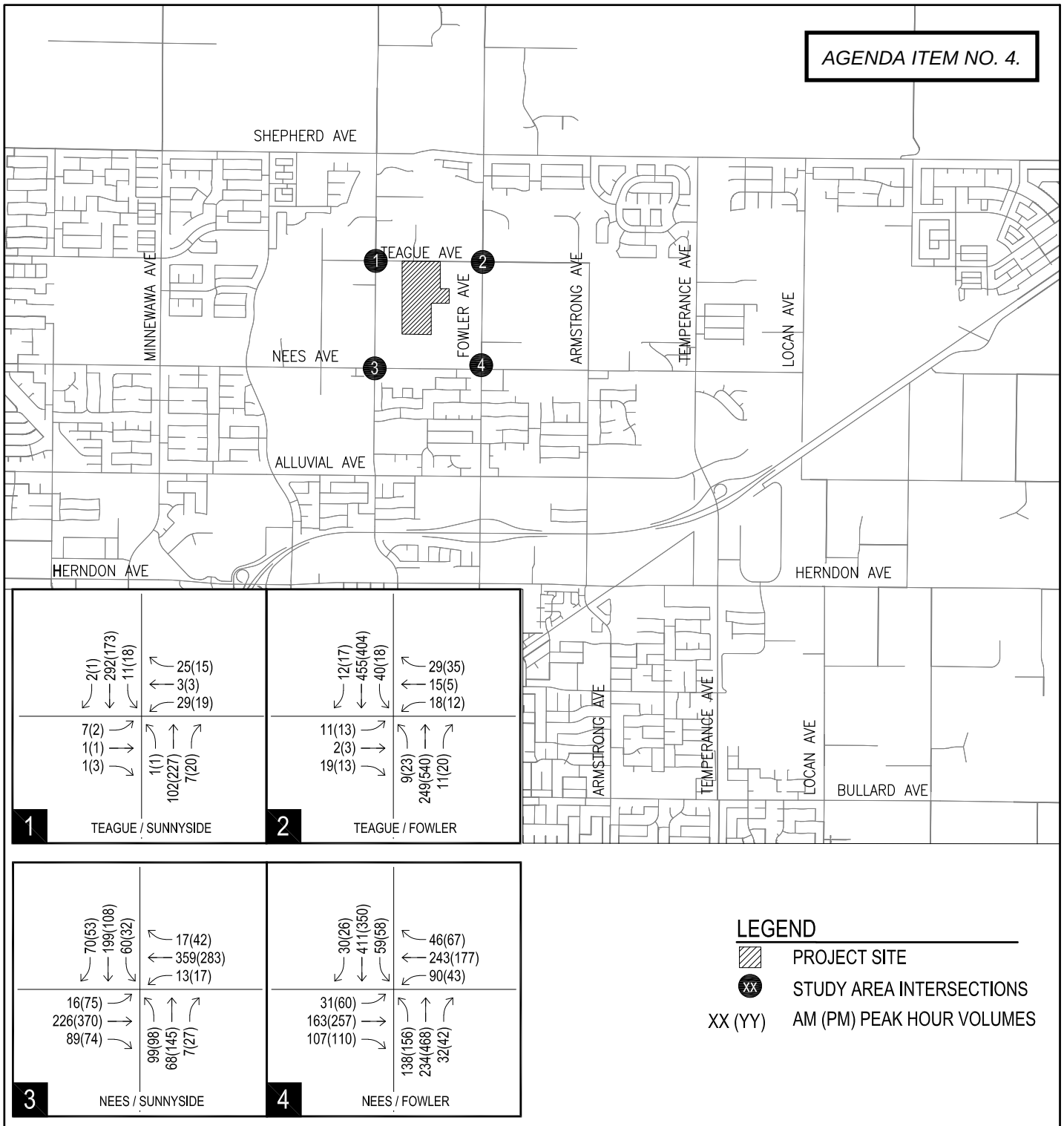
PROJECT TRIPS AT SITE ACCESS ROADS-POTENTIAL FUTURE CONDITION



Proposed McKenney Assemblage
Clovis, California

EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

AGENDA ITEM NO. 4.



LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

Proposed McKenney Assemblage
Clovis, California

NEAR-TERM WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

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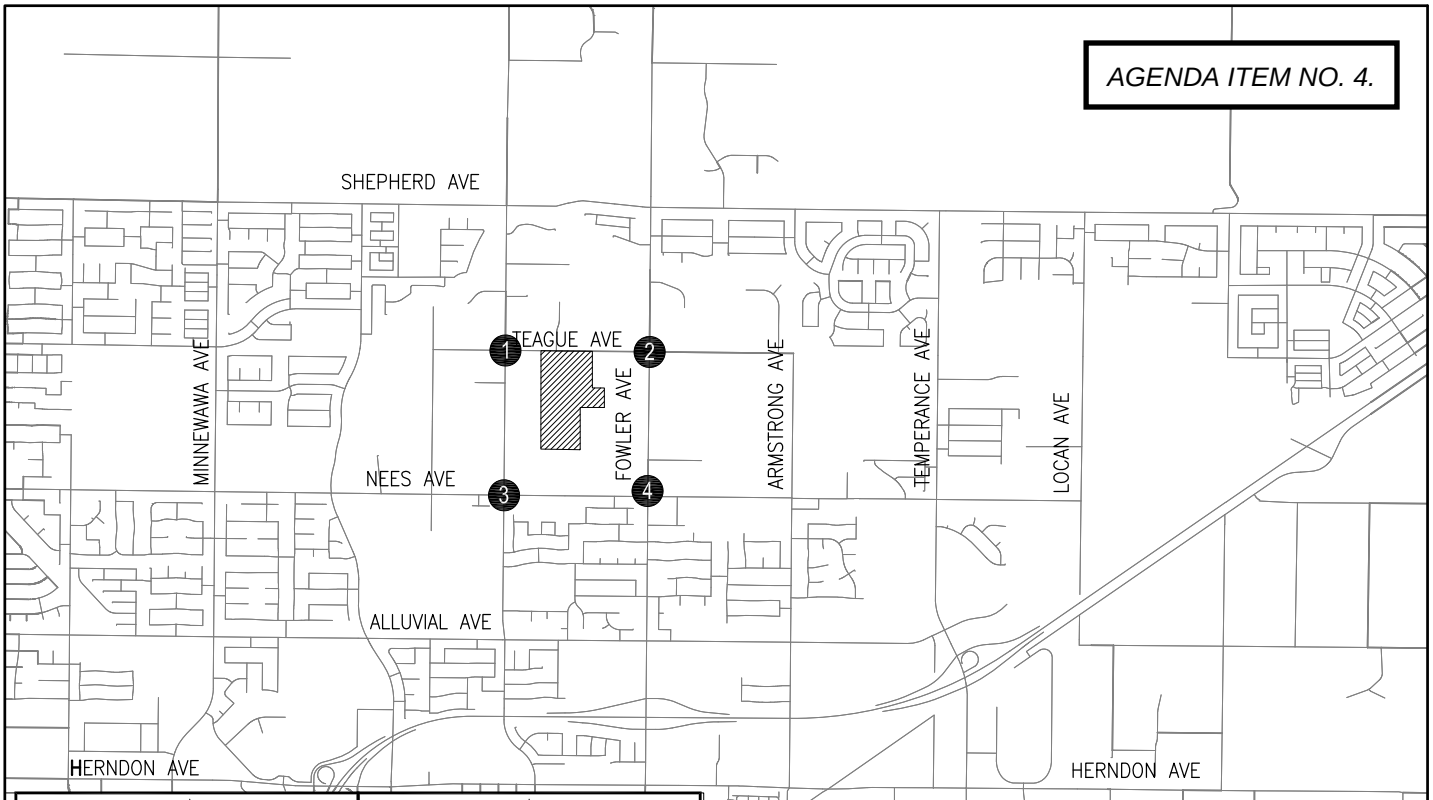
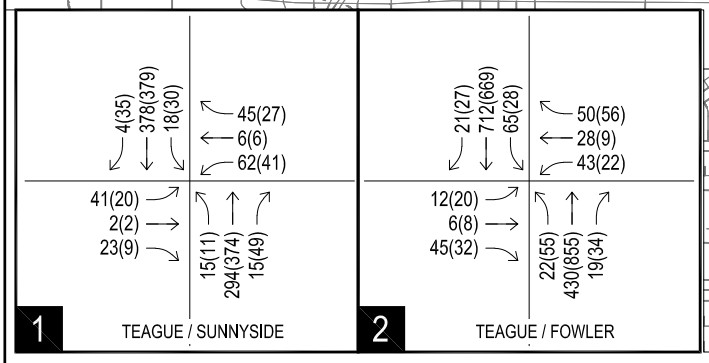
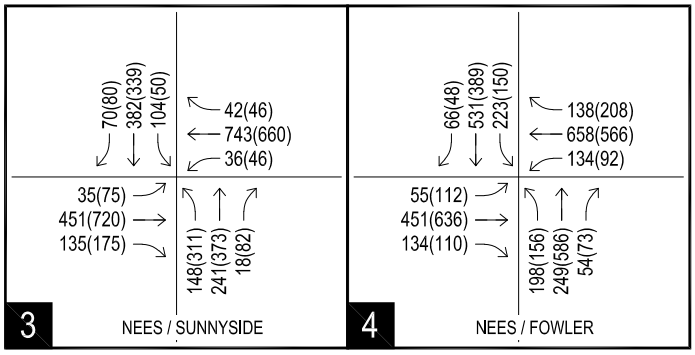
Figure 8







LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

Proposed McKenney Assemblage
Clovis, California

CUMULATIVE YEAR 2040 WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

Figure 9

APPENDIX A
TRAFFIC COUNT DATA SHEETS

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Mov

AGENDA ITEM NO. 4.

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

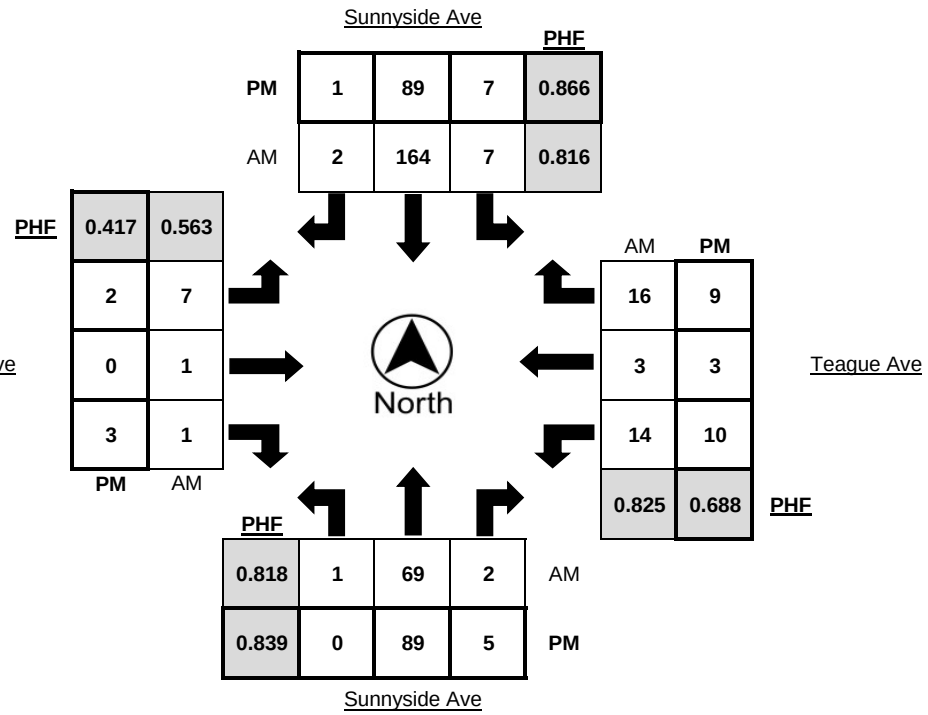
LOCATION Sunnyside Ave @ Teague Ave
LATITUDE 36.85927
COUNTY Fresno
LONGITUDE -119.6930596
COLLECTION DATE Wednesday, November 29, 2017
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	16	1	3	1	25	2	0	0	0	0	0	0	1	4	0
7:15 AM - 7:30 AM	0	16	0	0	0	43	0	1	2	0	0	0	3	0	2	0
7:30 AM - 7:45 AM	1	19	1	4	1	35	1	2	2	0	0	0	1	1	8	0
7:45 AM - 8:00 AM	0	13	0	3	4	35	1	2	2	1	1	0	5	1	4	0
8:00 AM - 8:15 AM	0	21	1	1	2	51	0	2	1	0	0	0	5	1	2	0
8:15 AM - 8:30 AM	0	25	0	3	0	31	1	4	1	0	0	0	1	1	2	0
8:30 AM - 8:45 AM	1	17	0	1	0	28	0	4	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	20	1	0	0	24	0	3	0	0	0	0	3	0	1	1
TOTAL	**2**	**147**	**4**	**15**	**8**	**272**	**5**	**18**	**8**	**1**	**1**	**0**	**18**	**5**	**23**	**1**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	0	24	1	1	2	23	1	4	0	0	0	0	4	0	4	1
4:15 PM - 4:30 PM	0	21	0	0	3	20	0	0	1	0	0	0	1	2	1	0
4:30 PM - 4:45 PM	0	18	2	1	0	20	0	2	0	0	1	0	3	1	1	0
4:45 PM - 5:00 PM	0	26	2	2	2	26	0	0	1	0	2	0	2	0	3	0
5:00 PM - 5:15 PM	0	26	3	0	0	22	1	1	0	1	0	0	0	0	1	0
5:15 PM - 5:30 PM	0	20	2	0	1	20	1	0	2	0	0	0	1	0	4	0
5:30 PM - 5:45 PM	0	20	1	0	0	18	0	0	1	0	0	0	3	0	3	0
5:45 PM - 6:00 PM	0	15	2	0	2	16	1	0	0	0	0	0	0	0	1	0
TOTAL	**0**	**170**	**13**	**4**	**10**	**165**	**4**	**7**	**5**	**1**	**3**	**0**	**14**	**3**	**18**	**1**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	1	69	2	8	7	164	2	7	7	1	1	0	14	3	16	0
4:00 PM - 5:00 PM	0	89	5	4	7	89	1	6	2	0	3	0	10	3	9	1

	PHF	Trucks
AM	0.854	5.2%
PM	0.852	5.0%



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310 N. Irwin Street - Suite 20
Hanford, CA 93230

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Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

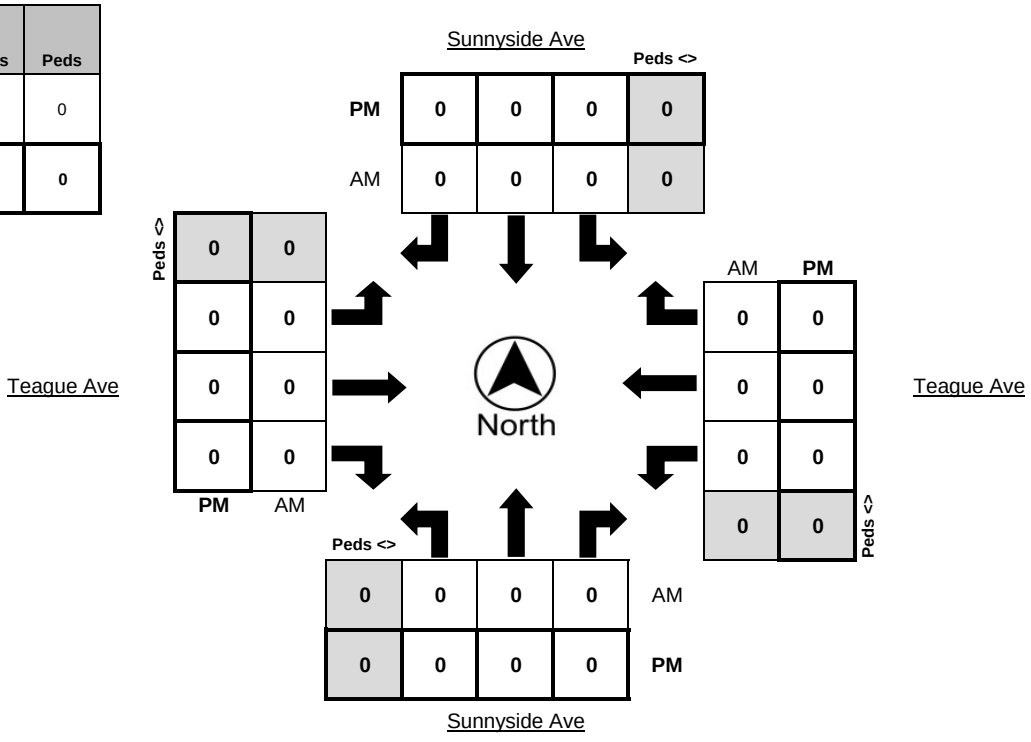
LOCATION Sunnyside Ave @ Teague Ave
LATITUDE 36.8593
COUNTY Fresno
LONGITUDE -119.6931
COLLECTION DATE Wednesday, November 29, 2017
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	**0**	**0**



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310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

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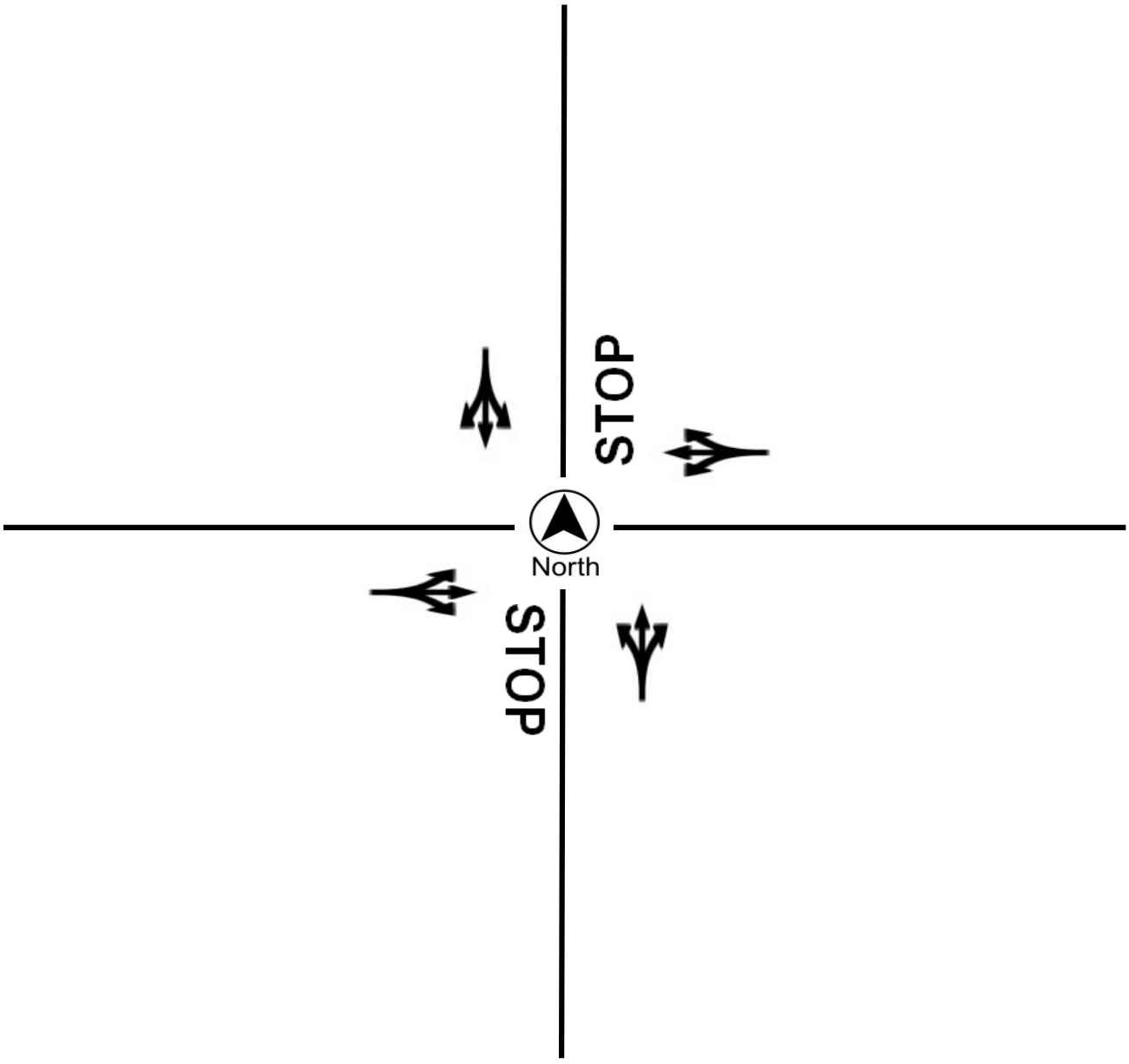
AGENDA ITEM NO. 4.

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Sunnyside Ave @ Teague Ave	**N/S STREET**	Sunnyside Ave
COUNTY	Fresno	**E/W STREET**	Teague Ave
COLLECTION DATE	Wednesday, November 29, 2017	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	Two-Way Stop

COMMENTS



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310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Mov

AGENDA ITEM NO. 4.

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

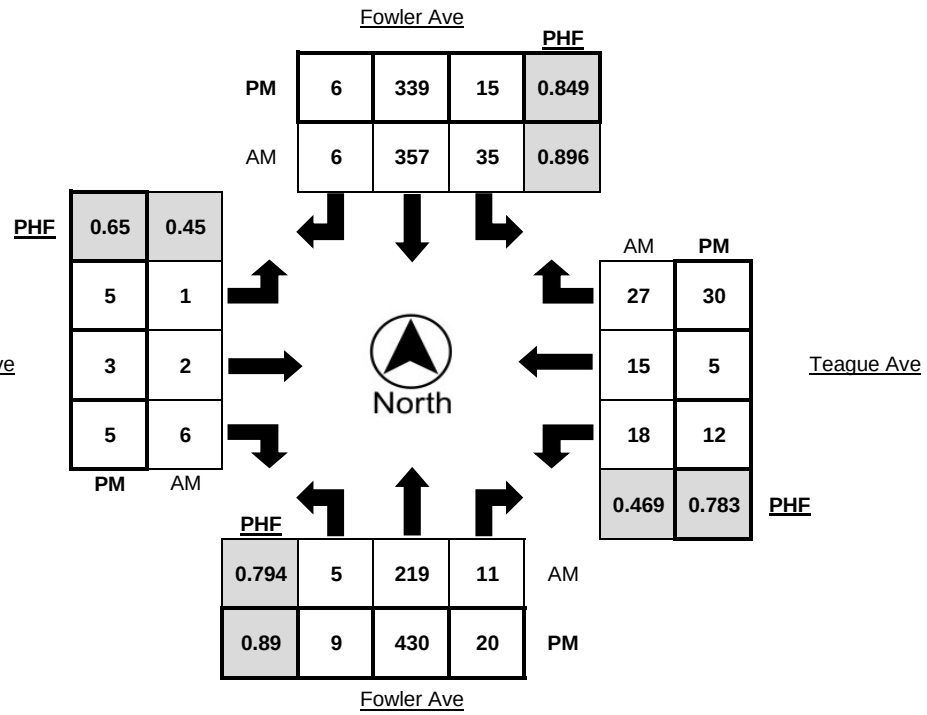
LOCATION Fowler Ave @ Teague Ave
LATITUDE 36.8592572
COUNTY Fresno
LONGITUDE -119.6840501
COLLECTION DATE Wednesday, November 29, 2017
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	3	37	3	1	5	65	0	3	0	1	3	1	3	1	2	0
7:15 AM - 7:30 AM	2	56	0	2	3	81	1	3	0	0	0	0	0	4	3	1
7:30 AM - 7:45 AM	1	44	2	1	7	98	2	5	1	1	0	0	4	6	4	0
7:45 AM - 8:00 AM	1	69	4	2	9	100	2	1	0	0	5	0	3	1	3	1
8:00 AM - 8:15 AM	1	50	5	2	16	78	1	0	0	1	1	0	11	4	17	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	1	62	3	3	3	66	0	0	0	0	1	0	1	0	8	1
8:45 AM - 9:00 AM	0	69	2	4	0	80	0	2	0	0	0	0	4	0	8	0
TOTAL	**9**	**387**	**19**	**15**	**43**	**568**	**6**	**14**	**1**	**3**	**10**	**1**	**26**	**16**	**45**	**3**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	3	89	3	2	0	81	1	1	0	1	2	0	3	0	8	0
4:15 PM - 4:30 PM	3	95	4	1	2	73	1	1	1	1	3	0	0	1	6	0
4:30 PM - 4:45 PM	2	78	6	1	1	76	2	1	0	0	2	0	5	1	3	1
4:45 PM - 5:00 PM	2	104	6	2	1	57	1	3	0	1	0	0	1	0	7	0
5:00 PM - 5:15 PM	3	120	6	1	5	89	2	2	3	0	1	0	1	0	6	0
5:15 PM - 5:30 PM	3	103	4	0	3	103	0	2	0	0	2	0	3	3	7	0
5:30 PM - 5:45 PM	2	101	4	0	4	76	2	2	1	0	1	0	4	2	6	0
5:45 PM - 6:00 PM	1	106	6	1	3	71	2	2	1	3	1	0	4	0	11	0
TOTAL	**19**	**796**	**39**	**8**	**19**	**626**	**11**	**14**	**6**	**6**	**12**	**0**	**21**	**7**	**54**	**1**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	5	219	11	7	35	357	6	9	1	2	6	0	18	15	27	2
5:00 PM - 6:00 PM	9	430	20	2	15	339	6	8	5	3	5	0	12	5	30	0

	PHF	Trucks
AM	0.891	2.6%
PM	0.931	1.1%



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Mov

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

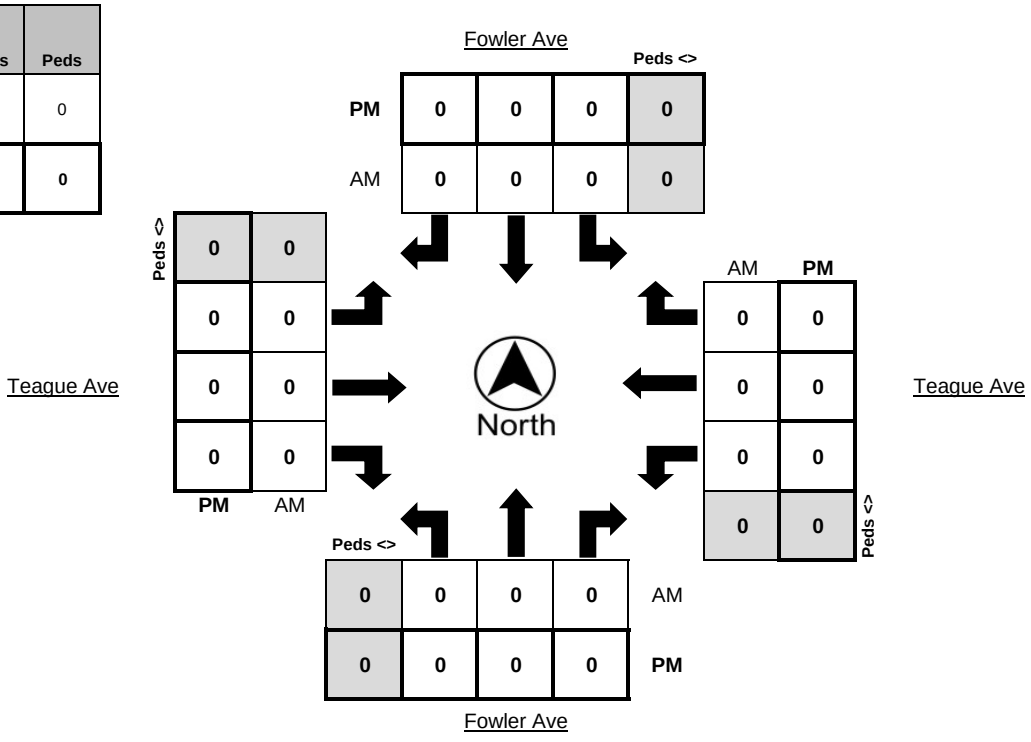
LOCATION Fowler Ave @ Teague Ave
LATITUDE 36.8593
COUNTY Fresno
LONGITUDE -119.6841
COLLECTION DATE Wednesday, November 29, 2017
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	**0**	**0**



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

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Turning Mov

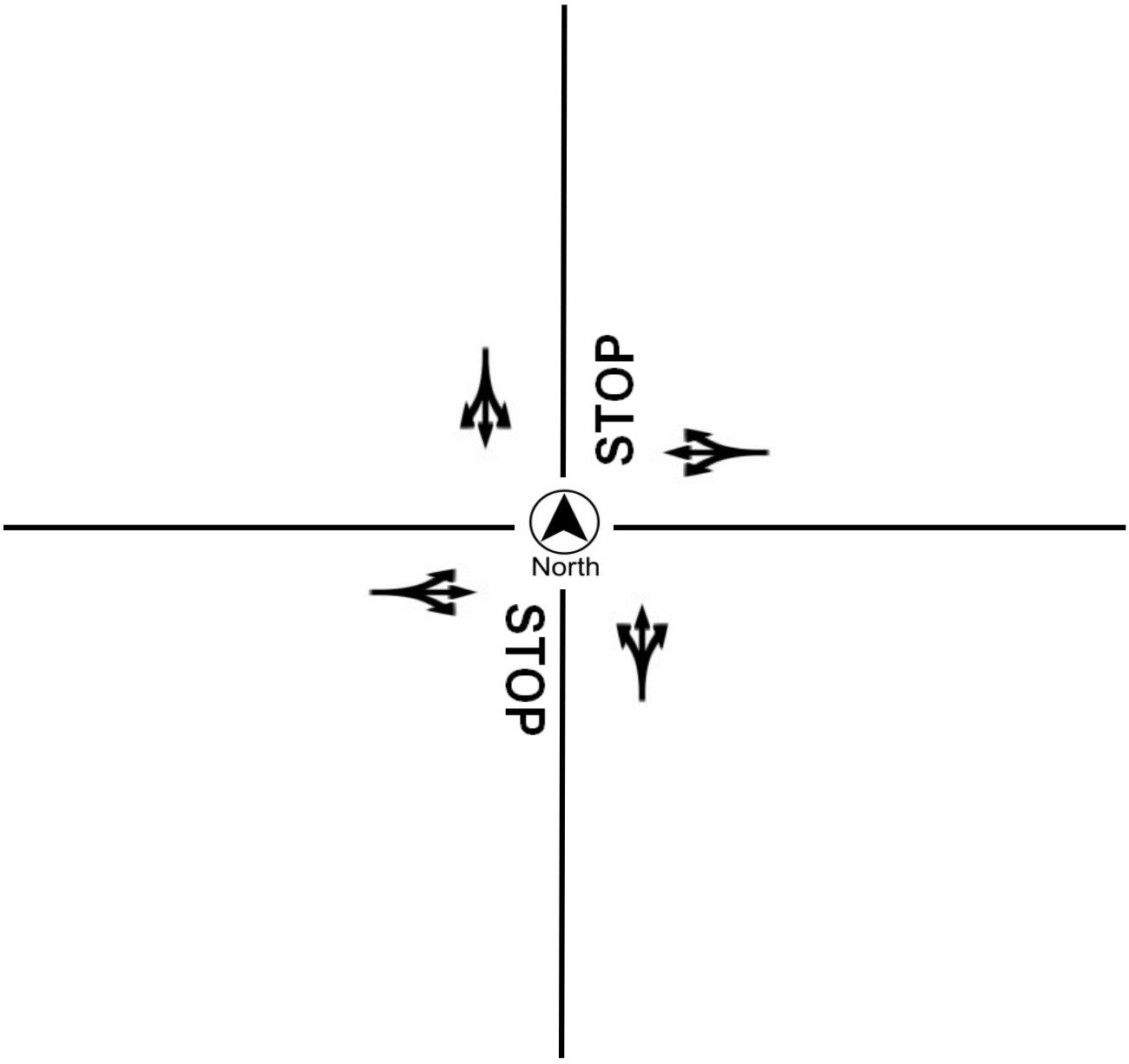
AGENDA ITEM NO. 4.

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Fowler Ave @ Teague Ave	**N/S STREET**	Fowler Ave
COUNTY	Fresno	**E/W STREET**	Teague Ave
COLLECTION DATE	Wednesday, November 29, 2017	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	Two-Way Stop

COMMENTS



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Hanford, CA 93230

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AGENDA ITEM NO. 4.

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

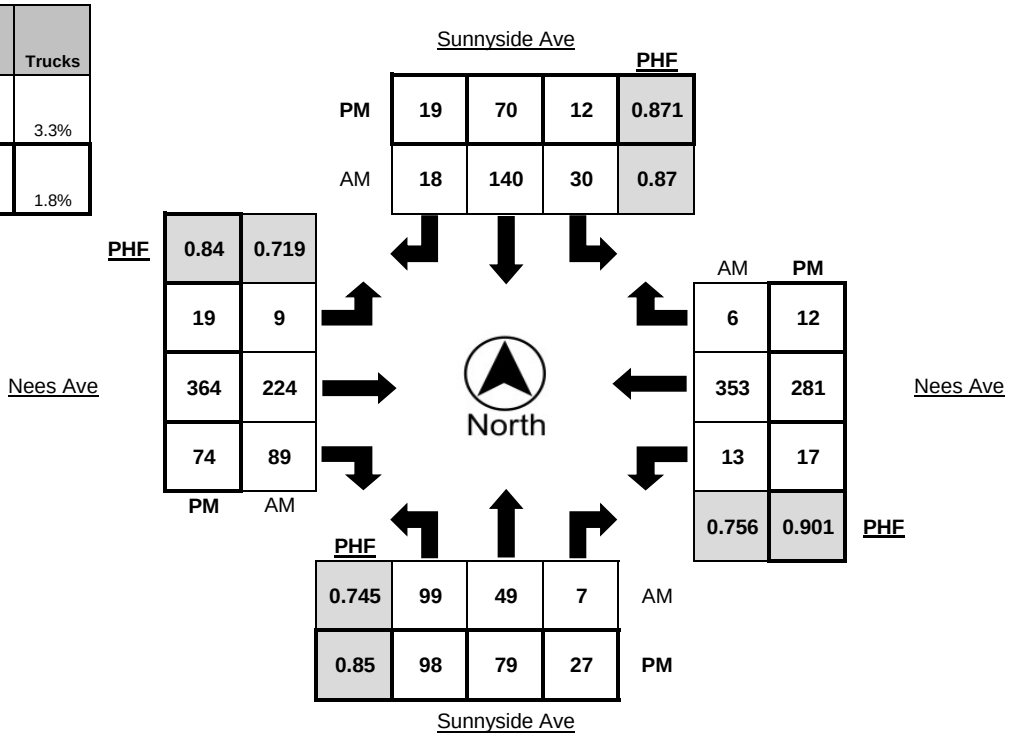
LOCATION Sunnyside Ave @ Nees Ave
LATITUDE 36.8520085
COUNTY Fresno
LONGITUDE -119.6930932
COLLECTION DATE Thursday, November 30, 2017
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	14	8	3	2	1	21	4	1	0	29	7	1	3	53	4	2
7:15 AM - 7:30 AM	43	8	1	0	4	30	6	0	3	42	17	5	1	120	2	5
7:30 AM - 7:45 AM	21	15	1	4	8	32	3	2	3	61	24	2	3	117	1	0
7:45 AM - 8:00 AM	15	11	0	1	11	36	4	0	1	84	27	3	4	56	1	2
8:00 AM - 8:15 AM	20	15	5	3	7	42	5	3	2	37	21	2	5	60	2	2
8:15 AM - 8:30 AM	22	20	6	2	5	31	5	5	1	31	24	4	11	72	1	2
8:30 AM - 8:45 AM	8	14	3	3	5	7	0	3	2	32	6	3	6	59	6	2
8:45 AM - 9:00 AM	13	9	2	0	5	17	1	3	4	31	8	2	2	46	4	2
TOTAL	**156**	**100**	**21**	**15**	**46**	**216**	**28**	**17**	**16**	**347**	**134**	**22**	**35**	**583**	**21**	**17**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	16	24	4	0	2	28	4	3	4	65	14	0	4	45	3	2
4:15 PM - 4:30 PM	26	28	9	0	3	29	3	3	4	91	15	2	9	62	2	2
4:30 PM - 4:45 PM	29	23	8	1	2	23	3	2	3	75	18	4	4	66	0	2
4:45 PM - 5:00 PM	18	20	5	1	1	19	3	1	8	105	16	1	5	64	5	0
5:00 PM - 5:15 PM	30	15	7	1	5	10	6	3	3	79	14	0	6	71	3	1
5:15 PM - 5:30 PM	21	21	7	1	4	18	7	0	5	105	26	0	2	80	4	1
5:30 PM - 5:45 PM	23	24	5	0	3	14	4	4	5	66	18	1	8	71	2	1
5:45 PM - 6:00 PM	20	25	2	0	2	15	2	1	4	80	16	3	3	65	3	0
TOTAL	**183**	**180**	**47**	**4**	**22**	**156**	**32**	**17**	**36**	**666**	**137**	**11**	**41**	**524**	**22**	**9**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	99	49	7	8	30	140	18	5	9	224	89	12	13	353	6	9
4:30 PM - 5:30 PM	98	79	27	4	12	70	19	6	19	364	74	5	17	281	12	4

	PHF	Trucks
AM	0.897	3.3%
PM	0.893	1.8%



Metro Traffic Data Inc.
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Hanford, CA 93230

800-975-6938 Phone/Fax
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Turning Mov

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

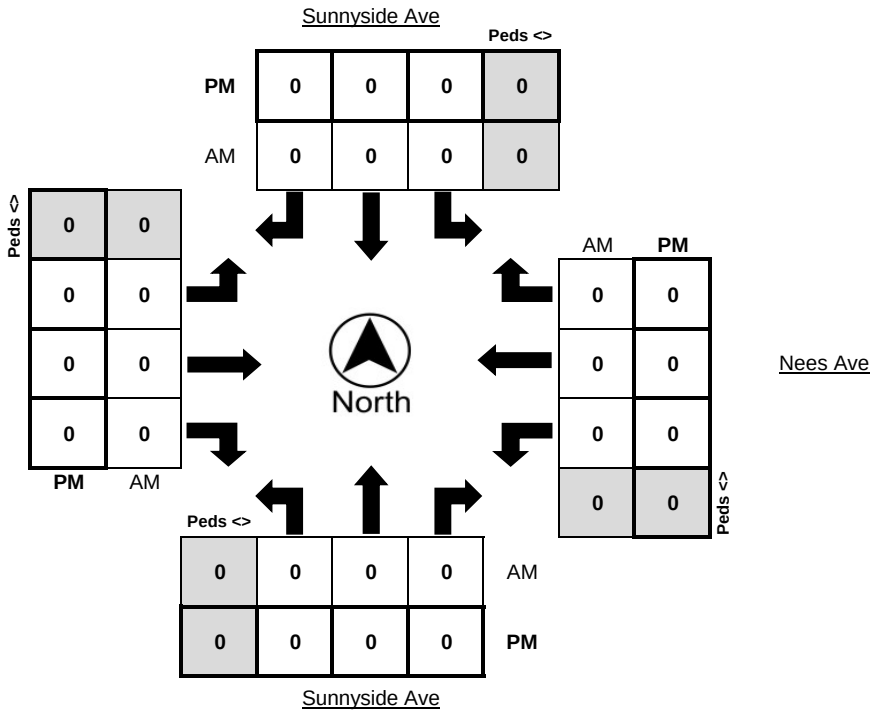
LOCATION Sunnyside Ave @ Nees Ave
LATITUDE 36.8520
COUNTY Fresno
LONGITUDE -119.6931
COLLECTION DATE Thursday, November 30, 2017
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	**0**	**0**



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Mov

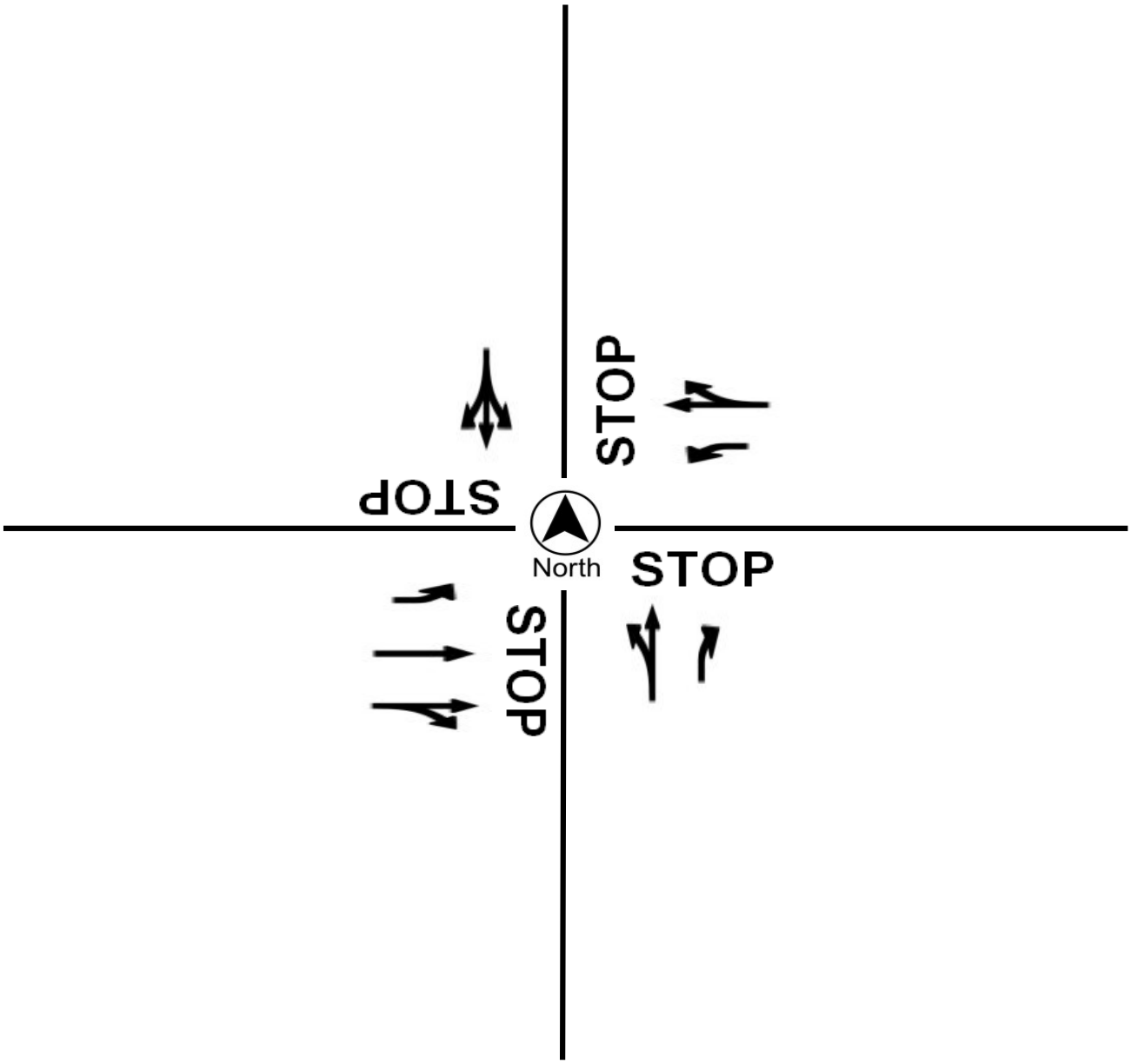
AGENDA ITEM NO. 4.

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Sunnyside Ave @ Nees Ave	**N/S STREET**	Sunnyside Ave
COUNTY	Fresno	**E/W STREET**	Nees Ave
COLLECTION DATE	Thursday, November 30, 2017	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	All-Way Stop

COMMENTS



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AGENDA ITEM NO. 4.

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

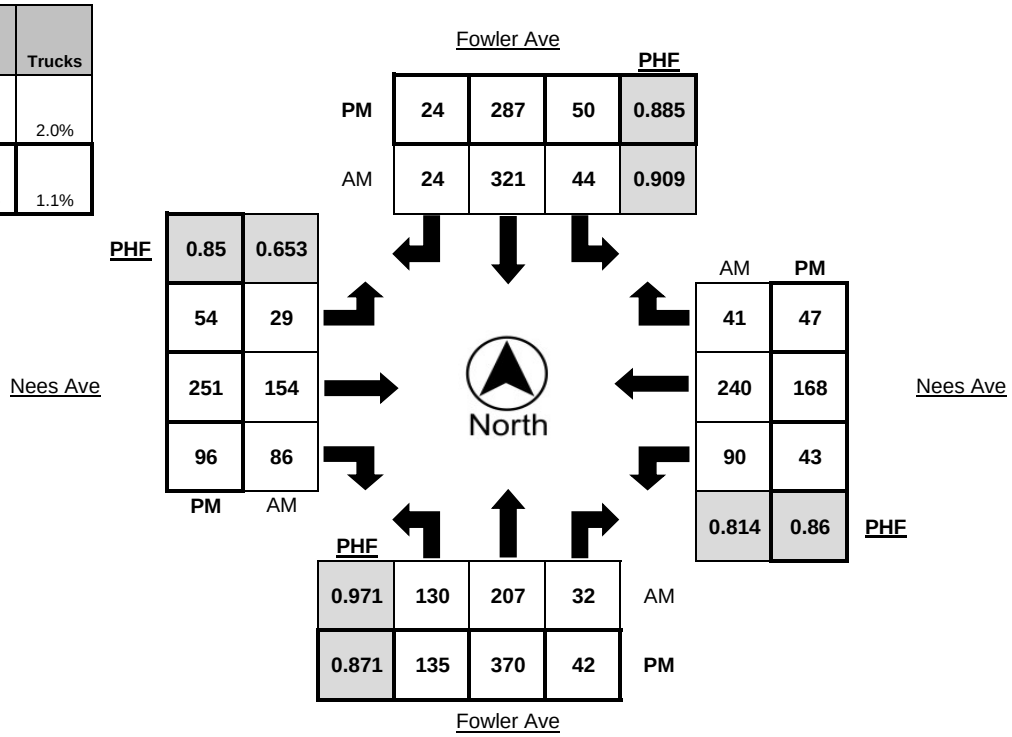
LOCATION Fowler Ave @ Nees Ave
LATITUDE 36.8519795
COUNTY Fresno
LONGITUDE -119.6840769
COLLECTION DATE Thursday, November 30, 2017
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	33	35	3	1	9	51	4	3	3	22	9	1	17	44	6	1
7:15 AM - 7:30 AM	40	51	4	3	7	68	6	3	9	25	10	3	18	87	9	0
7:30 AM - 7:45 AM	34	49	8	2	8	83	9	4	5	47	21	1	22	78	13	1
7:45 AM - 8:00 AM	21	62	8	2	14	90	3	1	5	58	40	0	17	38	9	2
8:00 AM - 8:15 AM	35	45	12	1	15	80	6	2	10	24	15	1	33	37	10	2
8:15 AM - 8:30 AM	29	45	6	0	14	70	13	2	5	26	13	2	40	54	15	4
8:30 AM - 8:45 AM	33	36	7	2	9	68	3	3	4	19	12	1	17	39	8	0
8:45 AM - 9:00 AM	22	47	6	4	9	53	1	3	3	26	12	1	13	30	7	3
TOTAL	**247**	**370**	**54**	**15**	**85**	**563**	**45**	**21**	**44**	**247**	**132**	**10**	**177**	**407**	**77**	**13**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	28	68	16	4	15	72	4	5	6	49	17	1	16	30	6	0
4:15 PM - 4:30 PM	31	78	14	1	13	65	5	1	13	65	23	0	16	48	13	0
4:30 PM - 4:45 PM	32	96	15	1	7	66	6	2	10	55	21	0	14	36	15	0
4:45 PM - 5:00 PM	29	78	7	2	10	69	7	3	16	68	27	0	15	51	9	0
5:00 PM - 5:15 PM	41	103	13	2	18	71	5	3	11	57	18	0	10	36	11	1
5:15 PM - 5:30 PM	33	93	7	1	15	81	6	3	17	71	30	0	4	45	12	0
5:30 PM - 5:45 PM	42	78	9	0	7	62	12	1	12	42	20	1	9	36	11	0
5:45 PM - 6:00 PM	20	117	8	0	9	66	4	1	6	52	22	1	8	35	15	0
TOTAL	**256**	**711**	**89**	**11**	**94**	**552**	**49**	**19**	**91**	**459**	**178**	**3**	**92**	**317**	**92**	**1**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	130	207	32	8	44	321	24	10	29	154	86	5	90	240	41	5
4:30 PM - 5:30 PM	135	370	42	6	50	287	24	11	54	251	96	0	43	168	47	1

	PHF	Trucks
AM	0.927	2.0%
PM	0.946	1.1%



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Turning Mov

Prepared For:
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

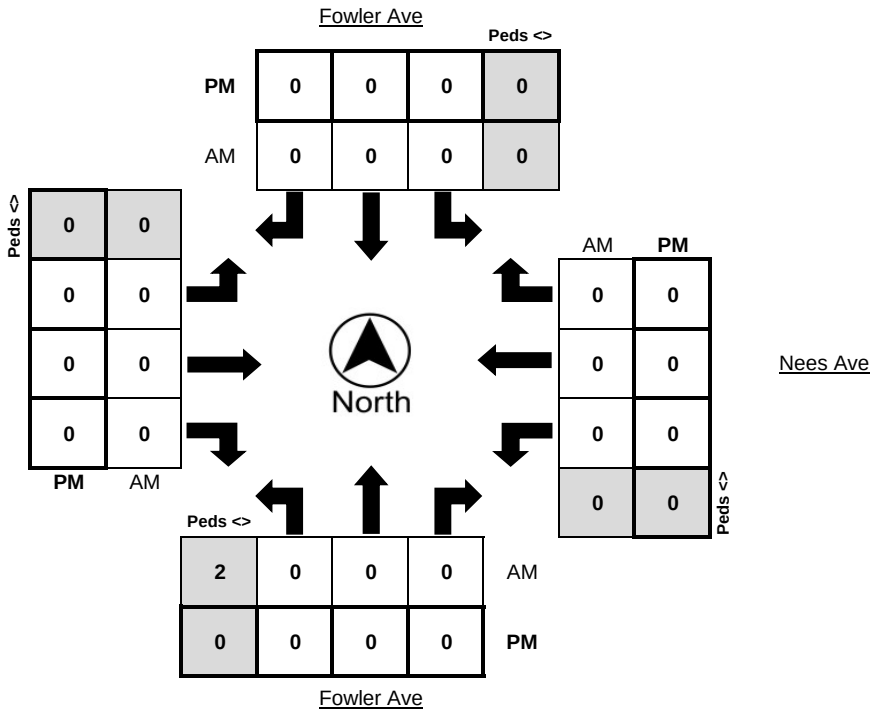
LOCATION Fowler Ave @ Nees Ave
LATITUDE 36.8520
COUNTY Fresno
LONGITUDE -119.6841
COLLECTION DATE Thursday, November 30, 2017
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	2
PM Peak Total	**0**	**0**



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Mov

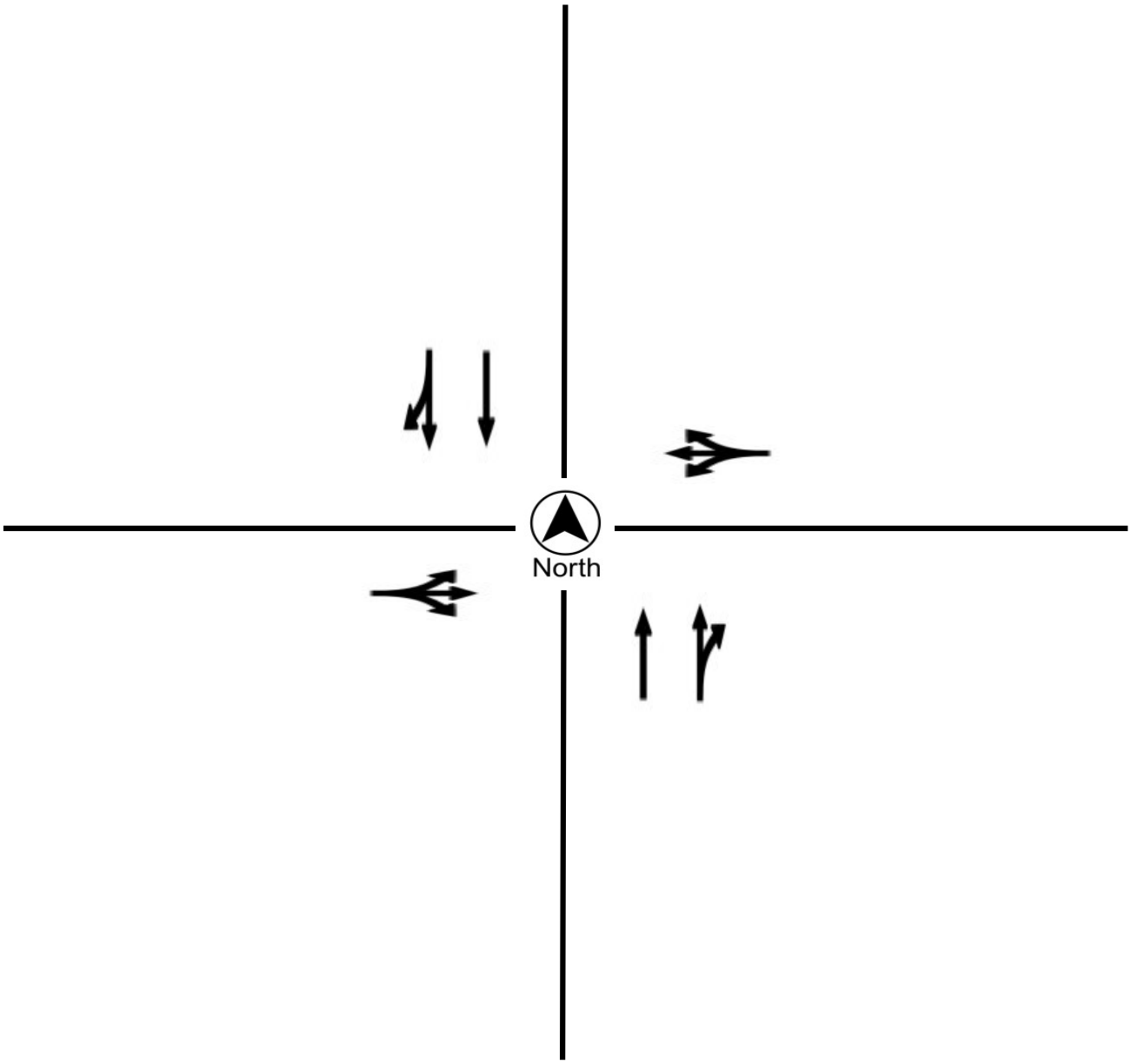
AGENDA ITEM NO. 4.

Prepared For:

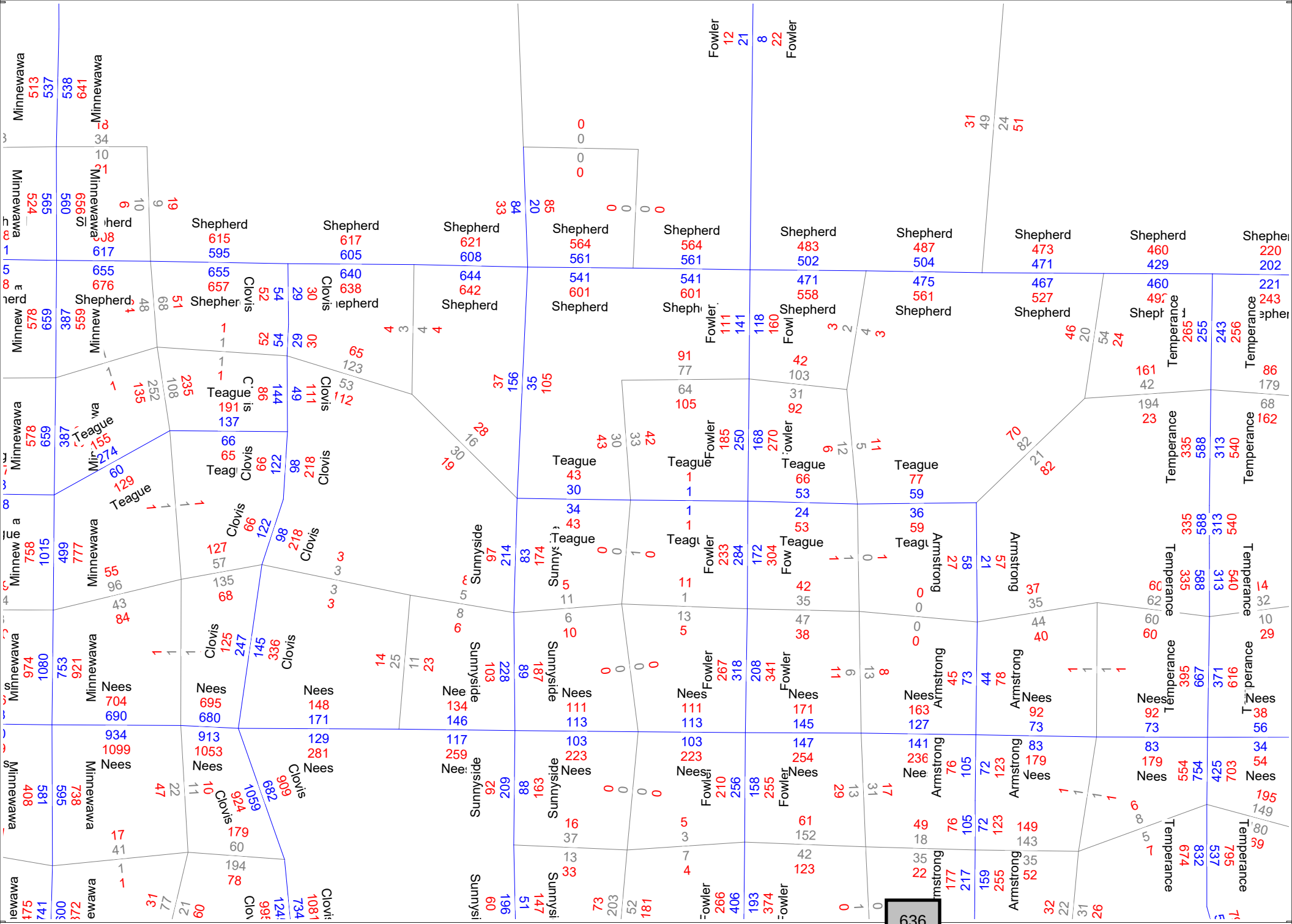
Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Fowler Ave @ Nees Ave	**N/S STREET**	Fowler Ave
COUNTY	Fresno	**E/W STREET**	Nees Ave
COLLECTION DATE	Thursday, November 30, 2017	**WEATHER**	Clear
CYCLE TIME	83 Seconds	**CONTROL TYPE**	Signal

COMMENTS All approaches have protected left turns.

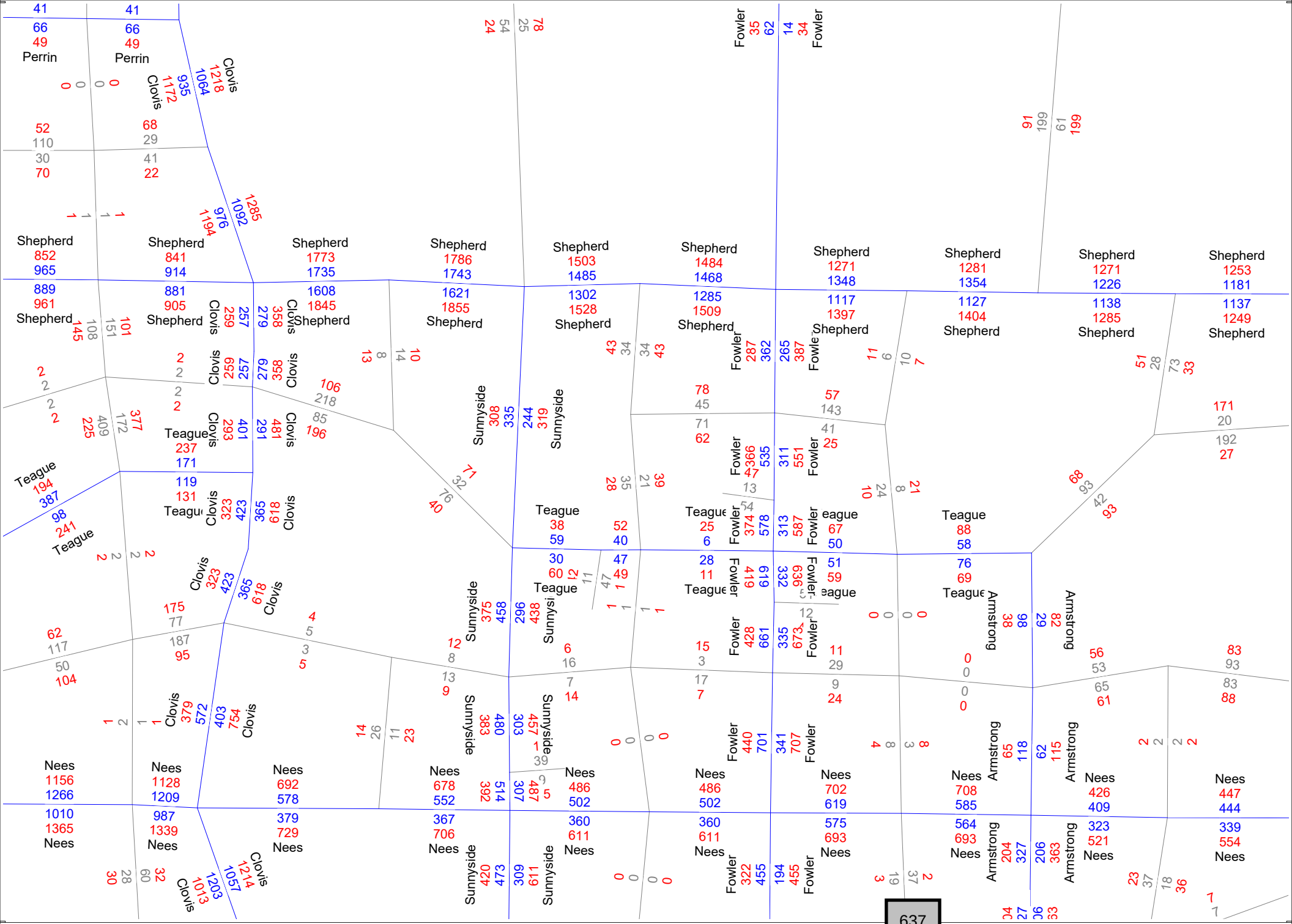


APPENDIX B
FRESNO COUNTY TRAVEL MODEL



2017 Council of Fresno County Governments Travel Demand Mo

AM and PM Peak Hour Traffic Volumes



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2035 With Project Council of Fresno County Governments Travel Dema del
AM and PM Peak Hour Traffic Volumes

APPENDIX C
INTERSECTION ANALYSES

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	7	1	1	14	3	16	1	69	2	7	164	2
Future Vol, veh/h	7	1	1	14	3	16	1	69	2	7	164	2
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	82	82	82	82	82	82
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	16	3	18	1	84	2	9	200	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	327	317	211	317	317	95	207	0	0	91	0	0
Stage 1	224	224	-	92	92	-	-	-	-	-	-	-
Stage 2	103	93	-	225	225	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	620	594	822	630	594	953	1346	-	-	1485	-	-
Stage 1	772	713	-	908	813	-	-	-	-	-	-	-
Stage 2	896	812	-	771	712	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	596	583	814	619	583	944	1340	-	-	1478	-	-
Mov Cap-2 Maneuver	596	583	-	619	583	-	-	-	-	-	-	-
Stage 1	767	704	-	903	808	-	-	-	-	-	-	-
Stage 2	870	807	-	760	703	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	10.1	0.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1340	-	-	613	738	1478	-	-
HCM Lane V/C Ratio	0.001	-	-	0.017	0.051	0.006	-	-
HCM Control Delay (s)	7.7	0	-	11	10.1	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	2	6	18	15	27	5	219	11	35	357	6
Future Vol, veh/h	1	2	6	18	15	27	5	219	11	35	357	6
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	79	79	79	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	2	7	20	17	31	6	277	14	39	397	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	809	792	411	789	788	294	409	0	0	296	0	0
Stage 1	484	484	-	301	301	-	-	-	-	-	-	-
Stage 2	325	308	-	488	487	-	-	-	-	-	-	-
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	299	322	641	308	323	745	1150	-	-	1265	-	-
Stage 1	564	552	-	708	665	-	-	-	-	-	-	-
Stage 2	687	660	-	561	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	262	304	635	290	305	738	1145	-	-	1259	-	-
Mov Cap-2 Maneuver	262	304	-	290	305	-	-	-	-	-	-	-
Stage 1	558	527	-	700	658	-	-	-	-	-	-	-
Stage 2	634	653	-	528	525	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	15.6	0.2	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1145	-	-	454	406	1259	-	-
HCM Lane V/C Ratio	0.006	-	-	0.023	0.168	0.031	-	-
HCM Control Delay (s)	8.2	0	-	13.1	15.6	8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.1	-	-

Intersection	
Intersection Delay, s/veh	29.9
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	224	89	13	353	6	99	49	7	30	140	18
Future Vol, veh/h	9	224	89	13	353	6	99	49	7	30	140	18
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.75	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	295	117	17	464	8	132	65	9	34	161	21
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	16.3	51.2	18.2	19.2
HCM LOS	C	F	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	67%	0%	7%	0%	100%	0%	16%
Vol Thru, %	33%	0%	93%	56%	0%	98%	74%
Vol Right, %	0%	100%	0%	44%	0%	2%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	7	121	201	13	359	188
LT Vol	99	0	9	0	13	0	30
Through Vol	49	0	112	112	0	353	140
RT Vol	0	7	0	89	0	6	18
Lane Flow Rate	197	9	159	264	17	472	216
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.469	0.019	0.334	0.529	0.036	0.936	0.496
Departure Headway (Hd)	8.555	7.486	7.556	7.198	7.776	7.25	8.26
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	480	478	503	463	505	439
Service Time	6.27	5.201	5.27	4.912	5.476	4.95	6.288
HCM Lane V/C Ratio	0.467	0.019	0.333	0.525	0.037	0.935	0.492
HCM Control Delay	18.6	10.3	14	17.7	10.8	52.7	19.2
HCM Lane LOS	C	B	B	C	B	F	C
HCM 95th-tile Q	2.4	0.1	1.5	3.1	0.1	11.4	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	154	86	90	240	41	130	207	32	44	321	24
Future Volume (veh/h)	29	154	86	90	240	41	130	207	32	44	321	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	45	237	132	111	296	51	134	213	33	48	353	26
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.81	0.81	0.81	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	484	260	143	393	68	171	576	488	83	445	33
Arrive On Green	0.04	0.22	0.22	0.08	0.25	0.25	0.10	0.31	0.31	0.05	0.26	0.26
Sat Flow, veh/h	1774	2217	1189	1774	1546	266	1774	1863	1576	1774	1713	126
Grp Volume(v), veh/h	45	187	182	111	0	347	134	213	33	48	0	379
Grp Sat Flow(s),veh/h/ln	1774	1770	1637	1774	0	1813	1774	1863	1576	1774	0	1840
Q Serve(g_s), s	1.4	5.3	5.5	3.5	0.0	10.0	4.2	5.1	0.8	1.5	0.0	10.9
Cycle Q Clear(g_c), s	1.4	5.3	5.5	3.5	0.0	10.0	4.2	5.1	0.8	1.5	0.0	10.9
Prop In Lane	1.00		0.73	1.00		0.15	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	79	387	358	143	0	461	171	576	488	83	0	478
V/C Ratio(X)	0.57	0.48	0.51	0.78	0.00	0.75	0.78	0.37	0.07	0.58	0.00	0.79
Avail Cap(c_a), veh/h	222	561	519	222	0	574	222	597	505	222	0	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	19.4	19.5	25.6	0.0	19.5	25.1	15.3	13.8	26.5	0.0	19.6
Incr Delay (d2), s/veh	6.2	0.9	1.1	8.9	0.0	4.4	12.9	0.4	0.1	6.2	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.7	2.6	2.0	0.0	5.6	2.7	2.7	0.4	0.9	0.0	6.3
LnGrp Delay(d),s/veh	32.8	20.3	20.6	34.5	0.0	23.9	37.9	15.7	13.9	32.8	0.0	25.6
LnGrp LOS	C	C	C	C		C	D	B	B	C		C
Approach Vol, veh/h		414			458			380			427	
Approach Delay, s/veh		21.8			26.5			23.4			26.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	22.5	9.5	17.3	10.4	19.7	7.4	19.3
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	3.5	7.1	5.5	7.5	6.2	12.9	3.4	12.0
Green Ext Time (p_c), s	0.0	2.5	0.0	3.0	0.0	1.6	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	45	369	111	347	134	213	33	48	379
v/c Ratio	0.23	0.43	0.55	0.69	0.64	0.32	0.05	0.25	0.79
Control Delay	32.0	15.1	41.7	30.2	46.9	21.1	0.1	32.3	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	15.1	41.7	30.2	46.9	21.1	0.1	32.3	36.6
Queue Length 50th (ft)	18	43	47	132	57	76	0	20	150
Queue Length 95th (ft)	34	46	#92	191	#142	136	0	50	#281
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	211	1097	211	573	211	666	672	211	568
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.34	0.53	0.61	0.64	0.32	0.05	0.23	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	1	3	10	3	9	1	89	5	7	89	1
Future Vol, veh/h	2	1	3	10	3	9	1	89	5	7	89	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	84	84	84	87	87	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	1	3	11	3	10	1	106	6	8	102	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	243	113	242	240	119	108	0	0	117	0	0
Stage 1	124	124	-	116	116	-	-	-	-	-	-	-
Stage 2	123	119	-	126	124	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	700	654	932	706	656	925	1464	-	-	1453	-	-
Stage 1	873	788	-	881	794	-	-	-	-	-	-	-
Stage 2	874	791	-	871	788	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	679	643	923	692	645	916	1457	-	-	1446	-	-
Mov Cap-2 Maneuver	679	643	-	692	645	-	-	-	-	-	-	-
Stage 1	868	779	-	876	789	-	-	-	-	-	-	-
Stage 2	856	786	-	857	779	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.9	0.1	0.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1457	-	-	774	761	1446	-	-
HCM Lane V/C Ratio	0.001	-	-	0.009	0.033	0.006	-	-
HCM Control Delay (s)	7.5	0	-	9.7	9.9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	3	5	12	5	30	9	430	20	15	339	6
Future Vol, veh/h	5	3	5	12	5	30	9	430	20	15	339	6
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	89	89	89	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	3	6	14	6	34	10	483	22	18	399	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	983	974	413	967	966	504	411	0	0	510	0	0
Stage 1	444	444	-	519	519	-	-	-	-	-	-	-
Stage 2	539	530	-	448	447	-	-	-	-	-	-	-
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	228	252	639	234	255	568	1148	-	-	1055	-	-
Stage 1	593	575	-	540	533	-	-	-	-	-	-	-
Stage 2	527	527	-	590	573	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	203	241	633	221	244	563	1143	-	-	1050	-	-
Mov Cap-2 Maneuver	203	241	-	221	244	-	-	-	-	-	-	-
Stage 1	583	559	-	531	524	-	-	-	-	-	-	-
Stage 2	482	518	-	566	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.1	16.5	0.2	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1143	-	-	289	367	1050	-	-
HCM Lane V/C Ratio	0.009	-	-	0.051	0.146	0.017	-	-
HCM Control Delay (s)	8.2	0	-	18.1	16.5	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	364	74	17	281	12	98	79	27	12	70	19
Future Vol, veh/h	19	364	74	17	281	12	98	79	27	12	70	19
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	428	87	19	312	13	115	93	32	14	80	22
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	15.3	19	15.4	13.2
HCM LOS	C	C	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	55%	0%	9%	0%	100%	0%	12%
Vol Thru, %	45%	0%	91%	71%	0%	96%	69%
Vol Right, %	0%	100%	0%	29%	0%	4%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	177	27	201	256	17	293	101
LT Vol	98	0	19	0	17	0	12
Through Vol	79	0	182	182	0	281	70
RT Vol	0	27	0	74	0	12	19
Lane Flow Rate	208	32	236	301	19	326	116
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.439	0.058	0.435	0.532	0.038	0.61	0.246
Departure Headway (Hd)	7.597	6.598	6.616	6.362	7.281	6.741	7.62
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	475	543	549	569	492	537	471
Service Time	5.342	4.342	4.316	4.062	5.023	4.483	5.672
HCM Lane V/C Ratio	0.438	0.059	0.43	0.529	0.039	0.607	0.246
HCM Control Delay	16.2	9.8	14.3	16.1	10.3	19.5	13.2
HCM Lane LOS	C	A	B	C	B	C	B
HCM 95th-tile Q	2.2	0.2	2.2	3.1	0.1	4.1	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	251	96	43	168	47	135	370	42	50	287	24
Future Volume (veh/h)	54	251	96	43	168	47	135	370	42	50	287	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	64	295	113	50	195	55	155	425	48	56	322	27
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	568	213	86	304	86	196	593	502	93	441	37
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.11	0.32	0.32	0.05	0.26	0.26
Sat Flow, veh/h	1774	2513	941	1774	1395	393	1774	1863	1576	1774	1695	142
Grp Volume(v), veh/h	64	206	202	50	0	250	155	425	48	56	0	349
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	0	1788	1774	1863	1576	1774	0	1837
Q Serve(g_s), s	1.9	5.6	5.8	1.5	0.0	7.0	4.7	11.1	1.2	1.7	0.0	9.6
Cycle Q Clear(g_c), s	1.9	5.6	5.8	1.5	0.0	7.0	4.7	11.1	1.2	1.7	0.0	9.6
Prop In Lane	1.00		0.56	1.00		0.22	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	100	400	380	86	0	389	196	593	502	93	0	478
V/C Ratio(X)	0.64	0.51	0.53	0.58	0.00	0.64	0.79	0.72	0.10	0.60	0.00	0.73
Avail Cap(c_a), veh/h	228	577	549	228	0	583	228	614	520	228	0	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	18.7	18.8	25.7	0.0	19.6	23.9	16.6	13.2	25.6	0.0	18.7
Incr Delay (d2), s/veh	6.5	1.0	1.2	6.1	0.0	1.8	15.0	3.9	0.1	6.2	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.9	2.8	0.9	0.0	3.7	3.1	6.3	0.5	1.0	0.0	5.3
LnGrp Delay(d),s/veh	32.0	19.7	20.0	31.8	0.0	21.4	38.9	20.5	13.3	31.8	0.0	22.0
LnGrp LOS	C	B	B	C		C	D	C	B	C		C
Approach Vol, veh/h		472			300			628			405	
Approach Delay, s/veh		21.5			23.1			24.5			23.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	22.5	7.6	17.4	11.0	19.3	8.0	16.9
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	3.7	13.1	3.5	7.8	6.7	11.6	3.9	9.0
Green Ext Time (p_c), s	0.0	2.0	0.0	2.7	0.0	2.5	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	64	408	50	250	155	425	48	56	349
v/c Ratio	0.30	0.50	0.24	0.60	0.66	0.60	0.07	0.26	0.71
Control Delay	31.8	19.1	30.8	26.8	46.6	25.7	0.2	31.2	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	19.1	30.8	26.8	46.6	25.7	0.2	31.2	30.3
Queue Length 50th (ft)	24	61	19	84	62	159	0	21	122
Queue Length 95th (ft)	57	92	48	143	#159	#311	0	55	#242
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	234	1180	234	614	234	711	706	234	627
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.35	0.21	0.41	0.66	0.60	0.07	0.24	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	1	27	3	24	1	69	6	10	164	2
Future Vol, veh/h	7	1	1	27	3	24	1	69	6	10	164	2
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	82	82	82	82	82	82
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	31	3	27	1	84	7	12	200	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	340	328	211	326	326	98	207	0	0	96	0	0
Stage 1	230	230	-	95	95	-	-	-	-	-	-	-
Stage 2	110	98	-	231	231	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	608	586	822	621	587	950	1346	-	-	1479	-	-
Stage 1	766	708	-	904	810	-	-	-	-	-	-	-
Stage 2	888	808	-	765	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	578	574	814	609	575	941	1340	-	-	1472	-	-
Mov Cap-2 Maneuver	578	574	-	609	575	-	-	-	-	-	-	-
Stage 1	761	698	-	899	805	-	-	-	-	-	-	-
Stage 2	854	803	-	752	698	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	10.5	0.1	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1340	-	-	597	719	1472	-	-
HCM Lane V/C Ratio	0.001	-	-	0.017	0.085	0.008	-	-
HCM Control Delay (s)	7.7	0	-	11.1	10.5	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	2	19	18	15	27	9	219	11	35	357	9
Future Vol, veh/h	9	2	19	18	15	27	9	219	11	35	357	9
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	79	79	79	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	2	22	20	17	31	11	277	14	39	397	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	820	803	412	808	801	294	412	0	0	296	0	0
Stage 1	485	485	-	311	311	-	-	-	-	-	-	-
Stage 2	335	318	-	497	490	-	-	-	-	-	-	-
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	294	317	640	299	318	745	1147	-	-	1265	-	-
Stage 1	563	552	-	699	658	-	-	-	-	-	-	-
Stage 2	679	654	-	555	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	257	298	634	273	299	738	1142	-	-	1259	-	-
Mov Cap-2 Maneuver	257	298	-	273	299	-	-	-	-	-	-	-
Stage 1	553	527	-	687	647	-	-	-	-	-	-	-
Stage 2	623	643	-	510	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.4	16.1	0.3	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1142	-	-	418	393	1259	-	-
HCM Lane V/C Ratio	0.01	-	-	0.082	0.173	0.031	-	-
HCM Control Delay (s)	8.2	0	-	14.4	16.1	8	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.6	0.1	-	-

Intersection	
Intersection Delay, s/veh	32.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	224	89	13	353	6	99	51	7	30	147	24
Future Vol, veh/h	11	224	89	13	353	6	99	51	7	30	147	24
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.75	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	295	117	17	464	8	132	68	9	34	169	28
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	16.9	58.3	18.8	20.6
HCM LOS	C	F	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	66%	0%	9%	0%	100%	0%	15%
Vol Thru, %	34%	0%	91%	56%	0%	98%	73%
Vol Right, %	0%	100%	0%	44%	0%	2%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	7	123	201	13	359	201
LT Vol	99	0	11	0	13	0	30
Through Vol	51	0	112	112	0	353	147
RT Vol	0	7	0	89	0	6	24
Lane Flow Rate	200	9	162	264	17	472	231
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.481	0.02	0.346	0.538	0.038	0.968	0.534
Departure Headway (Hd)	8.657	7.592	7.687	7.321	7.902	7.376	8.322
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	416	471	468	492	456	496	432
Service Time	6.416	5.351	5.442	5.076	5.602	5.076	6.385
HCM Lane V/C Ratio	0.481	0.019	0.346	0.537	0.037	0.952	0.535
HCM Control Delay	19.2	10.5	14.5	18.3	10.9	60	20.6
HCM Lane LOS	C	B	B	C	B	F	C
HCM 95th-tile Q	2.5	0.1	1.5	3.1	0.1	12.4	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	154	86	90	240	42	130	210	32	46	332	24
Future Volume (veh/h)	29	154	86	90	240	42	130	210	32	46	332	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	45	237	132	111	296	52	134	216	33	51	365	26
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.81	0.81	0.81	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	483	259	142	391	69	171	581	491	86	454	32
Arrive On Green	0.04	0.22	0.22	0.08	0.25	0.25	0.10	0.31	0.31	0.05	0.26	0.26
Sat Flow, veh/h	1774	2217	1189	1774	1541	271	1774	1863	1576	1774	1718	122
Grp Volume(v), veh/h	45	187	182	111	0	348	134	216	33	51	0	391
Grp Sat Flow(s),veh/h/ln	1774	1770	1637	1774	0	1812	1774	1863	1576	1774	0	1840
Q Serve(g_s), s	1.4	5.3	5.6	3.5	0.0	10.2	4.2	5.2	0.8	1.6	0.0	11.4
Cycle Q Clear(g_c), s	1.4	5.3	5.6	3.5	0.0	10.2	4.2	5.2	0.8	1.6	0.0	11.4
Prop In Lane	1.00		0.73	1.00		0.15	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	79	385	356	142	0	459	171	581	491	86	0	486
V/C Ratio(X)	0.57	0.49	0.51	0.78	0.00	0.76	0.78	0.37	0.07	0.59	0.00	0.80
Avail Cap(c_a), veh/h	220	555	514	220	0	569	220	591	500	220	0	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	19.6	19.7	25.9	0.0	19.8	25.3	15.4	13.9	26.7	0.0	19.7
Incr Delay (d2), s/veh	6.3	1.0	1.1	9.2	0.0	4.6	13.2	0.4	0.1	6.4	0.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.7	2.6	2.1	0.0	5.6	2.7	2.7	0.4	0.9	0.0	6.7
LnGrp Delay(d),s/veh	33.1	20.6	20.9	35.0	0.0	24.4	38.5	15.8	13.9	33.1	0.0	26.6
LnGrp LOS	C	C	C	D		C	D	B	B	C		C
Approach Vol, veh/h		414			459			383			442	
Approach Delay, s/veh		22.1			27.0			23.6			27.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	22.8	9.5	17.4	10.4	20.0	7.5	19.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	3.6	7.2	5.5	7.6	6.2	13.4	3.4	12.2
Green Ext Time (p_c), s	0.0	2.6	0.0	3.0	0.0	1.5	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	45	369	111	348	134	216	33	51	391
v/c Ratio	0.24	0.43	0.55	0.70	0.64	0.32	0.05	0.27	0.80
Control Delay	32.1	15.2	41.9	30.4	47.2	21.1	0.1	32.7	37.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	15.2	41.9	30.4	47.2	21.1	0.1	32.7	37.7
Queue Length 50th (ft)	18	43	47	132	57	78	0	21	156
Queue Length 95th (ft)	34	46	#92	191	#142	137	0	52	#295
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	210	1090	210	570	210	669	675	210	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.34	0.53	0.61	0.64	0.32	0.05	0.24	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	1	3	18	3	14	1	89	19	16	89	1
Future Vol, veh/h	2	1	3	18	3	14	1	89	19	16	89	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	84	84	84	87	87	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	1	3	20	3	16	1	106	23	18	102	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	278	280	113	271	269	128	108	0	0	134	0	0
Stage 1	144	144	-	125	125	-	-	-	-	-	-	-
Stage 2	134	136	-	146	144	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	668	623	932	675	632	914	1464	-	-	1432	-	-
Stage 1	852	772	-	872	787	-	-	-	-	-	-	-
Stage 2	862	778	-	850	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	641	608	923	658	617	905	1457	-	-	1425	-	-
Mov Cap-2 Maneuver	641	608	-	658	617	-	-	-	-	-	-	-
Stage 1	847	758	-	867	782	-	-	-	-	-	-	-
Stage 2	838	773	-	831	758	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.2	0.1	1.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1457	-	-	749	734	1425	-	-
HCM Lane V/C Ratio	0.001	-	-	0.009	0.054	0.013	-	-
HCM Control Delay (s)	7.5	0	-	9.9	10.2	7.6	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	3	13	12	5	30	23	430	20	15	339	15
Future Vol, veh/h	10	3	13	12	5	30	23	430	20	15	339	15
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	89	89	89	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	3	15	14	6	34	26	483	22	18	399	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1020	1011	418	1009	1009	504	422	0	0	510	0	0
Stage 1	449	449	-	551	551	-	-	-	-	-	-	-
Stage 2	571	562	-	458	458	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	215	240	635	219	240	568	1137	-	-	1055	-	-
Stage 1	589	572	-	519	515	-	-	-	-	-	-	-
Stage 2	506	510	-	583	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	188	225	629	201	225	563	1132	-	-	1050	-	-
Mov Cap-2 Maneuver	188	225	-	201	225	-	-	-	-	-	-	-
Stage 1	567	557	-	500	496	-	-	-	-	-	-	-
Stage 2	453	491	-	551	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.4	17.2	0.4	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1132	-	-	298	348	1050	-	-
HCM Lane V/C Ratio	0.023	-	-	0.099	0.153	0.017	-	-
HCM Control Delay (s)	8.3	0	-	18.4	17.2	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	364	74	17	281	12	98	87	27	12	74	23
Future Vol, veh/h	25	364	74	17	281	12	98	87	27	12	74	23
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	428	87	19	312	13	115	102	32	14	85	26
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	15.8	19.7	16	13.6
HCM LOS	C	C	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	53%	0%	12%	0%	100%	0%	11%
Vol Thru, %	47%	0%	88%	71%	0%	96%	68%
Vol Right, %	0%	100%	0%	29%	0%	4%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	27	207	256	17	293	109
LT Vol	98	0	25	0	17	0	12
Through Vol	87	0	182	182	0	281	74
RT Vol	0	27	0	74	0	12	23
Lane Flow Rate	218	32	244	301	19	326	125
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.463	0.059	0.453	0.538	0.039	0.62	0.268
Departure Headway (Hd)	7.664	6.676	6.703	6.435	7.402	6.861	7.694
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	537	538	560	484	527	466
Service Time	5.405	4.417	4.442	4.174	5.142	4.601	5.745
HCM Lane V/C Ratio	0.464	0.06	0.454	0.537	0.039	0.619	0.268
HCM Control Delay	16.9	9.8	14.9	16.5	10.4	20.2	13.6
HCM Lane LOS	C	A	B	C	B	C	B
HCM 95th-tile Q	2.4	0.2	2.3	3.2	0.1	4.2	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	251	96	43	168	53	135	378	42	51	294	24
Future Volume (veh/h)	54	251	96	43	168	53	135	378	42	51	294	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	64	295	113	50	195	62	155	434	48	57	330	27
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	574	215	86	298	95	196	596	504	93	445	36
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.11	0.32	0.32	0.05	0.26	0.26
Sat Flow, veh/h	1774	2513	941	1774	1351	430	1774	1863	1576	1774	1698	139
Grp Volume(v), veh/h	64	206	202	50	0	257	155	434	48	57	0	357
Grp Sat Flow(s),veh/h/ln	1774	1770	1684	1774	0	1781	1774	1863	1576	1774	0	1837
Q Serve(g_s), s	2.0	5.7	5.9	1.5	0.0	7.3	4.8	11.5	1.2	1.8	0.0	9.9
Cycle Q Clear(g_c), s	2.0	5.7	5.9	1.5	0.0	7.3	4.8	11.5	1.2	1.8	0.0	9.9
Prop In Lane	1.00		0.56	1.00		0.24	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	100	404	385	86	0	392	196	596	504	93	0	482
V/C Ratio(X)	0.64	0.51	0.53	0.58	0.00	0.66	0.79	0.73	0.10	0.61	0.00	0.74
Avail Cap(c_a), veh/h	225	570	543	225	0	574	225	607	513	225	0	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	18.8	18.9	26.0	0.0	19.8	24.2	16.8	13.3	25.9	0.0	18.9
Incr Delay (d2), s/veh	6.6	1.0	1.1	6.2	0.0	1.9	15.4	4.3	0.1	6.3	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.9	2.8	0.9	0.0	3.8	3.2	6.6	0.5	1.0	0.0	5.6
LnGrp Delay(d),s/veh	32.5	19.8	20.0	32.2	0.0	21.7	39.6	21.2	13.4	32.2	0.0	22.7
LnGrp LOS	C	B	C	C		C	D	C	B	C		C
Approach Vol, veh/h		472			307			637			414	
Approach Delay, s/veh		21.6			23.4			25.1			24.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	22.8	7.6	17.7	11.1	19.6	8.0	17.2
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	3.8	13.5	3.5	7.9	6.8	11.9	4.0	9.3
Green Ext Time (p_c), s	0.0	2.0	0.0	2.7	0.0	2.4	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	64	408	50	257	155	434	48	57	357
v/c Ratio	0.30	0.50	0.24	0.62	0.67	0.61	0.07	0.27	0.72
Control Delay	32.0	19.1	31.0	27.1	47.0	26.3	0.2	31.4	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	19.1	31.0	27.1	47.0	26.3	0.2	31.4	31.0
Queue Length 50th (ft)	24	61	19	87	62	164	0	22	126
Queue Length 95th (ft)	57	92	48	146	#159	#321	0	55	#251
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	232	1173	232	609	232	712	707	232	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.35	0.22	0.42	0.67	0.61	0.07	0.25	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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	7	1	1	29	3	25	1	102	7	11	292	2
Future Vol, veh/h	7	1	1	29	3	25	1	102	7	11	292	2
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	82	82	82	82	82	82
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	33	3	28	1	124	9	13	356	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	539	528	367	525	525	139	363	0	0	138	0	0
Stage 1	388	388	-	136	136	-	-	-	-	-	-	-
Stage 2	151	140	-	389	389	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	449	451	672	458	453	901	1179	-	-	1427	-	-
Stage 1	630	604	-	860	778	-	-	-	-	-	-	-
Stage 2	844	775	-	629	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	424	441	666	448	443	892	1173	-	-	1420	-	-
Mov Cap-2 Maneuver	424	441	-	448	443	-	-	-	-	-	-	-
Stage 1	626	594	-	855	773	-	-	-	-	-	-	-
Stage 2	809	770	-	617	593	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.3	12.1	0.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1173	-	-	444	573	1420	-	-
HCM Lane V/C Ratio	0.001	-	-	0.023	0.113	0.009	-	-
HCM Control Delay (s)	8.1	0	-	13.3	12.1	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	2	19	18	15	29	9	249	11	40	455	12
Future Vol, veh/h	11	2	19	18	15	29	9	249	11	40	455	12
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	79	79	79	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	2	22	20	17	33	11	315	14	44	506	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	980	962	523	967	961	332	524	0	0	334	0	0
Stage 1	606	606	-	349	349	-	-	-	-	-	-	-
Stage 2	374	356	-	618	612	-	-	-	-	-	-	-
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	229	256	554	234	256	710	1043	-	-	1225	-	-
Stage 1	484	487	-	667	633	-	-	-	-	-	-	-
Stage 2	647	629	-	477	484	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	194	237	549	210	237	703	1038	-	-	1219	-	-
Mov Cap-2 Maneuver	194	237	-	210	237	-	-	-	-	-	-	-
Stage 1	475	460	-	655	622	-	-	-	-	-	-	-
Stage 2	589	618	-	431	457	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	19.1	0.3	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1038	-	-	321	326	1219	-	-
HCM Lane V/C Ratio	0.011	-	-	0.113	0.216	0.036	-	-
HCM Control Delay (s)	8.5	0	-	17.6	19.1	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.8	0.1	-	-

Intersection	
Intersection Delay, s/veh	61.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	226	89	13	359	17	99	68	7	60	199	70
Future Vol, veh/h	16	226	89	13	359	17	99	68	7	60	199	70
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.75	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	297	117	17	472	22	132	91	9	69	229	80
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	21.9	117.2	24.6	52.7
HCM LOS	C	F	C	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	59%	0%	12%	0%	100%	0%	18%
Vol Thru, %	41%	0%	88%	56%	0%	95%	60%
Vol Right, %	0%	100%	0%	44%	0%	5%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	7	129	202	13	376	329
LT Vol	99	0	16	0	13	0	60
Through Vol	68	0	113	113	0	359	199
RT Vol	0	7	0	89	0	17	70
Lane Flow Rate	223	9	170	266	17	495	378
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.573	0.022	0.41	0.614	0.043	1.155	0.891
Departure Headway (Hd)	9.9	8.856	9.144	8.756	8.957	8.404	9.079
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	367	407	395	415	401	435	401
Service Time	7.6	6.556	6.844	6.456	6.676	6.123	7.079
HCM Lane V/C Ratio	0.608	0.022	0.43	0.641	0.042	1.138	0.943
HCM Control Delay	25.1	11.8	18.1	24.4	12.1	120.8	52.7
HCM Lane LOS	D	B	C	C	B	F	F
HCM 95th-tile Q	3.4	0.1	2	4	0.1	18.4	9.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	163	107	90	243	46	138	234	32	59	411	30
Future Volume (veh/h)	31	163	107	90	243	46	138	234	32	59	411	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	48	251	165	111	300	57	142	241	33	65	452	33
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.65	0.65	0.65	0.81	0.81	0.81	0.97	0.97	0.97	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	446	282	142	380	72	179	625	529	96	495	36
Arrive On Green	0.05	0.22	0.22	0.08	0.25	0.25	0.10	0.34	0.34	0.05	0.29	0.29
Sat Flow, veh/h	1774	2072	1311	1774	1520	289	1774	1863	1576	1774	1715	125
Grp Volume(v), veh/h	48	213	203	111	0	357	142	241	33	65	0	485
Grp Sat Flow(s),veh/h/ln	1774	1770	1613	1774	0	1808	1774	1863	1576	1774	0	1840
Q Serve(g_s), s	1.7	6.7	7.0	3.8	0.0	11.5	4.9	6.1	0.9	2.2	0.0	15.8
Cycle Q Clear(g_c), s	1.7	6.7	7.0	3.8	0.0	11.5	4.9	6.1	0.9	2.2	0.0	15.8
Prop In Lane	1.00		0.81	1.00		0.16	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	80	381	347	142	0	452	179	625	529	96	0	531
V/C Ratio(X)	0.60	0.56	0.59	0.78	0.00	0.79	0.79	0.39	0.06	0.68	0.00	0.91
Avail Cap(c_a), veh/h	203	512	467	203	0	523	203	625	529	203	0	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	21.8	21.9	28.1	0.0	21.8	27.3	15.8	14.0	28.9	0.0	21.4
Incr Delay (d2), s/veh	6.9	1.3	1.6	11.7	0.0	7.0	17.2	0.4	0.0	8.0	0.0	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.4	3.3	2.3	0.0	6.5	3.2	3.2	0.4	1.3	0.0	10.9
LnGrp Delay(d),s/veh	36.0	23.1	23.5	39.8	0.0	28.8	44.5	16.2	14.1	36.8	0.0	41.3
LnGrp LOS	D	C	C	D		C	D	B	B	D		D
Approach Vol, veh/h		464			468			416			550	
Approach Delay, s/veh		24.6			31.4			25.7			40.8	
Approach LOS		C			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	25.8	9.9	18.3	11.2	22.8	7.7	20.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	4.2	8.1	5.8	9.0	6.9	17.8	3.7	13.5
Green Ext Time (p_c), s	0.0	3.0	0.0	3.0	0.0	0.1	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	416	111	357	142	241	33	65	485
v/c Ratio	0.26	0.48	0.58	0.73	0.72	0.35	0.05	0.35	0.91
Control Delay	32.8	14.9	43.9	32.6	53.3	21.1	0.1	34.8	49.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	14.9	43.9	32.6	53.3	21.1	0.1	34.8	49.2
Queue Length 50th (ft)	20	45	47	136	61	88	0	27	~209
Queue Length 95th (ft)	35	47	#92	197	#152	153	0	62	#398
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	198	1055	198	540	198	698	696	198	534
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.39	0.56	0.66	0.72	0.35	0.05	0.33	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	454	66	10	348	4	69	12	41	3	9	7
Future Vol, veh/h	9	454	66	10	348	4	69	12	41	3	9	7
Peak Hour Factor	0.91	0.91	0.91	0.97	0.97	0.97	0.80	0.80	0.80	0.68	0.68	0.68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	499	73	10	359	4	86	15	51	4	13	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.1	14.6	11.5	9.9
HCM LOS	D	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	2%	3%	16%
Vol Thru, %	10%	86%	96%	47%
Vol Right, %	34%	12%	1%	37%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	529	362	19
LT Vol	69	9	10	3
Through Vol	12	454	348	9
RT Vol	41	66	4	7
Lane Flow Rate	152	581	373	28
Geometry Grp	1	1	1	1
Degree of Util (X)	0.264	0.803	0.548	0.05
Departure Headway (Hd)	6.227	4.973	5.289	6.498
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	575	727	683	548
Service Time	4.281	3.007	3.329	4.571
HCM Lane V/C Ratio	0.264	0.799	0.546	0.051
HCM Control Delay	11.5	25.1	14.6	9.9
HCM Lane LOS	B	D	B	A
HCM 95th-tile Q	1.1	8.3	3.3	0.2

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	2	1	3	19	3	15	1	227	20	18	173	1
Future Vol, veh/h	2	1	3	19	3	15	1	227	20	18	173	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	84	84	84	87	87	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	1	3	22	3	17	1	270	24	21	199	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	546	548	210	538	536	292	205	0	0	299	0	0
Stage 1	247	247	-	289	289	-	-	-	-	-	-	-
Stage 2	299	301	-	249	247	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	444	440	823	449	447	740	1349	-	-	1245	-	-
Stage 1	750	696	-	712	668	-	-	-	-	-	-	-
Stage 2	703	660	-	748	696	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	420	427	815	435	434	733	1343	-	-	1239	-	-
Mov Cap-2 Maneuver	420	427	-	435	434	-	-	-	-	-	-	-
Stage 1	746	679	-	708	664	-	-	-	-	-	-	-
Stage 2	679	656	-	726	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	12.5	0	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1343	-	-	556	521	1239	-	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.081	0.017	-	-
HCM Control Delay (s)	7.7	0	-	11.6	12.5	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-

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	13	3	13	12	5	35	23	540	20	18	404	17
Future Vol, veh/h	13	3	13	12	5	35	23	540	20	18	404	17
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	89	89	89	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	3	15	14	6	40	26	607	22	21	475	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1230	1218	495	1216	1217	628	500	0	0	634	0	0
Stage 1	532	532	-	675	675	-	-	-	-	-	-	-
Stage 2	698	686	-	541	542	-	-	-	-	-	-	-
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	154	181	575	158	181	483	1064	-	-	949	-	-
Stage 1	531	526	-	444	453	-	-	-	-	-	-	-
Stage 2	431	448	-	525	520	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	129	167	570	142	167	478	1059	-	-	944	-	-
Mov Cap-2 Maneuver	129	167	-	142	167	-	-	-	-	-	-	-
Stage 1	508	507	-	425	434	-	-	-	-	-	-	-
Stage 2	373	429	-	490	501	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.9	21.5	0.3	0.4
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	205	277	944	-	-
HCM Lane V/C Ratio	0.024	-	-	0.161	0.213	0.022	-	-
HCM Control Delay (s)	8.5	0	-	25.9	21.5	8.9	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.8	0.1	-	-

Intersection	
Intersection Delay, s/veh	28.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	370	74	17	283	42	98	145	27	32	108	53
Future Vol, veh/h	75	370	74	17	283	42	98	145	27	32	108	53
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	435	87	19	314	47	115	171	32	37	124	61
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	25.8	36.6	27	22
HCM LOS	D	E	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	40%	0%	29%	0%	100%	0%	17%
Vol Thru, %	60%	0%	71%	71%	0%	87%	56%
Vol Right, %	0%	100%	0%	29%	0%	13%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	27	260	259	17	325	193
LT Vol	98	0	75	0	17	0	32
Through Vol	145	0	185	185	0	283	108
RT Vol	0	27	0	74	0	42	53
Lane Flow Rate	286	32	306	305	19	361	222
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.69	0.068	0.69	0.657	0.046	0.814	0.544
Departure Headway (Hd)	8.692	7.758	8.122	7.766	8.724	8.112	8.836
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	417	462	444	466	411	448	408
Service Time	6.443	5.508	5.878	5.521	6.474	5.862	6.899
HCM Lane V/C Ratio	0.686	0.069	0.689	0.655	0.046	0.806	0.544
HCM Control Delay	28.8	11.1	27.2	24.3	11.9	37.9	22
HCM Lane LOS	D	B	D	C	B	E	C
HCM 95th-tile Q	5.1	0.2	5.1	4.7	0.1	7.6	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	257	110	43	177	67	156	468	42	58	350	26
Future Volume (veh/h)	60	257	110	43	177	67	156	468	42	58	350	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	71	302	129	50	206	78	179	538	48	65	393	29
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.87	0.87	0.87	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	579	242	84	293	111	212	614	520	98	455	34
Arrive On Green	0.06	0.24	0.24	0.05	0.23	0.23	0.12	0.33	0.33	0.06	0.27	0.27
Sat Flow, veh/h	1774	2428	1013	1774	1284	486	1774	1863	1576	1774	1713	126
Grp Volume(v), veh/h	71	218	213	50	0	284	179	538	48	65	0	422
Grp Sat Flow(s),veh/h/ln	1774	1770	1671	1774	0	1771	1774	1863	1576	1774	0	1840
Q Serve(g_s), s	2.3	6.4	6.6	1.6	0.0	8.8	5.9	16.2	1.3	2.1	0.0	13.0
Cycle Q Clear(g_c), s	2.3	6.4	6.6	1.6	0.0	8.8	5.9	16.2	1.3	2.1	0.0	13.0
Prop In Lane	1.00		0.61	1.00		0.27	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	103	422	399	84	0	403	212	614	520	98	0	489
V/C Ratio(X)	0.69	0.52	0.53	0.60	0.00	0.70	0.85	0.88	0.09	0.66	0.00	0.86
Avail Cap(c_a), veh/h	212	535	505	212	0	535	212	614	520	212	0	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	19.7	19.8	27.8	0.0	21.1	25.7	18.8	13.8	27.6	0.0	20.8
Incr Delay (d2), s/veh	7.9	1.0	1.1	6.6	0.0	2.7	25.9	13.5	0.1	7.4	0.0	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.2	3.1	1.0	0.0	4.6	4.4	10.5	0.6	1.2	0.0	8.2
LnGrp Delay(d),s/veh	35.5	20.7	20.9	34.4	0.0	23.9	51.6	32.3	13.9	35.0	0.0	32.7
LnGrp LOS	D	C	C	C		C	D	C	B	C		C
Approach Vol, veh/h		502			334			765			487	
Approach Delay, s/veh		22.9			25.5			35.6			33.0	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	24.5	7.7	19.1	12.0	20.7	8.4	18.5
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	18.2	7.1	18.0	7.1	18.2	7.1	18.0
Max Q Clear Time (g_c+I1), s	4.1	18.2	3.6	8.6	7.9	15.0	4.3	10.8
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.0	0.7	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	71	431	50	284	179	538	48	65	422
v/c Ratio	0.35	0.52	0.25	0.67	0.81	0.74	0.07	0.32	0.81
Control Delay	33.5	18.8	31.6	28.7	61.4	32.5	0.2	32.9	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	18.8	31.6	28.7	61.4	32.5	0.2	32.9	36.5
Queue Length 50th (ft)	28	63	19	97	74	~249	0	25	160
Queue Length 95th (ft)	63	95	48	161	#186	#426	0	61	#322
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	221	1123	221	578	221	725	716	221	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.38	0.23	0.49	0.81	0.74	0.07	0.29	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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	41	2	23	62	6	45	15	294	15	18	378	4
Future Vol, veh/h	41	2	23	62	6	45	15	294	15	18	378	4
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	45	2	25	67	7	49	16	320	16	20	411	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	851	831	423	837	825	338	420	0	0	341	0	0
Stage 1	458	458	-	365	365	-	-	-	-	-	-	-
Stage 2	393	373	-	472	460	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	277	302	624	283	304	697	1123	-	-	1202	-	-
Stage 1	577	562	-	648	618	-	-	-	-	-	-	-
Stage 2	626	613	-	567	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	243	287	618	259	289	690	1118	-	-	1196	-	-
Mov Cap-2 Maneuver	243	287	-	259	289	-	-	-	-	-	-	-
Stage 1	564	547	-	633	604	-	-	-	-	-	-	-
Stage 2	562	599	-	527	546	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.1	21	0.4	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1118	-	-	310	347	1196	-	-
HCM Lane V/C Ratio	0.015	-	-	0.231	0.354	0.016	-	-
HCM Control Delay (s)	8.3	0	-	20.1	21	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	1.6	0.1	-	-

Intersection	
Int Delay, s/veh	14.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	6	45	43	28	50	22	430	19	65	712	21
Future Vol, veh/h	12	6	45	43	28	50	22	430	19	65	712	21
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	7	49	47	30	54	24	467	21	71	774	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1506	1474	796	1492	1475	488	802	0	0	493	0	0
Stage 1	933	933	-	531	531	-	-	-	-	-	-	-
Stage 2	573	541	-	961	944	-	-	-	-	-	-	-
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	99	127	387	102	126	580	822	-	-	1071	-	-
Stage 1	319	345	-	532	526	-	-	-	-	-	-	-
Stage 2	505	521	-	308	341	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	106	383	74	105	574	818	-	-	1066	-	-
Mov Cap-2 Maneuver	61	106	-	74	105	-	-	-	-	-	-	-
Stage 1	305	302	-	508	502	-	-	-	-	-	-	-
Stage 2	410	498	-	230	299	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.8	150.5	0.4	0.7
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	818	-	-	170	129	1066	-	-
HCM Lane V/C Ratio	0.029	-	-	0.403	1.02	0.066	-	-
HCM Control Delay (s)	9.5	0	-	39.8	150.5	8.6	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	7.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	334
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	451	135	36	743	42	148	241	18	104	382	70
Future Vol, veh/h	35	451	135	36	743	42	148	241	18	104	382	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	490	147	39	808	46	161	262	20	113	415	76
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	86.3	592.3	145.5	367.2
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	38%	0%	13%	0%	100%	0%	19%
Vol Thru, %	62%	0%	87%	63%	0%	95%	69%
Vol Right, %	0%	100%	0%	37%	0%	5%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	389	18	261	361	36	785	556
LT Vol	148	0	35	0	36	0	104
Through Vol	241	0	226	226	0	743	382
RT Vol	0	18	0	135	0	42	70
Lane Flow Rate	423	20	283	392	39	853	604
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	1.167	0.049	0.77	1.03	0.111	2.298	1.708
Departure Headway (Hd)	14.934	13.966	15.417	15.054	12.345	11.768	14.277
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	249	258	238	247	292	316	260
Service Time	12.634	11.666	13.117	12.754	10.045	9.468	12.277
HCM Lane V/C Ratio	1.699	0.078	1.189	1.587	0.134	2.699	2.323
HCM Control Delay	151.4	17.4	55.9	108.3	16.6	618.7	367.2
HCM Lane LOS	F	C	F	F	C	F	F
HCM 95th-tile Q	13.1	0.2	5.5	10.1	0.4	54.5	28.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	451	134	134	658	138	198	249	54	223	531	66
Future Volume (veh/h)	55	451	134	134	658	138	198	249	54	223	531	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	60	490	103	146	715	105	215	271	42	242	577	50
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	1019	213	169	639	94	179	511	432	265	544	47
Arrive On Green	0.04	0.35	0.35	0.10	0.40	0.40	0.10	0.27	0.27	0.15	0.32	0.32
Sat Flow, veh/h	1774	2911	609	1774	1587	233	1774	1863	1575	1774	1690	146
Grp Volume(v), veh/h	60	297	296	146	0	820	215	271	42	242	0	627
Grp Sat Flow(s),veh/h/ln	1774	1770	1750	1774	0	1820	1774	1863	1575	1774	0	1836
Q Serve(g_s), s	5.0	19.6	19.8	12.1	0.0	60.1	15.1	18.5	3.0	20.1	0.0	48.1
Cycle Q Clear(g_c), s	5.0	19.6	19.8	12.1	0.0	60.1	15.1	18.5	3.0	20.1	0.0	48.1
Prop In Lane	1.00		0.35	1.00		0.13	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	76	619	613	169	0	732	179	511	432	265	0	591
V/C Ratio(X)	0.79	0.48	0.48	0.86	0.00	1.12	1.20	0.53	0.10	0.91	0.00	1.06
Avail Cap(c_a), veh/h	84	619	613	251	0	732	179	511	432	298	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.8	37.9	38.0	66.6	0.0	44.6	67.1	46.0	40.4	62.6	0.0	50.6
Incr Delay (d2), s/veh	34.9	0.6	0.6	17.8	0.0	71.2	130.7	1.0	0.1	29.2	0.0	54.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	9.7	9.6	6.8	0.0	44.6	13.9	9.6	1.3	12.0	0.0	33.2
LnGrp Delay(d),s/veh	105.7	38.5	38.6	84.3	0.0	115.8	197.8	47.1	40.5	91.8	0.0	104.6
LnGrp LOS	F	D	D	F		F	F	D	D	F		F
Approach Vol, veh/h		653			966			528			869	
Approach Delay, s/veh		44.7			111.0			107.9			101.0	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.2	45.8	19.2	57.2	20.0	53.0	11.3	65.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	25.1	38.1	21.1	46.1	15.1	48.1	7.1	60.1
Max Q Clear Time (g_c+I1), s	22.1	20.5	14.1	21.8	17.1	50.1	7.0	62.1
Green Ext Time (p_c), s	0.2	5.2	0.2	10.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	93.2
HCM 2010 LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	636	146	865	215	271	59	242	649
v/c Ratio	0.72	0.55	0.73	1.19	1.21	0.55	0.11	0.88	1.10
Control Delay	112.4	41.7	84.3	138.6	188.6	52.9	0.4	91.8	115.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.4	41.7	84.3	138.6	188.6	52.9	0.4	91.8	115.1
Queue Length 50th (ft)	59	257	140	~1016	~255	233	0	232	~719
Queue Length 95th (ft)	#138	334	214	#1277	#428	333	0	#369	#965
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	83	1150	248	726	178	494	524	296	588
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.55	0.59	1.19	1.21	0.55	0.11	0.82	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	2	9	41	6	27	11	374	49	30	379	35
Future Vol, veh/h	20	2	9	41	6	27	11	374	49	30	379	35
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	22	2	10	45	7	29	12	407	53	33	412	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	983	991	441	971	984	444	455	0	0	465	0	0
Stage 1	502	502	-	463	463	-	-	-	-	-	-	-
Stage 2	481	489	-	508	521	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	225	243	610	229	245	608	1090	-	-	1081	-	-
Stage 1	546	537	-	573	559	-	-	-	-	-	-	-
Stage 2	561	544	-	542	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	199	227	604	212	229	602	1085	-	-	1076	-	-
Mov Cap-2 Maneuver	199	227	-	212	229	-	-	-	-	-	-	-
Stage 1	535	512	-	562	548	-	-	-	-	-	-	-
Stage 2	517	533	-	507	503	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	23	0.2	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	250	280	1076	-	-
HCM Lane V/C Ratio	0.011	-	-	0.135	0.287	0.03	-	-
HCM Control Delay (s)	8.4	0	-	21.6	23	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	1.2	0.1	-	-

Intersection	
Int Delay, s/veh	17.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	8	32	22	9	56	55	855	34	28	669	27
Future Vol, veh/h	20	8	32	22	9	56	55	855	34	28	669	27
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	9	35	24	10	61	60	929	37	30	727	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1915	1898	752	1902	1894	958	761	0	0	971	0	0
Stage 1	807	807	-	1073	1073	-	-	-	-	-	-	-
Stage 2	1108	1091	-	829	821	-	-	-	-	-	-	-
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	51	69	410	52	70	312	851	-	-	710	-	-
Stage 1	375	394	-	267	297	-	-	-	-	-	-	-
Stage 2	255	291	-	365	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	29	54	406	35	54	309	847	-	-	707	-	-
Mov Cap-2 Maneuver	29	54	-	35	54	-	-	-	-	-	-	-
Stage 1	316	363	-	225	250	-	-	-	-	-	-	-
Stage 2	166	245	-	300	358	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	219.3	199.3	0.6	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	847	-	-	65	89	707	-	-
HCM Lane V/C Ratio	0.071	-	-	1.003	1.063	0.043	-	-
HCM Control Delay (s)	9.6	0	-	219.3	199.3	10.3	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	5	6.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	368.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	720	175	46	660	46	311	373	82	50	339	80
Future Vol, veh/h	75	720	175	46	660	46	311	373	82	50	339	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	783	190	50	717	50	338	405	89	54	368	87
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	253.4	490	464.6	256.6
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	45%	0%	17%	0%	100%	0%	11%
Vol Thru, %	55%	0%	83%	67%	0%	93%	72%
Vol Right, %	0%	100%	0%	33%	0%	7%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	684	82	435	535	46	706	469
LT Vol	311	0	75	0	46	0	50
Through Vol	373	0	360	360	0	660	339
RT Vol	0	82	0	175	0	46	80
Lane Flow Rate	743	89	473	582	50	767	510
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	2.063	0.224	1.289	1.535	0.143	2.075	1.436
Departure Headway (Hd)	12.994	11.996	15.832	15.485	12.653	12.064	15.444
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	290	301	236	238	286	307	240
Service Time	10.694	9.696	13.532	13.185	10.353	9.764	13.444
HCM Lane V/C Ratio	2.562	0.296	2.004	2.445	0.175	2.498	2.125
HCM Control Delay	518.1	18.1	199.4	297.3	17.5	520.8	256.6
HCM Lane LOS	F	C	F	F	C	F	F
HCM 95th-tile Q	41.9	0.8	15.4	21.7	0.5	45.2	19.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	636	110	92	566	208	156	586	73	150	389	48
Future Volume (veh/h)	112	636	110	92	566	208	156	586	73	150	389	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	122	691	84	100	615	159	170	637	55	163	423	37
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1227	149	121	571	148	179	635	537	131	530	46
Arrive On Green	0.05	0.39	0.39	0.07	0.40	0.40	0.10	0.34	0.34	0.07	0.31	0.31
Sat Flow, veh/h	1774	3176	386	1774	1426	369	1774	1863	1576	1774	1688	148
Grp Volume(v), veh/h	122	385	390	100	0	774	170	637	55	163	0	460
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1774	0	1795	1774	1863	1576	1774	0	1836
Q Serve(g_s), s	8.1	25.6	25.6	8.3	0.0	60.1	14.3	51.1	3.6	11.1	0.0	34.4
Cycle Q Clear(g_c), s	8.1	25.6	25.6	8.3	0.0	60.1	14.3	51.1	3.6	11.1	0.0	34.4
Prop In Lane	1.00		0.22	1.00		0.21	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	96	683	692	121	0	719	179	635	537	131	0	576
V/C Ratio(X)	1.27	0.56	0.56	0.82	0.00	1.08	0.95	1.00	0.10	1.24	0.00	0.80
Avail Cap(c_a), veh/h	96	683	692	179	0	719	179	635	537	131	0	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.9	36.1	36.1	69.0	0.0	45.0	67.1	49.4	33.8	69.4	0.0	47.1
Incr Delay (d2), s/veh	182.2	1.1	1.1	17.6	0.0	56.0	53.3	36.7	0.1	157.4	0.0	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	12.7	12.9	4.7	0.0	40.9	9.7	32.7	1.6	11.2	0.0	18.6
LnGrp Delay(d),s/veh	253.1	37.2	37.2	86.6	0.0	100.9	120.4	86.1	33.9	226.9	0.0	54.9
LnGrp LOS	F	D	D	F		F	F	F	C	F		D
Approach Vol, veh/h		897			874			862			623	
Approach Delay, s/veh		66.5			99.3			89.5			99.9	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	56.0	15.2	62.8	20.0	52.0	13.0	65.0
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	11.1	51.1	15.1	53.1	15.1	47.1	8.1	60.1
Max Q Clear Time (g_c+I1), s	13.1	53.1	10.3	27.6	16.3	36.4	10.1	62.1
Green Ext Time (p_c), s	0.0	0.0	0.1	11.5	0.0	4.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.8
HCM 2010 LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	122	811	100	841	170	637	79	163	475
v/c Ratio	1.28	0.63	0.66	1.17	0.96	1.00	0.13	1.25	0.82
Control Delay	239.2	41.3	86.9	131.6	122.4	85.6	1.6	215.6	60.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	239.2	41.3	86.9	131.6	122.4	85.6	1.6	215.6	60.5
Queue Length 50th (ft)	~151	341	96	~972	168	~628	0	~198	428
Queue Length 95th (ft)	#288	420	161	#1233	#322	#890	10	#352	#601
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	95	1279	178	717	178	634	606	130	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.28	0.63	0.56	1.17	0.96	1.00	0.13	1.25	0.82

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

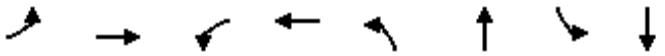
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX D
MITIGATED INTERSECTION ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	226	89	13	359	17	99	68	7	60	199	70
Future Volume (veh/h)	16	226	89	13	359	17	99	68	7	60	199	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	297	104	17	472	15	132	91	8	69	229	63
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.75	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	853	293	37	586	19	169	432	38	104	309	85
Arrive On Green	0.02	0.33	0.33	0.02	0.33	0.33	0.10	0.26	0.26	0.06	0.22	0.22
Sat Flow, veh/h	1774	2583	885	1774	1795	57	1774	1687	148	1774	1403	386
Grp Volume(v), veh/h	21	202	199	17	0	487	132	0	99	69	0	292
Grp Sat Flow(s),veh/h/ln	1774	1770	1699	1774	0	1852	1774	0	1836	1774	0	1789
Q Serve(g_s), s	0.7	4.8	5.0	0.5	0.0	13.5	4.1	0.0	2.4	2.1	0.0	8.5
Cycle Q Clear(g_c), s	0.7	4.8	5.0	0.5	0.0	13.5	4.1	0.0	2.4	2.1	0.0	8.5
Prop In Lane	1.00		0.52	1.00		0.03	1.00		0.08	1.00		0.22
Lane Grp Cap(c), veh/h	44	585	561	37	0	604	169	0	470	104	0	394
V/C Ratio(X)	0.48	0.34	0.36	0.46	0.00	0.81	0.78	0.00	0.21	0.66	0.00	0.74
Avail Cap(c_a), veh/h	253	698	670	253	0	731	225	0	626	225	0	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	14.2	14.2	27.1	0.0	17.2	24.8	0.0	16.4	25.8	0.0	20.4
Incr Delay (d2), s/veh	7.7	0.3	0.4	8.8	0.0	5.5	12.1	0.0	0.2	7.0	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.4	2.4	0.3	0.0	7.7	2.5	0.0	1.2	1.2	0.0	4.5
LnGrp Delay(d),s/veh	34.7	14.5	14.6	35.9	0.0	22.8	36.9	0.0	16.6	32.8	0.0	23.1
LnGrp LOS	C	B	B	D		C	D		B	C		C
Approach Vol, veh/h		422			504			231			361	
Approach Delay, s/veh		15.6			23.2			28.2			25.0	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	19.3	5.2	23.4	10.2	17.2	5.4	23.2
Change Period (Y+Rc), s	4.9	4.9	4.0	4.9	4.9	4.9	4.0	4.9
Max Green Setting (Gmax), s	7.1	19.1	8.0	22.1	7.1	19.1	8.0	22.1
Max Q Clear Time (g_c+I1), s	4.1	4.4	2.5	7.0	6.1	10.5	2.7	15.5
Green Ext Time (p_c), s	0.0	1.8	0.0	4.6	0.0	1.3	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	414	17	494	132	100	69	309
v/c Ratio	0.11	0.33	0.09	0.80	0.62	0.16	0.35	0.71
Control Delay	30.9	13.0	31.0	33.2	46.0	19.5	34.6	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	13.0	31.0	33.2	46.0	19.5	34.6	30.9
Queue Length 50th (ft)	7	41	6	141	45	26	23	90
Queue Length 95th (ft)	24	80	21	#290	#112	59	67	193
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	239	1407	239	692	212	645	212	588
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.29	0.07	0.71	0.62	0.16	0.33	0.53

Intersection Summary

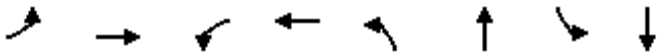
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	370	74	17	283	42	98	145	27	32	108	53
Future Volume (veh/h)	75	370	74	17	283	42	98	145	27	32	108	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	88	435	87	19	314	47	115	171	32	37	124	61
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	990	196	41	455	68	148	318	59	72	216	106
Arrive On Green	0.07	0.34	0.34	0.02	0.29	0.29	0.08	0.21	0.21	0.04	0.18	0.18
Sat Flow, veh/h	1774	2941	584	1774	1582	237	1774	1525	285	1774	1174	578
Grp Volume(v), veh/h	88	260	262	19	0	361	115	0	203	37	0	185
Grp Sat Flow(s),veh/h/ln	1774	1770	1755	1774	0	1819	1774	0	1810	1774	0	1751
Q Serve(g_s), s	2.3	5.5	5.6	0.5	0.0	8.4	3.0	0.0	4.8	1.0	0.0	4.6
Cycle Q Clear(g_c), s	2.3	5.5	5.6	0.5	0.0	8.4	3.0	0.0	4.8	1.0	0.0	4.6
Prop In Lane	1.00		0.33	1.00		0.13	1.00		0.16	1.00		0.33
Lane Grp Cap(c), veh/h	128	596	591	41	0	524	148	0	377	72	0	323
V/C Ratio(X)	0.69	0.44	0.44	0.46	0.00	0.69	0.78	0.00	0.54	0.51	0.00	0.57
Avail Cap(c_a), veh/h	297	666	661	297	0	685	297	0	689	263	0	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	12.3	12.4	23.1	0.0	15.1	21.5	0.0	16.9	22.5	0.0	17.8
Incr Delay (d2), s/veh	6.4	0.5	0.5	7.7	0.0	2.0	8.4	0.0	1.2	5.6	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	2.8	2.8	0.3	0.0	4.5	1.8	0.0	2.5	0.6	0.0	2.4
LnGrp Delay(d),s/veh	28.1	12.8	12.9	30.8	0.0	17.1	29.9	0.0	18.1	28.0	0.0	19.4
LnGrp LOS	C	B	B	C		B	C		B	C		B
Approach Vol, veh/h		610			380			318			222	
Approach Delay, s/veh		15.1			17.8			22.3			20.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	14.9	5.1	21.0	8.0	13.7	7.4	18.7
Change Period (Y+Rc), s	4.9	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	7.1	18.2	8.0	18.0	8.0	18.2	8.0	18.0
Max Q Clear Time (g_c+I1), s	3.0	6.8	2.5	7.6	5.0	6.6	4.3	10.4
Green Ext Time (p_c), s	0.0	1.5	0.0	3.7	0.1	1.6	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Queues



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	522	19	361	115	203	37	185
v/c Ratio	0.35	0.38	0.08	0.69	0.44	0.38	0.16	0.47
Control Delay	30.9	13.8	28.1	29.0	33.1	20.3	29.0	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	13.8	28.1	29.0	33.1	20.3	29.0	22.8
Queue Length 50th (ft)	31	55	7	117	41	49	13	52
Queue Length 95th (ft)	71	129	26	#257	#90	116	39	101
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	297	1660	297	692	297	741	263	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.31	0.06	0.52	0.39	0.27	0.14	0.27

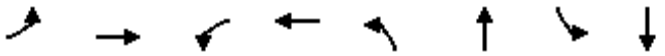
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	6	45	43	28	50	22	430	19	65	712	21
Future Volume (veh/h)	12	6	45	43	28	50	22	430	19	65	712	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	13	7	49	47	30	54	24	467	21	71	774	23
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	23	161	88	88	158	51	1251	56	117	1403	42
Arrive On Green	0.02	0.12	0.12	0.05	0.15	0.15	0.03	0.36	0.36	0.07	0.40	0.40
Sat Flow, veh/h	1774	199	1395	1774	593	1068	1774	3449	155	1774	3509	104
Grp Volume(v), veh/h	13	0	56	47	0	84	24	239	249	71	390	407
Grp Sat Flow(s),veh/h/ln	1774	0	1595	1774	0	1661	1774	1770	1834	1774	1770	1844
Q Serve(g_s), s	0.3	0.0	1.4	1.1	0.0	2.0	0.6	4.4	4.4	1.7	7.4	7.4
Cycle Q Clear(g_c), s	0.3	0.0	1.4	1.1	0.0	2.0	0.6	4.4	4.4	1.7	7.4	7.4
Prop In Lane	1.00		0.88	1.00		0.64	1.00		0.08	1.00		0.06
Lane Grp Cap(c), veh/h	30	0	184	88	0	246	51	642	665	117	708	737
V/C Ratio(X)	0.44	0.00	0.30	0.53	0.00	0.34	0.47	0.37	0.37	0.61	0.55	0.55
Avail Cap(c_a), veh/h	324	0	731	324	0	762	324	1296	1343	486	1458	1519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	17.8	20.3	0.0	16.7	20.9	10.3	10.3	19.9	10.1	10.1
Incr Delay (d2), s/veh	9.9	0.0	0.9	4.9	0.0	0.8	6.5	0.4	0.3	5.0	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.7	0.7	0.0	1.0	0.4	2.2	2.3	1.0	3.7	3.9
LnGrp Delay(d),s/veh	31.2	0.0	18.7	25.2	0.0	17.6	27.4	10.6	10.6	24.9	10.8	10.8
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		69			131			512			868	
Approach Delay, s/veh		21.1			20.3			11.4			11.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	20.8	6.2	10.0	5.3	22.4	4.7	11.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	12.0	32.1	8.0	20.1	8.0	36.1	8.0	20.1
Max Q Clear Time (g_c+I1), s	3.7	6.4	3.1	3.4	2.6	9.4	2.3	4.0
Green Ext Time (p_c), s	0.1	8.0	0.0	0.6	0.0	8.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B



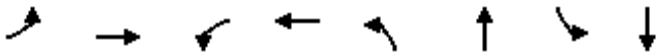
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	13	56	47	84	24	488	71	797
v/c Ratio	0.05	0.19	0.16	0.21	0.08	0.24	0.21	0.32
Control Delay	25.2	12.1	24.1	12.2	24.7	12.4	22.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	12.1	24.1	12.2	24.7	12.4	22.5	8.6
Queue Length 50th (ft)	3	1	9	6	5	44	14	37
Queue Length 95th (ft)	21	33	48	49	30	121	62	193
Internal Link Dist (ft)		2542		2955		2554		1670
Turn Bay Length (ft)								
Base Capacity (vph)	375	870	375	911	375	2692	563	2859
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06	0.13	0.09	0.06	0.18	0.13	0.28

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	451	135	36	743	42	148	241	18	104	382	70
Future Volume (veh/h)	35	451	135	36	743	42	148	241	18	104	382	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	490	147	39	808	46	161	262	20	113	415	76
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	826	246	64	1049	60	198	600	46	145	492	90
Arrive On Green	0.04	0.31	0.31	0.04	0.31	0.31	0.11	0.35	0.35	0.08	0.32	0.32
Sat Flow, veh/h	1774	2683	800	1774	3403	194	1774	1709	130	1774	1531	280
Grp Volume(v), veh/h	38	322	315	39	420	434	161	0	282	113	0	491
Grp Sat Flow(s),veh/h/ln	1774	1770	1714	1774	1770	1827	1774	0	1839	1774	0	1812
Q Serve(g_s), s	1.7	12.3	12.4	1.7	17.2	17.2	7.1	0.0	9.4	5.0	0.0	20.2
Cycle Q Clear(g_c), s	1.7	12.3	12.4	1.7	17.2	17.2	7.1	0.0	9.4	5.0	0.0	20.2
Prop In Lane	1.00		0.47	1.00		0.11	1.00		0.07	1.00		0.15
Lane Grp Cap(c), veh/h	63	545	528	64	546	563	198	0	646	145	0	582
V/C Ratio(X)	0.60	0.59	0.60	0.61	0.77	0.77	0.81	0.00	0.44	0.78	0.00	0.84
Avail Cap(c_a), veh/h	178	623	603	178	623	643	267	0	762	289	0	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	23.4	23.4	37.9	25.0	25.0	34.6	0.0	19.8	36.0	0.0	25.2
Incr Delay (d2), s/veh	8.8	1.2	1.3	8.9	5.2	5.0	12.9	0.0	0.5	8.7	0.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.2	6.0	1.0	9.2	9.5	4.2	0.0	4.9	2.8	0.0	11.1
LnGrp Delay(d),s/veh	46.8	24.5	24.7	46.8	30.2	30.1	47.5	0.0	20.3	44.7	0.0	31.8
LnGrp LOS	D	C	C	D	C	C	D		C	D		C
Approach Vol, veh/h		675			893			443			604	
Approach Delay, s/veh		25.9			30.8			30.2			34.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	33.0	6.9	29.5	12.9	30.6	6.8	29.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	13.0	33.1	8.0	28.1	12.0	34.1	8.0	28.1
Max Q Clear Time (g_c+I1), s	7.0	11.4	3.7	14.4	9.1	22.2	3.7	19.2
Green Ext Time (p_c), s	0.1	4.5	0.0	7.3	0.1	3.5	0.0	5.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	637	39	854	161	282	113	491
v/c Ratio	0.25	0.61	0.26	0.81	0.67	0.41	0.51	0.83
Control Delay	46.6	28.8	46.8	36.8	54.9	25.6	47.9	40.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	28.8	46.8	36.8	54.9	25.6	47.9	40.7
Queue Length 50th (ft)	22	165	23	254	96	134	66	271
Queue Length 95th (ft)	56	237	57	#373	#201	216	124	#431
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	176	1213	176	1233	265	762	287	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.53	0.22	0.69	0.61	0.37	0.39	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	451	134	134	658	138	198	249	54	223	531	66
Future Volume (veh/h)	55	451	134	134	658	138	198	249	54	223	531	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	490	103	146	715	118	215	271	46	242	577	63
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	1041	218	180	773	655	248	592	99	275	678	74
Arrive On Green	0.04	0.36	0.36	0.10	0.42	0.42	0.14	0.20	0.20	0.16	0.21	0.21
Sat Flow, veh/h	1774	2913	609	1774	1863	1578	1774	3031	508	1774	3217	350
Grp Volume(v), veh/h	60	297	296	146	715	118	215	157	160	242	317	323
Grp Sat Flow(s),veh/h/ln	1774	1770	1752	1774	1863	1578	1774	1770	1769	1774	1770	1798
Q Serve(g_s), s	3.1	12.1	12.2	7.5	33.9	4.4	11.1	7.3	7.5	12.4	16.0	16.1
Cycle Q Clear(g_c), s	3.1	12.1	12.2	7.5	33.9	4.4	11.1	7.3	7.5	12.4	16.0	16.1
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.29	1.00		0.19
Lane Grp Cap(c), veh/h	77	632	626	180	773	655	248	345	345	275	373	379
V/C Ratio(X)	0.78	0.47	0.47	0.81	0.92	0.18	0.87	0.45	0.46	0.88	0.85	0.85
Avail Cap(c_a), veh/h	152	632	626	286	802	679	248	363	363	286	401	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	23.1	23.2	41.0	25.9	17.2	39.2	33.1	33.2	38.5	35.3	35.4
Incr Delay (d2), s/veh	15.3	0.5	0.6	9.1	16.1	0.1	26.3	0.9	1.0	24.9	15.0	15.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	5.9	5.9	4.1	20.7	1.9	7.2	3.7	3.7	8.0	9.4	9.6
LnGrp Delay(d),s/veh	59.4	23.7	23.7	50.1	41.9	17.3	65.6	34.0	34.1	63.4	50.3	50.6
LnGrp LOS	E	C	C	D	D	B	E	C	C	E	D	D
Approach Vol, veh/h		653			979			532			882	
Approach Delay, s/veh		27.0			40.2			46.8			54.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	23.1	13.4	38.2	17.0	24.5	8.1	43.6
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	19.1	15.0	33.1	13.0	21.1	8.0	40.1
Max Q Clear Time (g_c+I1), s	14.4	9.5	9.5	14.2	13.1	18.1	5.1	35.9
Green Ext Time (p_c), s	0.0	3.7	0.2	8.5	0.0	1.5	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	42.5
HCM 2010 LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	636	146	715	150	215	330	242	649
v/c Ratio	0.44	0.56	0.63	0.95	0.22	0.87	0.48	0.87	0.87
Control Delay	54.4	26.7	53.0	51.3	7.6	76.2	35.3	71.7	50.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	26.7	53.0	51.3	7.6	76.2	35.3	71.7	50.0
Queue Length 50th (ft)	37	157	89	435	16	138	92	154	208
Queue Length 95th (ft)	78	218	152	#677	56	#279	136	#298	#305
Internal Link Dist (ft)		2542		4993			1407		2554
Turn Bay Length (ft)	260		170		25	285		100	
Base Capacity (vph)	151	1262	284	799	726	246	718	284	792
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.50	0.51	0.89	0.21	0.87	0.46	0.85	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

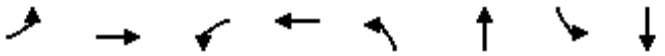
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	69	131	512	868
Demand Flow Rate, veh/h	70	134	521	884
Vehicles Circulating, veh/h	909	513	92	103
Vehicles Exiting, veh/h	78	100	887	544
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	5	5	5	5
Ped Cap Adj	1.000	0.999	0.995	0.995
Approach Delay, s/veh	7.5	6.5	5.9	8.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.469	0.531
Critical Headway, s	4.113	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	70	134	245	276	415	469
Cap Entry Lane, veh/h	598	789	1055	1059	1046	1051
Entry HV Adj Factor	0.984	0.981	0.982	0.983	0.983	0.980
Flow Entry, veh/h	69	131	240	271	408	460
Cap Entry, veh/h	588	773	1030	1035	1022	1025
V/C Ratio	0.117	0.170	0.234	0.262	0.399	0.448
Control Delay, s/veh	7.5	6.5	5.7	6.0	7.8	8.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	2	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	8	32	22	9	56	55	855	34	28	669	27
Future Volume (veh/h)	20	8	32	22	9	56	55	855	34	28	669	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	9	35	24	10	61	60	929	37	30	727	29
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	35	135	50	24	147	101	1631	65	61	1552	62
Arrive On Green	0.03	0.10	0.10	0.03	0.11	0.11	0.06	0.47	0.47	0.03	0.45	0.45
Sat Flow, veh/h	1774	330	1284	1774	225	1373	1774	3469	138	1774	3469	138
Grp Volume(v), veh/h	22	0	44	24	0	71	60	474	492	30	371	385
Grp Sat Flow(s),veh/h/ln	1774	0	1614	1774	0	1598	1774	1770	1837	1774	1770	1837
Q Serve(g_s), s	0.6	0.0	1.2	0.7	0.0	2.0	1.6	9.5	9.5	0.8	7.2	7.2
Cycle Q Clear(g_c), s	0.6	0.0	1.2	0.7	0.0	2.0	1.6	9.5	9.5	0.8	7.2	7.2
Prop In Lane	1.00		0.80	1.00		0.86	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	47	0	169	50	0	171	101	832	864	61	792	822
V/C Ratio(X)	0.47	0.00	0.26	0.48	0.00	0.42	0.59	0.57	0.57	0.49	0.47	0.47
Avail Cap(c_a), veh/h	289	0	628	289	0	621	289	1337	1388	289	1337	1388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	20.2	23.5	0.0	20.5	22.6	9.4	9.4	23.3	9.5	9.5
Incr Delay (d2), s/veh	7.1	0.0	0.8	6.8	0.0	1.6	5.5	0.6	0.6	6.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.4	0.0	1.0	0.9	4.8	4.9	0.5	3.6	3.7
LnGrp Delay(d),s/veh	30.7	0.0	21.0	30.3	0.0	22.1	28.1	10.0	10.0	29.4	9.9	9.9
LnGrp LOS	C		C	C		C	C	B	B	C	A	A
Approach Vol, veh/h		66			95			1026			786	
Approach Delay, s/veh		24.3			24.2			11.1			10.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	28.0	5.4	10.1	6.8	26.9	5.3	10.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	37.1	8.0	19.1	8.0	37.1	8.0	19.1
Max Q Clear Time (g_c+I1), s	2.8	11.5	2.7	3.2	3.6	9.2	2.6	4.0
Green Ext Time (p_c), s	0.0	11.6	0.0	0.5	0.0	12.0	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B



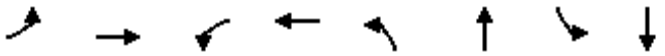
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	44	24	71	60	966	30	756
v/c Ratio	0.09	0.17	0.09	0.25	0.22	0.39	0.12	0.33
Control Delay	28.6	15.4	28.7	13.5	28.3	10.0	28.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	15.4	28.7	13.5	28.3	10.0	28.4	10.8
Queue Length 50th (ft)	5	2	5	2	13	46	6	72
Queue Length 95th (ft)	31	32	33	40	63	241	38	178
Internal Link Dist (ft)		2542		2955		2554		1670
Turn Bay Length (ft)								
Base Capacity (vph)	333	746	333	751	333	2745	333	2745
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.06	0.07	0.09	0.18	0.35	0.09	0.28

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	720	175	46	660	46	311	373	82	50	339	80
Future Volume (veh/h)	75	720	175	46	660	46	311	373	82	50	339	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	82	783	136	50	717	39	338	405	67	54	368	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	912	158	69	964	52	370	664	110	72	397	70
Arrive On Green	0.06	0.30	0.30	0.04	0.28	0.28	0.21	0.43	0.43	0.04	0.26	0.26
Sat Flow, veh/h	1774	3012	523	1774	3412	186	1774	1558	258	1774	1541	272
Grp Volume(v), veh/h	82	460	459	50	372	384	338	0	472	54	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1765	1774	1770	1828	1774	0	1816	1774	0	1813
Q Serve(g_s), s	4.2	22.8	22.8	2.6	17.7	17.7	17.3	0.0	18.7	2.8	0.0	21.6
Cycle Q Clear(g_c), s	4.2	22.8	22.8	2.6	17.7	17.7	17.3	0.0	18.7	2.8	0.0	21.6
Prop In Lane	1.00		0.30	1.00		0.10	1.00		0.14	1.00		0.15
Lane Grp Cap(c), veh/h	105	536	535	69	500	517	370	0	774	72	0	468
V/C Ratio(X)	0.78	0.86	0.86	0.72	0.74	0.74	0.91	0.00	0.61	0.75	0.00	0.93
Avail Cap(c_a), veh/h	153	558	557	153	558	576	382	0	774	153	0	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.1	30.5	30.5	44.2	30.3	30.3	35.9	0.0	20.7	44.1	0.0	33.6
Incr Delay (d2), s/veh	14.5	12.3	12.4	13.2	4.8	4.6	25.4	0.0	1.4	14.6	0.0	23.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	13.0	12.9	1.5	9.3	9.6	11.1	0.0	9.6	1.7	0.0	13.9
LnGrp Delay(d),s/veh	57.6	42.9	42.9	57.4	35.0	34.9	61.4	0.0	22.1	58.7	0.0	57.1
LnGrp LOS	E	D	D	E	D	C	E		C	E		E
Approach Vol, veh/h		1001			806			810			487	
Approach Delay, s/veh		44.1			36.4			38.5			57.3	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	44.5	7.6	33.0	23.4	28.9	9.5	31.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	36.9	8.0	29.3	20.0	24.9	8.0	29.3
Max Q Clear Time (g_c+I1), s	4.8	20.7	4.6	24.8	19.3	23.6	6.2	19.7
Green Ext Time (p_c), s	0.0	4.8	0.0	3.4	0.1	0.3	0.0	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	42.7
HCM 2010 LOS	D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	973	50	767	338	494	54	455
v/c Ratio	0.59	0.94	0.38	0.74	0.93	0.66	0.41	0.96
Control Delay	62.3	49.5	52.3	35.9	72.5	29.8	53.4	70.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.3	49.5	52.3	35.9	72.5	29.8	53.4	70.0
Queue Length 50th (ft)	51	311	31	230	215	262	33	285
Queue Length 95th (ft)	#111	#445	69	300	#387	386	73	#492
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	146	1058	146	1067	367	749	146	473
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.92	0.34	0.72	0.92	0.66	0.37	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	636	110	92	566	208	156	586	73	150	389	48
Future Volume (veh/h)	112	636	110	92	566	208	156	586	73	150	389	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	122	691	98	100	615	159	170	637	57	163	423	37
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	1162	165	128	670	567	205	780	70	189	753	66
Arrive On Green	0.09	0.37	0.37	0.07	0.36	0.36	0.12	0.24	0.24	0.11	0.23	0.23
Sat Flow, veh/h	1774	3112	441	1774	1863	1577	1774	3285	294	1774	3293	287
Grp Volume(v), veh/h	122	393	396	100	615	159	170	343	351	163	227	233
Grp Sat Flow(s),veh/h/ln	1774	1770	1783	1774	1863	1577	1774	1770	1809	1774	1770	1810
Q Serve(g_s), s	5.7	15.1	15.1	4.7	26.7	6.1	7.9	15.5	15.5	7.6	9.6	9.7
Cycle Q Clear(g_c), s	5.7	15.1	15.1	4.7	26.7	6.1	7.9	15.5	15.5	7.6	9.6	9.7
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.16	1.00		0.16
Lane Grp Cap(c), veh/h	153	661	666	128	670	567	205	420	429	189	404	414
V/C Ratio(X)	0.80	0.59	0.60	0.78	0.92	0.28	0.83	0.82	0.82	0.86	0.56	0.56
Avail Cap(c_a), veh/h	168	661	666	231	729	617	210	463	473	189	442	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	21.3	21.3	38.5	25.9	19.3	36.6	30.5	30.5	37.2	28.8	28.9
Incr Delay (d2), s/veh	21.6	1.4	1.4	9.8	15.9	0.3	23.3	10.1	10.0	31.3	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.6	7.6	2.7	16.6	2.7	5.2	8.7	8.9	5.4	4.8	5.0
LnGrp Delay(d),s/veh	59.6	22.8	22.8	48.3	41.8	19.5	59.9	40.6	40.5	68.4	30.2	30.2
LnGrp LOS	E	C	C	D	D	B	E	D	D	E	C	C
Approach Vol, veh/h		911			874			864			623	
Approach Delay, s/veh		27.7			38.5			44.3			40.2	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	25.0	10.1	36.5	13.7	24.2	11.3	35.3
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	9.0	22.1	11.0	30.1	10.0	21.1	8.0	33.1
Max Q Clear Time (g_c+I1), s	9.6	17.5	6.7	17.1	9.9	11.7	7.7	28.7
Green Ext Time (p_c), s	0.0	2.5	0.1	7.3	0.0	4.3	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	122	811	100	615	226	170	716	163	475
v/c Ratio	0.75	0.63	0.52	0.92	0.36	0.83	0.85	0.89	0.59
Control Delay	68.9	25.9	47.7	48.2	11.5	72.4	42.3	84.3	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.9	25.9	47.7	48.2	11.5	72.4	42.3	84.3	32.7
Queue Length 50th (ft)	69	200	54	325	40	97	200	94	122
Queue Length 95th (ft)	#161	268	104	#530	95	#211	#288	#212	173
Internal Link Dist (ft)		2542		4993			1407		2554
Turn Bay Length (ft)	260		170		25	285		100	
Base Capacity (vph)	163	1291	225	713	668	204	897	184	858
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.63	0.44	0.86	0.34	0.83	0.80	0.89	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	66	95	1026	786
Demand Flow Rate, veh/h	67	96	1047	803
Vehicles Circulating, veh/h	797	1031	62	95
Vehicles Exiting, veh/h	101	78	802	1032
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	5	5	5	5
Ped Cap Adj	0.999	1.000	0.995	0.995
Approach Delay, s/veh	6.8	8.9	9.1	7.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.469	0.531
Critical Headway, s	4.113	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	67	96	492	555	377	426
Cap Entry Lane, veh/h	647	549	1079	1082	1052	1057
Entry HV Adj Factor	0.982	0.988	0.981	0.980	0.980	0.978
Flow Entry, veh/h	66	95	482	544	370	417
Cap Entry, veh/h	635	542	1052	1055	1026	1029
V/C Ratio	0.104	0.175	0.459	0.516	0.360	0.405
Control Delay, s/veh	6.8	8.9	8.6	9.6	7.3	7.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	1	2	3	2	2

Revised Traffic Impact Study

Proposed McKenney Assemblage -Tract 6284

Clovis, California

Prepared For:

Woodside 06N, LP
9 River Park Place East, Suite 430
Fresno, California 93720

Date:

March 3, 2020

Job No.:

19-046.02

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EXECUTIVE SUMMARY

This report presents the results of a traffic impact study for a proposed single-family residential development in Clovis, California. This report supersedes previous Traffic Impact Study reports dated September 18, 2019 and February 4, 2020. This analysis focuses on the anticipated effect of vehicle traffic resulting from the Project. The traffic impact study was performed in general conformance with the *City of Clovis Traffic Impact Study Guidelines* approved August 25, 2014.

The proposed McKenney Assemblage project (Tract 6284) will be located on the south side of Teague Avenue near Purdue Avenue in Clovis, California. The project includes 74 single-family residences with access via a local street connecting to Teague Avenue near Purdue Avenue. In the near-term condition, an emergency access will connect to Sunnyside Avenue but will not be accessible to the public. In the future, consideration may be given to converting the emergency access to a public street.

This report includes traffic counts and analyses of the following intersections:

1. Teague Avenue / Sunnyside Avenue
2. Teague Avenue / Fowler Avenue
3. Nees Avenue / Sunnyside Avenue
4. Nees Avenue / Fowler Avenue

This report includes analysis of the following road segments:

1. Fowler Avenue between Teague and Nees Avenues
2. Sunnyside Avenue between Teague and Nees Avenues

The Memorandum of Understanding (MOU) dated July 10, 2018 between the City of Clovis and County of Fresno requires that traffic signal warrants analyses be performed at the following intersections:

A. Shepherd Avenue / Sunnyside Avenue
B. Shepherd Avenue / Fowler Avenue
C. Teague Avenue / Fowler Avenue
D. Nees Avenue / Fowler Avenue
E. Teague Avenue / Sunnyside Avenue
F. Nees Avenue / Armstrong Avenue

Intersections B and D have already signalized. The City has already determined that traffic signals are warranted at intersections A and F and has either conditioned other projects to construct the signals (Shepherd/Sunnyside Avenues) or obtained CMAQ funding to construct signals (Nees/Armstrong Avenues, approximately 2022). Therefore, further analyses as described in the MOU are not needed and are not included in this study for those intersections.

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours were analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term With Project Conditions (includes approved projects)
- Cumulative Year 2040 With-Project Conditions

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the project, and to analyze the traffic conditions that are expected to occur in the future. The conclusions of the study are summarized in the following sections.

Vehicle Miles Traveled (VMT)

The City of Clovis has not yet developed significance criteria related to VMT. Therefore, these values are presented for information purposes only. However, it is noted that the average Project trip length estimate of 6.9 miles is less than 85 percent of the countywide average. Considering the *Technical Advisory on Evaluating Transportation Impacts in CEQ*A dated December 2018 by the State of California Governor's Office of Planning and Research, the Project would not cause a significant transportation impact.

Existing Conditions

The study intersections are currently operating at acceptable levels of service with calculated 95th-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project. The study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F. The other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues as described in this report is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Cumulative Year 2040 With-Project Conditions

The following study intersections are expected to operate below (i.e., worse than) the target LOS, with excessive queues that accompany the long delays:

- Teague Avenue / Fowler Avenue
- Nees Avenue / Sunnyside Avenue
- Nees Avenue / Fowler Avenue

The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F.

The intersection of Sunnyside and Teague Avenues is expected to operate at acceptable levels of service. The Sunnyside Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The intersection of Teague and Fowler Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues would require additional lanes to operate at acceptable levels of service. With the following lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues.

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Mr. Matt Smith
Woodside 06N, LP
9 River Park Place East, Suite 430
Fresno, California 93720

March 3, 2020

Subject: Revised Traffic Impact Study
Proposed McKenney Assemblage – Tract 6284
South of Teague Avenue Between Sunnyside and Fowler Avenues
Clovis, California

Dear Mr. Smith:

Introduction

This report presents the results of a traffic impact study for a proposed single-family residential development in Clovis, California. This report supersedes a previous Traffic Impact Study report dated September 18, 2019 and February 4, 2020. This analysis focuses on the anticipated effect of vehicle traffic resulting from the Project. The traffic impact study was performed in general conformance with the *City of Clovis Traffic Impact Study Guidelines* approved August 25, 2014.

Project Description

The proposed project will be located on the south side of Teague Avenue near Purdue Avenue in Clovis, California. The project includes 74 single-family residences with access via a local street connecting to Teague Avenue near Purdue Avenue. In the near-term condition, an emergency access will connect to Sunnyside Avenue but will not be accessible to the public. In the future, consideration may be given to converting the emergency access to a public street.

A site vicinity map is presented in the attached Figure 1 following the text of this report and illustrates the general vicinity of the assumed residential development described above. A site plan is presented in Figure 2.

Study Area and Time Period

This report includes analysis of the following intersections:

1. Teague Avenue / Sunnyside Avenue
2. Teague Avenue / Fowler Avenue
3. Nees Avenue / Sunnyside Avenue
4. Nees Avenue / Fowler Avenue

This report includes analysis of the following road segments:

1. Fowler Avenue between Teague and Nees Avenues
2. Sunnyside Avenue between Teague and Nees Avenues

The Memorandum of Understanding (MOU) dated July 10, 2018 between the City of Clovis and County of Fresno also requires that traffic signal warrants analyses be performed at the following intersections:

A. Shepherd Avenue / Sunnyside Avenue
B. Shepherd Avenue / Fowler Avenue
C. Teague Avenue / Fowler Avenue
D. Nees Avenue / Fowler Avenue
E. Teague Avenue / Sunnyside Avenue
F. Nees Avenue / Armstrong Avenue

Intersections B and D have already signalized. The City has already determined that traffic signals are warranted at intersections A and F and has either conditioned other projects to construct the signals (Shepherd/Sunnyside Avenues) or obtained CMAQ funding to construct signals (Nees/Armstrong Avenues, approximately 2022). Therefore, further analyses as described in the MOU are not needed and are not included in this study for those intersections.

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The peak hours are analyzed for the following conditions:

- Existing Conditions
- Existing Plus Project Conditions
- Near-Term With Project Conditions (includes approved projects)
- Cumulative Year 2040 With-Project Conditions

Lane Configurations and Intersection Control

The existing lane configurations and intersection control at the study intersections are illustrated in Figure 3, Existing Lane Configurations and Intersection Control.

City of Clovis General Plan

The City of Clovis General Plan designates the streets near the study area as follows:

- Sunnyside Avenue: Collector street with two lanes in both the 2035 condition and the ultimate condition.
- Fowler Avenue: Arterial street with two lanes in the 2035 condition and four lanes in the ultimate condition. City staff has indicated that the maximum ultimate lane configuration may include a TWLTL or a median along the center of the roadway.
- Teague Avenue: Collector street between Sunnyside and Armstrong Avenues with two lanes in both the 2035 condition and the ultimate condition. City staff has indicated that the maximum ultimate lane configuration may include a TWLTL along

the center of the roadway. Teague Avenue is designated as a local street with two lanes west of Sunnyside Avenue in all scenarios.

- Nees Avenue: Arterial street with four lanes in both the 2035 condition and the ultimate condition.

Existing Traffic Volumes

Existing traffic volumes were determined by performing manual turning movement counts at the study intersections between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a Tuesday, February 25, 2020. The traffic count data sheets are presented in Appendix A. The existing peak-hour turning movement volumes are presented in Figure 4, Existing Peak-Hour Traffic Volumes.

Project Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*, were used to estimate the number of trips anticipated to be generated by the Project. Table 1 presents the trip generation information.

Table 1
Project Trip Generation

Land Use	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Single-Family Detached Housing ITE Code (210)	74	9.44	700	0.75	25:75	14	42	56	0.99	63:37	47	27	74

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

Project Trip Distribution and Assignment

The Project trips were distributed to the adjacent road network considering the results of select zone analyses performed by the Fresno Council of Governments (COG) using the Fresno County travel model as presented in the Traffic Analyses report dated February 13, 2018 for the Dry Creek Preserve Master Plan, engineering judgment considering the distribution of existing traffic volumes, the locations and types of streets in the study area, Peters Engineering Group's familiarity with the Project vicinity, and complementary land uses in the Project vicinity. The percentage distribution of Project trips is presented in Figure 5, Project Trip Distribution Percentages. Project traffic volumes at the study intersections are presented in Figure 6A, Peak-Hour Project Traffic Volumes. An estimate of the project trips that would likely occur at the site access roads if the emergency vehicle access connecting to Sunnyside Avenue were to become a public street at some time in the future is presented in Figure 6B, Project Trips at Site Access Roads – Potential Future Condition.

Existing-Plus-Project Traffic Volumes

Existing-Plus-Project traffic volumes are presented in Figure 7, Existing-Plus-Project Peak-Hour Traffic Volumes. The values in Figure 7 were determined by adding the values in Figures 4 and 6.

Approved Projects

Projects that have been approved but are not yet complete are included in the analyses to assess cumulative impacts. The following projects are considered in the analyses:

- Tract 6154: 95 single-family residential lots located northwest of the intersection of Fowler and Teague Avenues
- Tract 6200: 586 single-family residential lots located northeast of the intersection of Clovis and Shepherd Avenues
- Tract 5546: 14 single-family residential lots not yet occupied southeast of the intersection of Sunnyside and Nees Avenues
- Tract 5720A: two single-family residential lots not yet occupied southwest of the intersection of Loyola and DeWolf Avenues
- Tract 6128: four single-family residential lots not yet occupied southeast of the intersection of Teague and Locan Avenues
- Tract 6134A: 14 single-family residential lots west of the intersection of Teague and Locan Avenues
- Tract 6145: 31 single-family residential lots not yet occupied southwest of the intersection of Richmond and DeWolf Avenues
- Tract 6180: 44 single-family residential lots not yet occupied west of the intersection of Richmond and Locan Avenues
- Tract 6190: six single-family residential lots not yet occupied southeast of the intersection of Loyola and Locan Avenues
- Tract 6263: 137 single-family residential lots on the south side of Shepherd Avenue between Clovis and Sunnyside Avenues
- Clovis Community Medical Center Expansion Phase 1 (CCMC): 300,172 square-foot expansion of the existing hospital, 94,392 square feet of medical-dental office building, 150,000 square feet of shopping center, and a 150-room hotel
- California Health Science University – College of Osteopathic Medicine (COM): 600-student college located southwest of the intersection of Temperance and Alluvial Avenues.

Near-Term With-Project Traffic Volumes

Peak-hour near-term with-Project traffic volumes are presented in Figure 8, Near-Term With-Project Peak-Hour Traffic Volumes, and include the trip generation estimates presented in Table 2.

Table 2
Approved Projects Trip Generation

Project	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Tract 6154	95	9.44	898	0.75	25:75	18	54	72	0.99	63:37	60	35	95
Tract 6200	586	9.44	5,532	0.75	25:75	110	330	440	0.99	63:37	366	215	581
Tract 5546	14	9.44	134	0.75	25:75	3	8	11	0.99	63:37	9	5	14
Tract 5720A	2	9.44	20	0.75	25:75	1	1	2	0.99	63:37	1	1	2
Tract 6128	4	9.44	38	0.75	25:75	1	2	3	0.99	63:37	3	2	4
Tract 6134A	14	9.44	134	0.75	25:75	3	8	11	0.99	63:37	9	5	14
Tract 6145	31	9.44	294	0.75	25:75	6	18	24	0.99	63:37	20	11	31
Tract 6180	44	9.44	416	0.75	25:75	8	25	33	0.99	63:37	28	16	44
Tract 6190	6	9.44	58	0.75	25:75	1	4	5	0.99	63:37	4	2	6
Tract 6263	137	9.44	1,294	0.75	25:75	26	77	103	0.99	63:37	86	50	136
CCMC*	-	-	15,121	-	-	507	249	756	-	-	518	760	1,278
COM	600	1.56	936	0.15	78:22	70	20	90	0.15	32:68	29	61	90

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.
* Data obtained from Draft Traffic Impact Analysis report dated November 8, 2017 for the Master Plan Expansion of the Clovis Community Medical Center

Cumulative Year 2040 Traffic Volumes

Cumulative traffic volumes for the year 2040 were determined using the Fresno Council of Governments' (COG) Fresno County travel model and the *Increment Method* approved by the COG. The base year and year 2035 travel model output used in the analyses are present in Appendix B. The traffic volumes were extrapolated to the year 2040.

Future turning movements were projected based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled *"Highway Traffic Data for Urbanized Area Project Planning and Design."* The approved projects traffic volumes were included in the resulting turning movements. In addition, trips that are likely to be generated by approximately 88 single-family residences on approximately 38.45 acres located on the east side of Fowler Avenue south of Teague Avenue (Fowler Site) are included in the year 2040 cumulative analyses. This site is considered to be the third developable area within the Dry Creek Preserve. Trip generation calculations are presented in Table 3 for the Fowler Site.

Table 3
Fowler Site Trip Generation

Project	Units	Daily		A.M. Peak Hour					P.M. Peak Hour				
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Fowler Site	88	9.44	832	0.75	25:75	16	50	66	0.99	63:37	55	33	88

Reference: *Trip Generation Manual, 10th Edition,* Institute of Transportation Engineers 2017
Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

Cumulative with-Project traffic volumes are presented in Figure 9, Cumulative With-Project Peak-Hour Traffic Volumes.

Significance Criteria

The Transportation Research Board *Highway Capacity Manual*, 2010, (HCM2010) defines level of service (LOS) as, "A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst."

Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 4 and 5. Automobile mode LOS characteristics for road segments based on HCM2010 methods were obtained from the City of Clovis General Plan Update and are presented in Table 6.

Table 4
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual,* Transportation Research Board, 2010

Table 5
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is low. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is low. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual,* Transportation Research Board, 2010

Table 6
Level of Service Criteria For Roadway Segments

Classification	Median Type	Number of Lanes	Peak Hour LOS Volume Thresholds		
			LOS C	LOS D	LOS E
Expressway	Raised Median	6	3,290	6,120	6,400
		4	2,080	4,060	4,260
Arterial	Raised Median	6	3,060	5,390	5,680
		4	1,950	3,580	3,780
		2	860	1,770	1,880
	TWLTL	4	1,840	3,400	3,590
		2	810	1,680	1,790
	Undivided	4	1,320	2,500	2,640
		2	570	1,230	1,310
Collector	TWLTL	4	1,840	3,400	3,590
		2	810	1,680	1,790
	Undivided	4	1,320	2,500	2,640
		2	570	1,230	1,310
Rural Arterial	Divided	4	1,950	3,580	3,780
	Undivided	2	570	1,230	1,310
Rural Collector/Local	Undivided	2	570	930	1,000

Reference: *General Plan Development Code Update Draft PEIR*, City of Clovis

The City of Clovis General Plan requires a minimum LOS D at intersections under the City's jurisdiction. The *City of Clovis Traffic Impact Study Guidelines* dated August 25, 2014 states the following:

"All City intersections and roadway segments shall operate at a LOS D or better under the near-term conditions, unless a finding of overriding consideration was adopted in the General Plan EIR. Under long-term conditions, all City intersections and roadway segments shall operate at a LOS D or better, except for the roadway segments adopted in the General Plan EIR to operate at LOS E or F. Exceptions to this standard may be allowed on a case by case basis where lower levels of service would result in other public benefits, such as:

a) Preserving agriculture or open space land

b) Preserving the rural/historic character of a neighborhood

c) Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts

d) Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders

e) Where right-of-way constraints would make capacity expansion infeasible"

The document *Guidelines for the Preparation of Traffic Impact Studies Within County of Fresno* dated August 2012 (County Guidelines) identifies LOS A, B, and C as acceptable at County locations and LOS D, E, and F as unacceptable. LOS D is considered acceptable

within the sphere of influence (SOI) of the City of Fresno or the City of Clovis. The County Guidelines state:

A project is considered to have a significant impact if its traffic, when added to the traffic of the without-project condition, would cause any of the changes in traffic conditions described below.

1) *On roadway segments:*
   a) *Cause a roadway that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR*
   b) *Cause the V/C ratio (on a directional peak hour basis) to increase by more than 0.05 on a roadway that is already operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding V/C ratio increase is greater than 0.05.*
2) *At signalized intersections:*
   a) *Cause an intersection that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR*
   b) *Cause the average delay to increase by more than 5.0 seconds at a signalized intersection that is operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding delay increase is greater than 5.0 seconds.*
3) *At unsignalized intersections, including all-way stop, minor approach stop, and roundabouts:*
   a) *Cause a movement or approach that is operating at an acceptable LOS to deteriorate to an unacceptable LOS; OR*
   b) *Cause the average delay to increase by more than 5.0 seconds on a movement or approach that is operating at an unacceptable LOS. It should be noted that a decrease from an unacceptable LOS to a lesser LOS (e.g. from LOS D to LOS E in County areas) is not considered an impact unless the corresponding delay increase is greater than 5.0 seconds.*
4) *On roadways with traveled way width of less than 18 feet (essentially one-lane roadways assuming a minimum of 8 feet per travel direction for vehicle width and edge-of-traveled-way clearance, plus 2 feet clearance between vehicles traveling in opposite directions.)*
   a) *Cause a roadway that already carries 100 vehicles per day (vpd) or less to carry more than 100 vpd; OR*
   b) *Cause a roadway that already carries more than 100 vpd to carry any additional traffic.*

The County Guidelines also contain the following statement: "*Although queuing is not included as a significance criterion, the TIS shall include a queuing analysis when*

appropriate, particularly (but not limited to) left-turn pockets at signalized intersections. The TIS shall include recommendations to correct excessive queuing, blocking, operational problems, or storage deficiencies related to queuing."

Vehicle Miles Traveled (VMT)

The select zone analysis performed by COG includes an estimate of the number of vehicle miles traveled (VMT). The modeling revealed that the average length of all trips generated by residential developments within the Dry Creek Preserve is expected to range from 6.6 miles to 7.1 miles, which is expected to average 6.9 miles. For comparison purposes, the countywide average for all trips, using the same model run, is 8.19 miles.

The City of Clovis has not yet developed significance criteria related to VMT. Therefore, these values are presented for information purposes only. However, it is noted that the average Project trip length estimate of 6.9 miles is less than 85 percent of the countywide average. Considering the *Technical Advisory on Evaluating Transportation Impacts in CEQ*A dated December 2018 by the State of California Governor's Office of Planning and Research, the Project would not cause a significant transportation impact.

Intersection Analyses

The intersection levels of service (LOS) were determined using the computer program Synchro 9, which is based on HCM2010 procedures for calculating levels of service. The intersection analysis sheets are presented in Appendix C.

Tables 7 through 10 present the results of the intersection analyses. For signalized intersections and all-way stop controlled intersections, the overall intersection LOS and the average delay per vehicle are presented. Two two-way stop-controlled intersections, the HCM does not define an overall intersection LOS; therefore, the average delay and LOS for the approach with the greatest delay is presented. Delays and LOS worse than the target LOS are presented in bold type.

Table 7
Intersection LOS Summary – Existing Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	11.2	B	10.6	B
Teague / Fowler	Two-way stop	18.8	C	17.2	C
Nees / Sunnyside	All-way stop	28.2	D	21.2	C
Nees / Fowler	Traffic Signals	24.4	C	22.5	C

Table 8
Intersection LOS Summary – Existing-Plus-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	11.4	B	10.8	B
Teague / Fowler	Two-way stop	19.6	C	18.0	C
Nees / Sunnyside	All-way stop	29.3	D	22.3	C
Nees / Fowler	Traffic Signals	24.9	C	22.8	C

Table 9
Intersection LOS Summary – Near-Term With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	13.7	B	13.1	B
Teague / Fowler	Two-way stop	25.1	D	24.7	C
Nees / Sunnyside	All-way stop	**59.4**	**F**	**56.3**	**F**
Nees / Fowler	Traffic Signals	30.7	C	27.0	C

Table 10
Intersection LOS Summary – Year 2040 Cumulative With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Sunnyside	Two-way stop	34.5	D	27.4	D
Teague / Fowler	Two-way stop	**190.2**	**F**	**233.3**	**F**
Nees / Sunnyside	All-way stop	**>300**	**F**	**>300**	**F**
Nees / Fowler	Traffic Signals	**88.3**	**F**	**91.0**	**F**

The results of the intersection operational analyses include an estimate of the 95th-percentile queue lengths. The existing storage capacity (where applicable) and the calculated 95th-percentile queue lengths are presented in Table 11. The storage capacities reported in Table 11 are based on measurements from available aerial photographs. Calculated 95th-percentile queue lengths that exceed the storage capacity by at least 25 feet (the average storage space for one vehicle) or that are considered to be excessive are indicated in bold type.

Table 11
Intersection Queuing Summary

Intersection	Existing Storage Capacity (feet)	Calculated 95th-Percentile Queue Length (feet)							
Approach		Existing		Existing Plus Project		Near-Term With-Project		Year 2040 With-Project	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
Teague / Sunnyside									
Eastbound LTR	*	3	0	3	0	3	3	35	15
Westbound LTR	*	5	3	8	3	10	8	65	35
Northbound LTR	*	0	0	0	0	0	0	0	0
Southbound LTR	*	0	0	0	0	0	3	3	3
Teague / Fowler									
Eastbound LTR	*	3	5	10	10	15	15	60	125
Westbound LTR	*	30	13	33	13	43	20	208	173
Northbound LTR	*	0	0	0	3	0	3	3	5
Southbound LTR	*	3	0	3	0	3	3	5	3
Nees / Sunnyside									
Eastbound L	90	**	**	**	**	**	**	**	**
Eastbound T	*	35	70	38	75	53	193	145	433
Eastbound TR	370	80	105	83	108	113	190	290	**595**
Westbound L	185+	5	5	5	5	8	8	18	13
Westbound TR	*	255	133	260	135	420	310	**>1,000**	**>1,000**
Northbound LT	*	88	113	90	123	128	288	**350**	**>1,000**
Northbound R	*	3	8	3	8	5	10	5	20
Southbound LTR	*	65	38	73	43	238	133	**765**	**480**
Nees / Fowler									
Eastbound L	235	67	82	67	82	69	99	116	**271**
Eastbound T	*	78	155	78	155	91	177	304	415
Eastbound TR	*	78	155	78	155	91	177	304	415
Westbound L	145	119	72	125	72	125	81	**203**	157
Westbound TR	*	311	213	337	218	349	295	**>1,000**	**>1,000**
Northbound L	250	176	138	164	138	199	188	**400**	**319**
Northbound T	*	153	300	150	308	175	389	335	912
Northbound R	*	0	0	0	0	0	0	0	22
Southbound L	100	69	68	71	68	84	78	**355**	**337**
Southbound TR	*	295	275	301	282	426	321	**909**	654

* Approximately ½ mile to the nearest major intersection.
** Limitations in the analysis technique prevent analysis of three lanes on the same approach.
\+ Connects to a TWLTL that provides a substantial amount of additional storage.

Road Segment Analyses

The road segment analyses were performed using the thresholds presented in Table 6. Tables 12 and 13 present the two-way peak-hour road segment volumes and the corresponding LOS based on the existing lane configurations. Levels of service below (i.e., worse than) the target LOS are presented in bold type.

Table 12
Level of Service Summary For Roadway Segments - A.M. Peak Hour

Roadway	Classification	Existing Median Type	Existing Number of Lanes	Volume and LOS			
				Existing	Existing Plus Project	Near-Term With-Project	Year 2040 With-Project
Fowler Avenue (Between Teague and Nees)	Arterial	None	2	736 D	753 D	892 D	**1,297** **E**
Sunnyside Avenue (Between Teague and Nees)	Collector	None	2	297 C	314 C	482 C	1,026 D

Table 13
Level of Service Summary For Roadway Segments - P.M. Peak Hour

Roadway	Classification	Existing Median Type	Existing Number of Lanes	Volume and LOS			
				Existing	Existing Plus Project	Near-Term With-Project	Year 2040 With-Project
Fowler Avenue (Between Teague and Nees)	Arterial	None	2	902 D	924 D	1,113 D	**1,667** **F**
Sunnyside Avenue (Between Teague and Nees)	Collector	None	2	298 C	320 C	551 C	972 D

Discussion of Analyses

Existing Conditions

The results of the analyses indicate that the study intersections are currently operating at acceptable levels of service with calculated 95th-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project.

The results of the analyses indicate that the study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F. The other study intersections will continue to operate at

acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Mitigated conditions are summarized in Tables 14 and 15. Mitigated intersection analysis sheets are attached.

Table 14
Mitigated Intersection LOS Summary – Near-Term With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Nees / Sunnyside	Signals	28.8	C	22.0	C

Table 15
Mitigated Intersection Queuing Summary – Near-Term With-Project Conditions

Intersection	95th-Percentile Queue Length (feet)	
Approach	A.M.	P.M.
Nees / Sunnyside		
Eastbound L	35	76
Eastbound TR	107	155
Westbound L	42	36
Westbound TR	334	306
Northbound L	163	154
Northbound TR	110	163
Southbound L	72	46
Southbound TR	247	125

Cumulative Year 2040 With-Project Conditions

The year 2040 cumulative with-Project conditions analyses are based on the assumption that the residential developments considered to be likely within the Dry Creek Preserve have been constructed and that 20 years of growth has occurred in the Clovis, Fresno, and Fresno County region as incorporated into the adopted Fresno County travel model. The analyses indicate that all of the study intersections, with the exception of the Teague Avenue / Sunnyside Avenue intersection, are expected to operate below (i.e., worse than) the target

LOS. Excessive queues would accompany the long delays. The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F. Sunnyside Avenue between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The improvements expected to result in an acceptable LOS at each of the impacted locations are described below.

The intersection of Teague and Fowler Avenues is expected to operate at LOS F during the a.m. and p.m. peak hours with the current two-way stop control and would require signalization to operate at acceptable levels of service. With signalization and the following minimum lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues is expected to operate at LOS F during the a.m. and p.m. peak hours with the current all-way stop control and would require signalization to operate at acceptable levels of service. With signalization and the following minimum lane configurations the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues is expected to operate at LOS F with the current signalization and lane configurations. The intersection would require additional lanes to operate at acceptable levels of service. With the following minimum lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan and to provide the required lanes at the intersection with Nees Avenue.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues presented in Table 17 as applicable.

Mitigated conditions are summarized in Tables 16 and 17. Mitigated intersection analysis sheets are presented in Appendix D.

Table 16
Mitigated Intersection LOS – Year 2040 Cumulative With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Teague / Fowler	Traffic Signals	13.1	B	12.0	B
	Roundabout	7.3	A	8.4	A
Nees / Sunnyside	Traffic Signals	38.1	D	45.5	D
Nees / Fowler	Traffic Signals	38.3	D	36.5	D

Table 17
Mitigated Intersection Queuing Summary - 2040 Cumulative With-Project Conditions

Intersection	95th-Percentile Queue Length (feet)	
Approach	A.M.	P.M.
Teague / Fowler		
Eastbound L	24	31
Eastbound TR	36	32
Westbound L	53	33
Westbound TR	49	42
Northbound L	30	63
Northbound TR	118	243
Southbound L	64	38
Southbound TR	194	178
Nees / Sunnyside		
Eastbound L	51	130
Eastbound TR	233	492
Westbound L	80	69
Westbound TR	405	310
Northbound L	223	399
Northbound TR	207	444
Southbound L	1114	73
Southbound TR	417	477
Nees / Fowler		
Eastbound L	75	178
Eastbound TR	203	294
Westbound L	144	111
Westbound T	619	540
Westbound R	51	105
Northbound L	259	201
Northbound TR	139	291
Southbound L	277	213
Southbound TR	287	199

Conclusions and Recommendations

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the project, and to analyze the traffic conditions that are expected to occur in the future. The conclusions of the study are summarized in the following sections.

Vehicle Miles Traveled (VMT)

The City of Clovis has not yet developed significance criteria related to VMT. Therefore, these values are presented for information purposes only. However, it is noted that the average Project trip length estimate of 6.9 miles is less than 85 percent of the countywide average. Considering the *Technical Advisory on Evaluating Transportation Impacts in CEQ*A dated December 2018 by the State of California Governor's Office of Planning and Research, the Project would not cause a significant transportation impact.

Existing Conditions

The study intersections are currently operating at acceptable levels of service with calculated 95th-percentile queues contained within the available storage capacity. Long queues have been observed, primarily at the Nees Avenue / Sunnyside Avenue intersection, and are often on a single approach during school peaks. The study road segments are operating at acceptable levels of service.

Existing-Plus-Project Conditions

The existing-plus-Project conditions analyses represent conditions that would occur after construction of the Project if none of the pending and approved projects were constructed. This scenario isolates the specific impacts of the Project. The study intersections will continue to operate at acceptable levels of service with queuing conditions similar to the existing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Near-Term With-Project Conditions

The near-term with-Project conditions analyses represent conditions that are expected after construction of the Project and other the pending and approved projects. This scenario isolates the near-term cumulative impacts of the Project and other known projects.

The results of the analyses indicate that the intersection of Nees and Sunnyside Avenues is expected to operate at LOS F. The other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions. The study road segments are also expected to continue to operate at acceptable levels of service.

Installation of traffic signals at the intersection of Nees and Sunnyside Avenues as described in this report is expected to result in acceptable levels of service. The following minimum lane configurations and installation of an eight-phase signal system with protected left-turn phases will result in LOS C during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn (same as existing);
Westbound: one left-turn lane and one through lane with a shared right turn (same as existing);
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

Cumulative Year 2040 With-Project Conditions

The following study intersections are expected to operate below (i.e., worse than) the target LOS, with excessive queues that accompany the long delays:

- Teague Avenue / Fowler Avenue
- Nees Avenue / Sunnyside Avenue
- Nees Avenue / Fowler Avenue

The two-lane Fowler Avenue road segment between Nees Avenue and Teague Avenue is expected to operate at LOS F.

The intersection of Sunnyside and Teague Avenues is expected to operate at acceptable levels of service. The Sunnyside Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D, which is considered acceptable by both the City of Clovis and County of Fresno General Plans (within the Clovis SOI).

The intersection of Teague and Fowler Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS B during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and one through lane with a shared right turn;
Westbound: one left-turn lane and one through lane with a shared right turn;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

As an alternative, the intersection of Teague and Fowler Avenues is a candidate for construction of a roundabout. The roundabout would include two entry lanes on the northbound and southbound approaches and one entry lane on the eastbound and westbound approaches and is expected to operate at LOS A during both the a.m. and p.m. peak hours.

The intersection of Nees and Sunnyside Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane and two through lanes with a shared right turn;
Northbound: one left-turn lane and one through lane with a shared right turn;
Southbound: one left-turn lane and one through lane with a shared right turn.

The intersection of Nees and Fowler Avenues would require additional lanes to operate at acceptable levels of service. With the following lane configurations, the intersection would operate at LOS D during the a.m. and p.m. peak hours:

Eastbound: one left-turn lane and two through lanes with a shared right turn;
Westbound: one left-turn lane, one through lane, and one right-turn lane;
Northbound: one left-turn lane and two through lanes with a shared right turn;
Southbound: one left-turn lane and two through lanes with a shared right turn.

The existing two-lane Fowler Avenue road segment between Teague and Nees Avenues is expected to operate at LOS D if widened to two lanes with a TWLTL, but should be planned for four lanes in the ultimate condition in accordance with the City of Clovis General Plan.

Turn lanes should be designed to accommodate the calculated 95th-percentile queues.

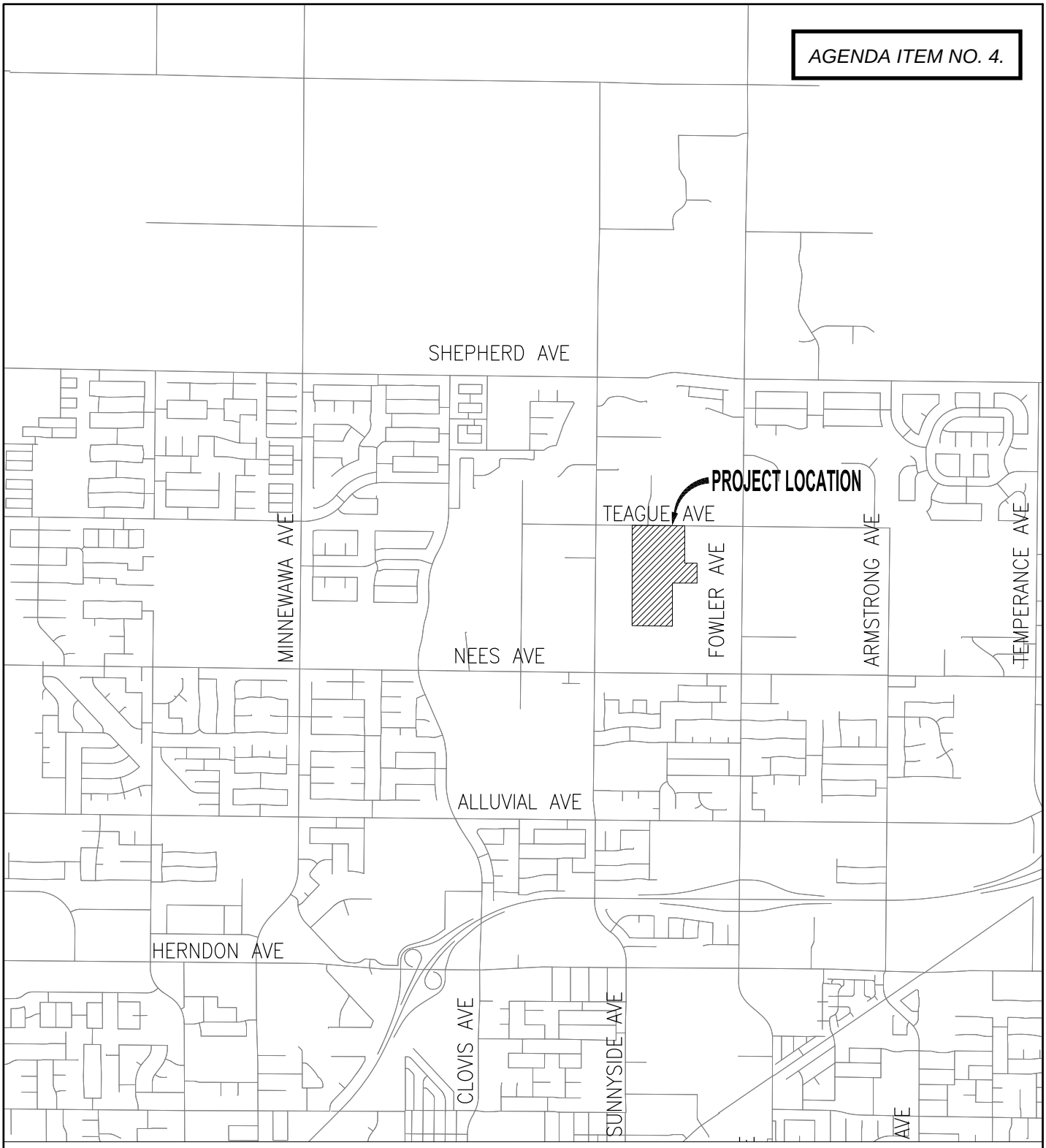
Thank you for the opportunity to perform this Traffic Impact Study. Please feel free to contact me if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures 1 through 9
Appendix A - Traffic Count Data Sheets
Appendix B - Fresno County Travel Model
Appendix C - Intersection Analyses
Appendix D - Mitigated Intersection Analyses

FIGURES



Proposed McKenney Assemblage
Clovis, California

VICINITY MAP

723

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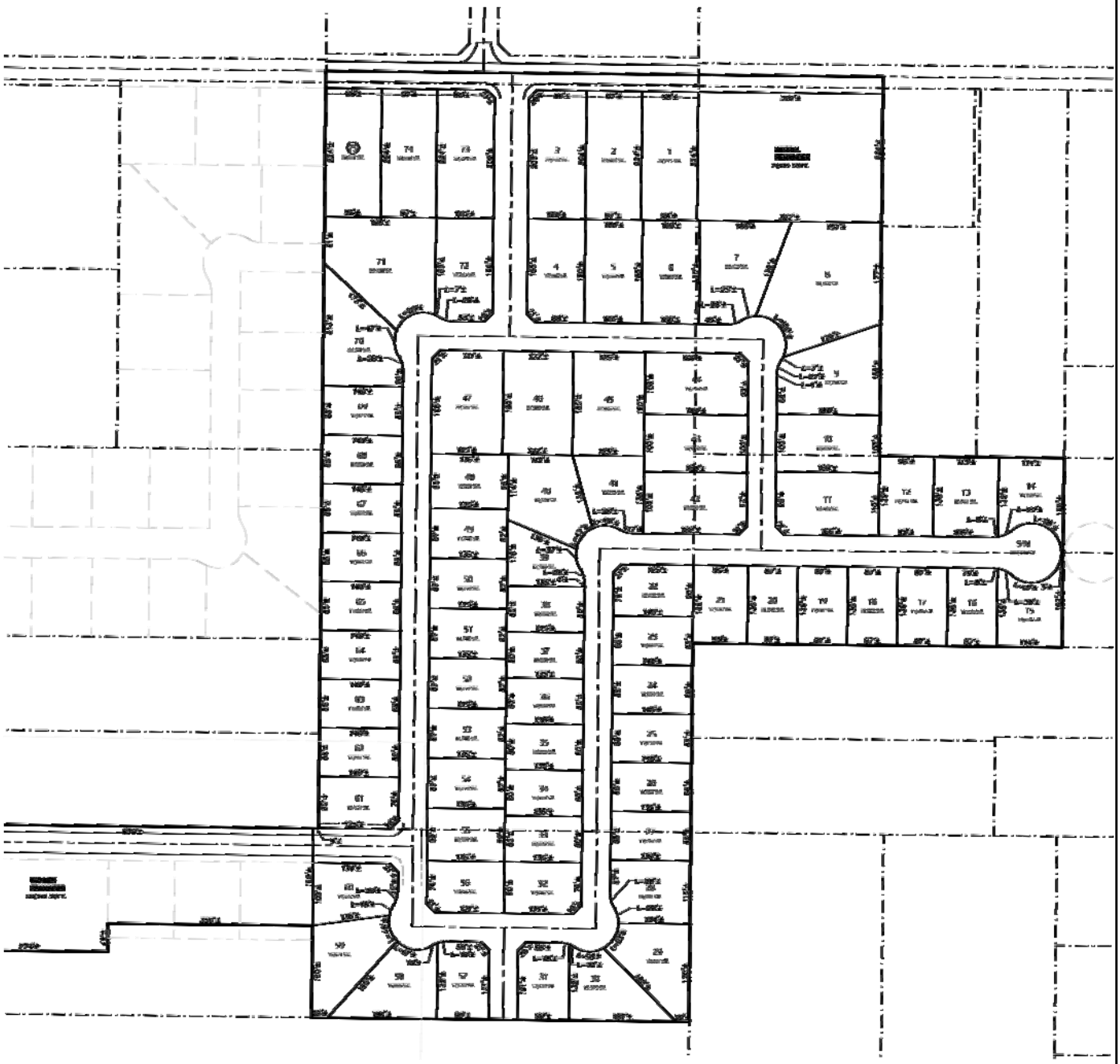
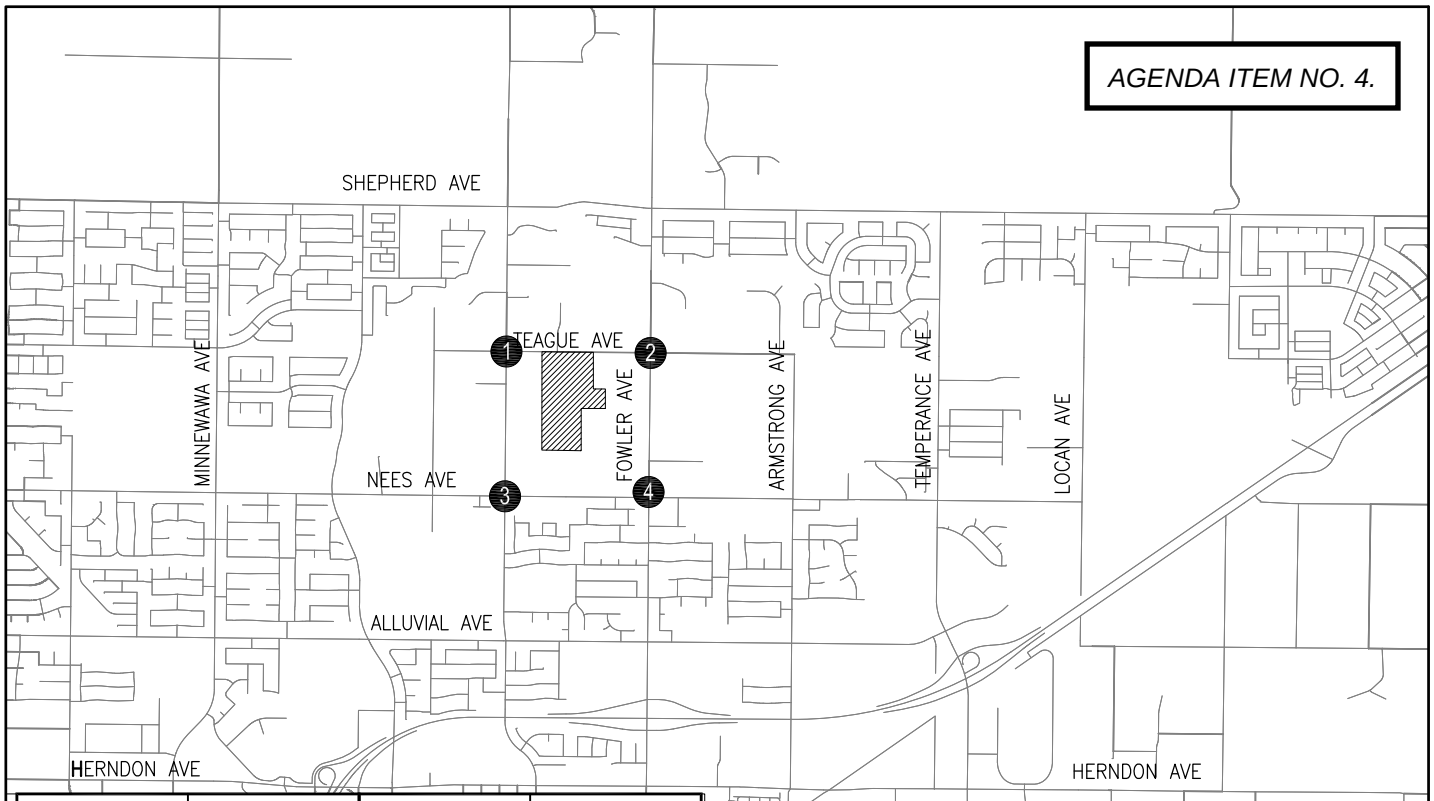
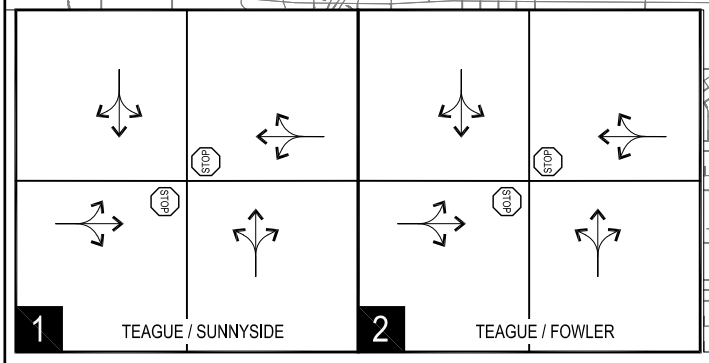
Figure 1

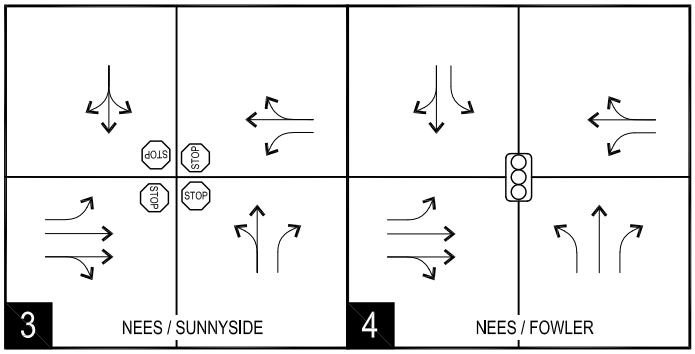


Proposed McKenney Assemblage
Clovis, California

SITE PLAN





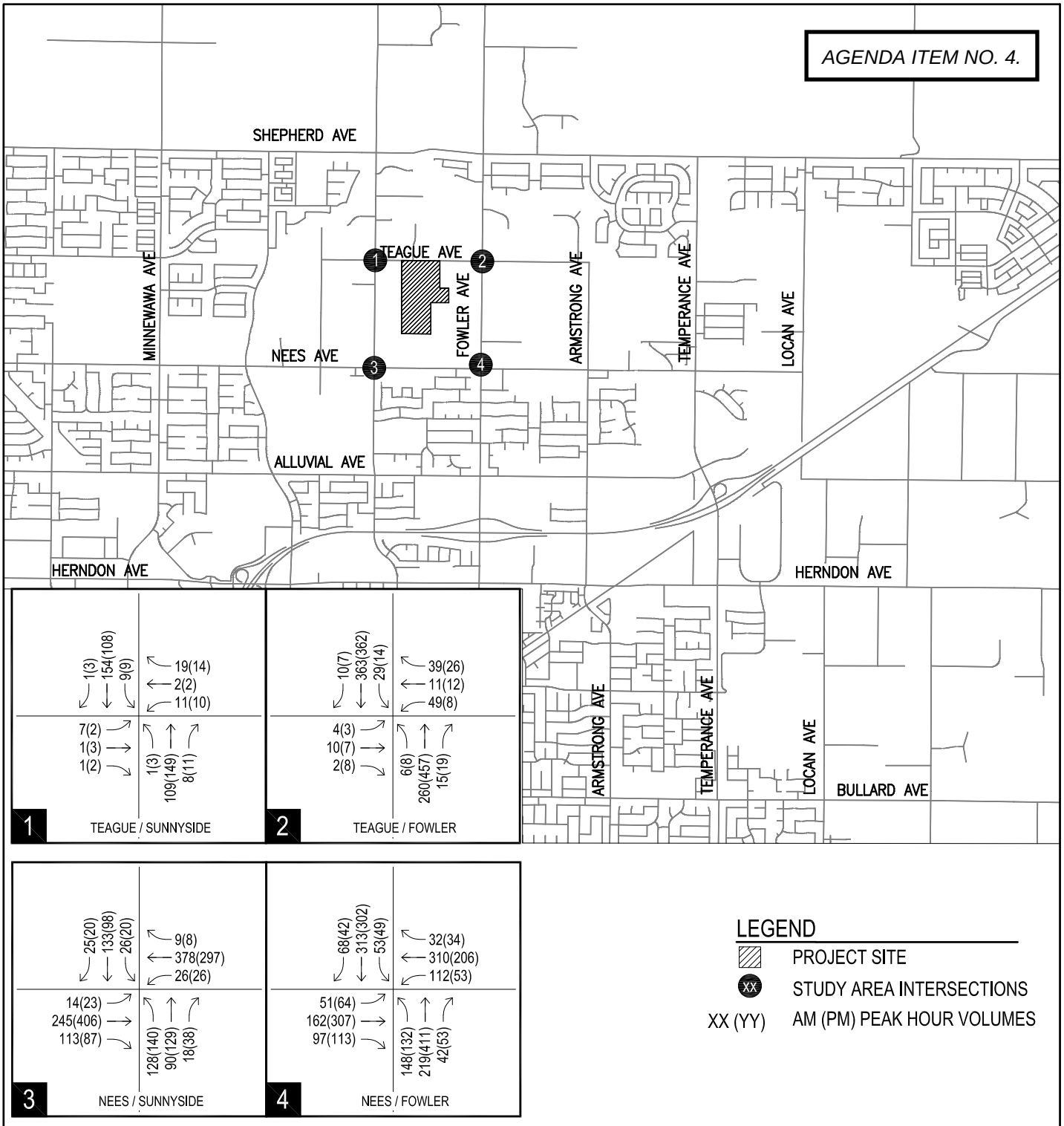


LEGEND

- PROJECT SITE
- XX STUDY AREA INTERSECTIONS
- SIGNALIZED INTERSECTION
- STOP STOP SIGN
- DIRECTION OF TRAVEL

Proposed McKenney Assemblage
Clovis, California

EXISTING LANE CONFIGURATIONS AND INTERSECTION CONTROL

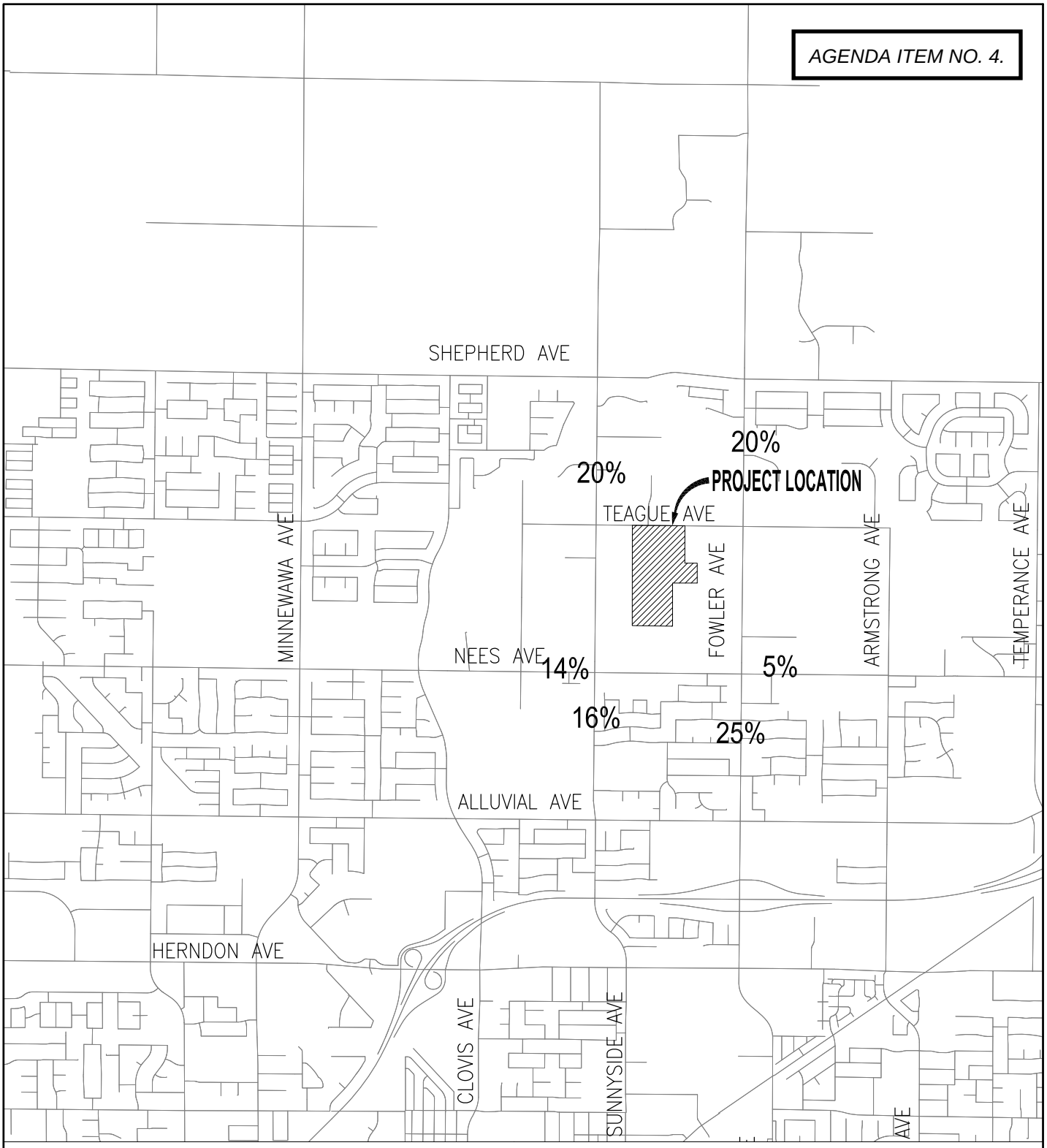


LEGEND

- PROJECT SITE
- XX STUDY AREA INTERSECTIONS
- XX (YY) AM (PM) PEAK HOUR VOLUMES

Proposed McKenney Assemblage
Clovis, California

EXISTING PEAK HOUR TRAFFIC VOLUMES

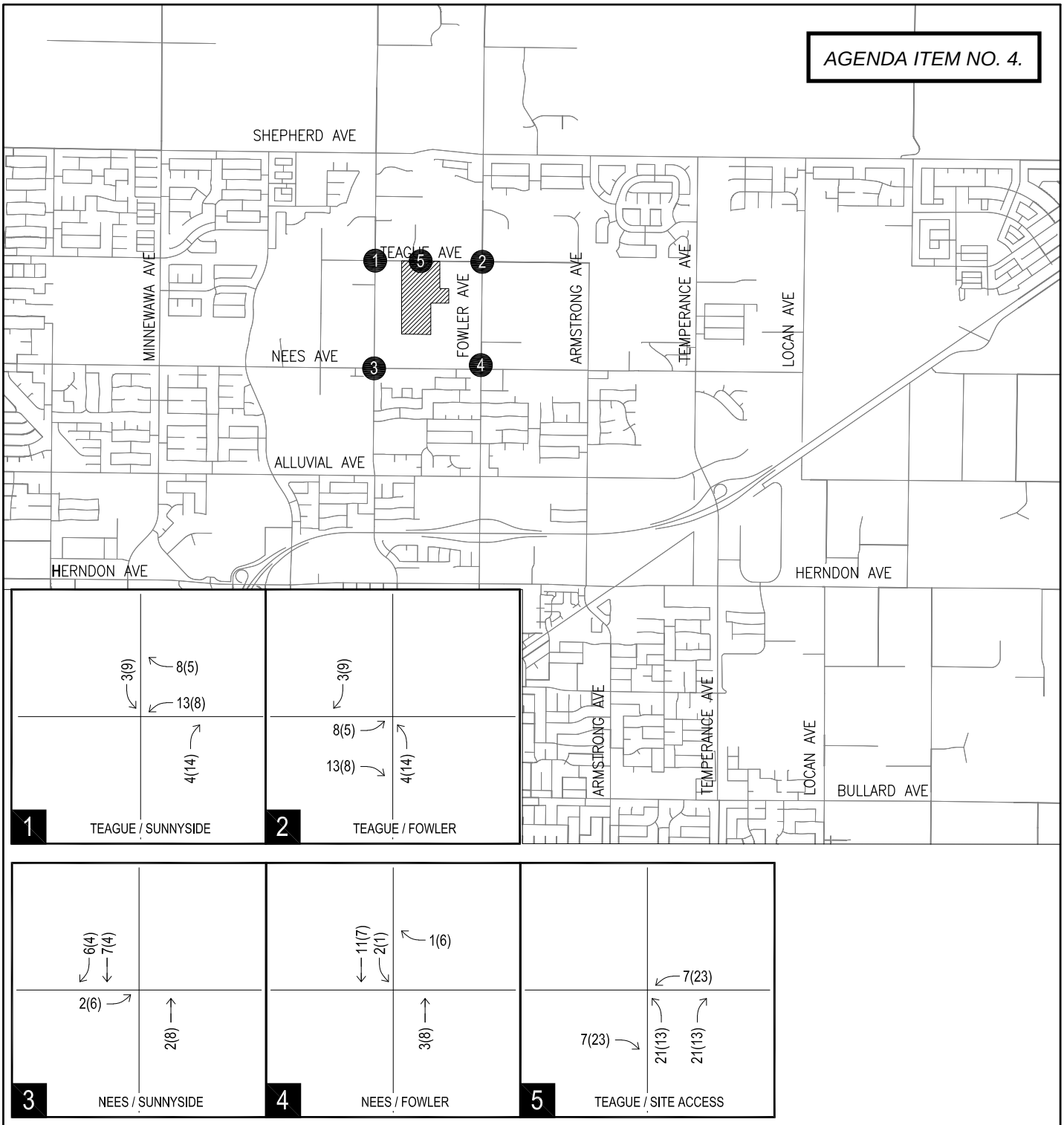


Proposed McKenney Assemblage
Clovis, California

PROJECT TRIP DISTRIBUTION PERCENTAGE

PETERS ENGINEERING GROUP

Figure 5

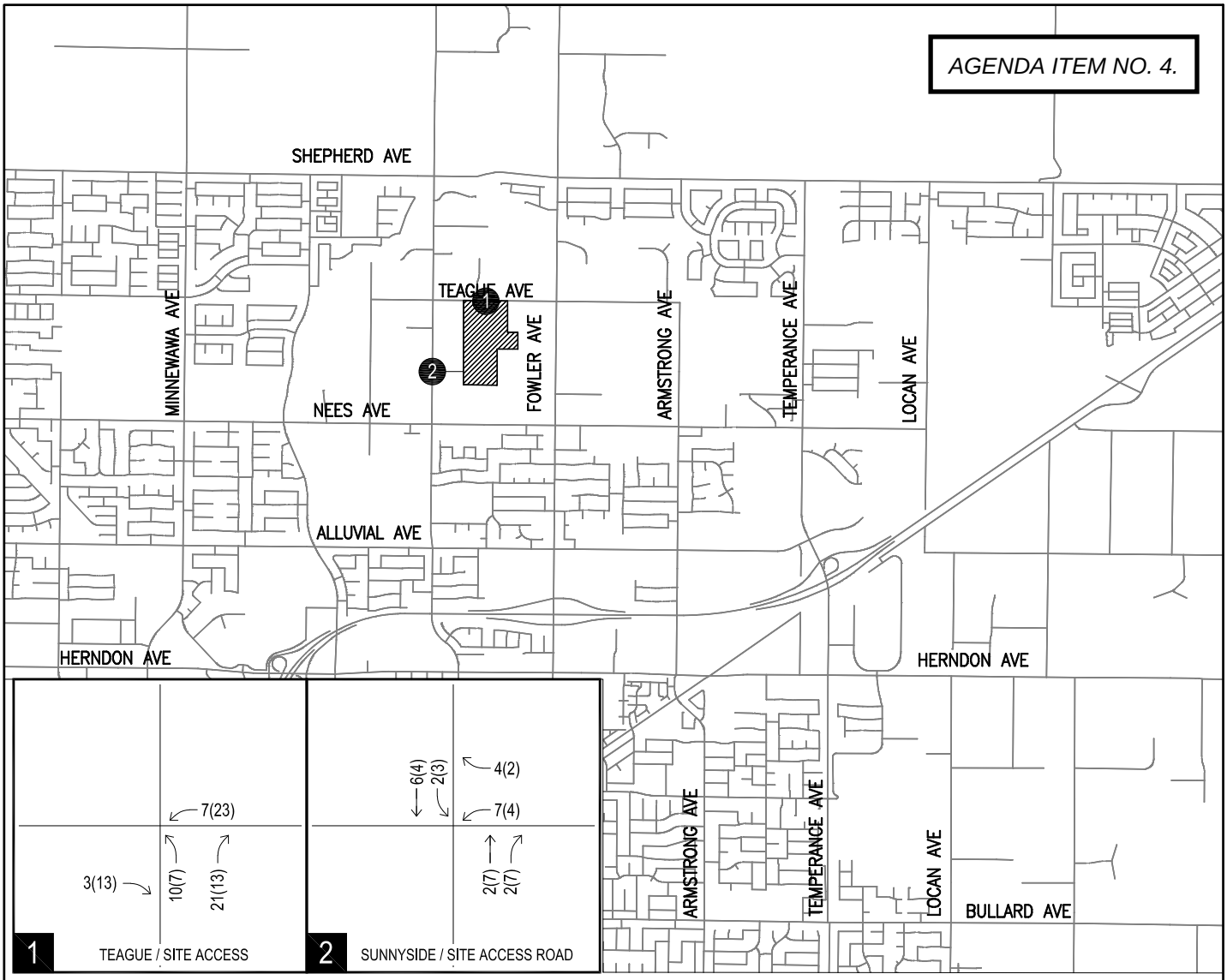


Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

PEAK HOUR PROJECT TRAFFIC VOLUMES

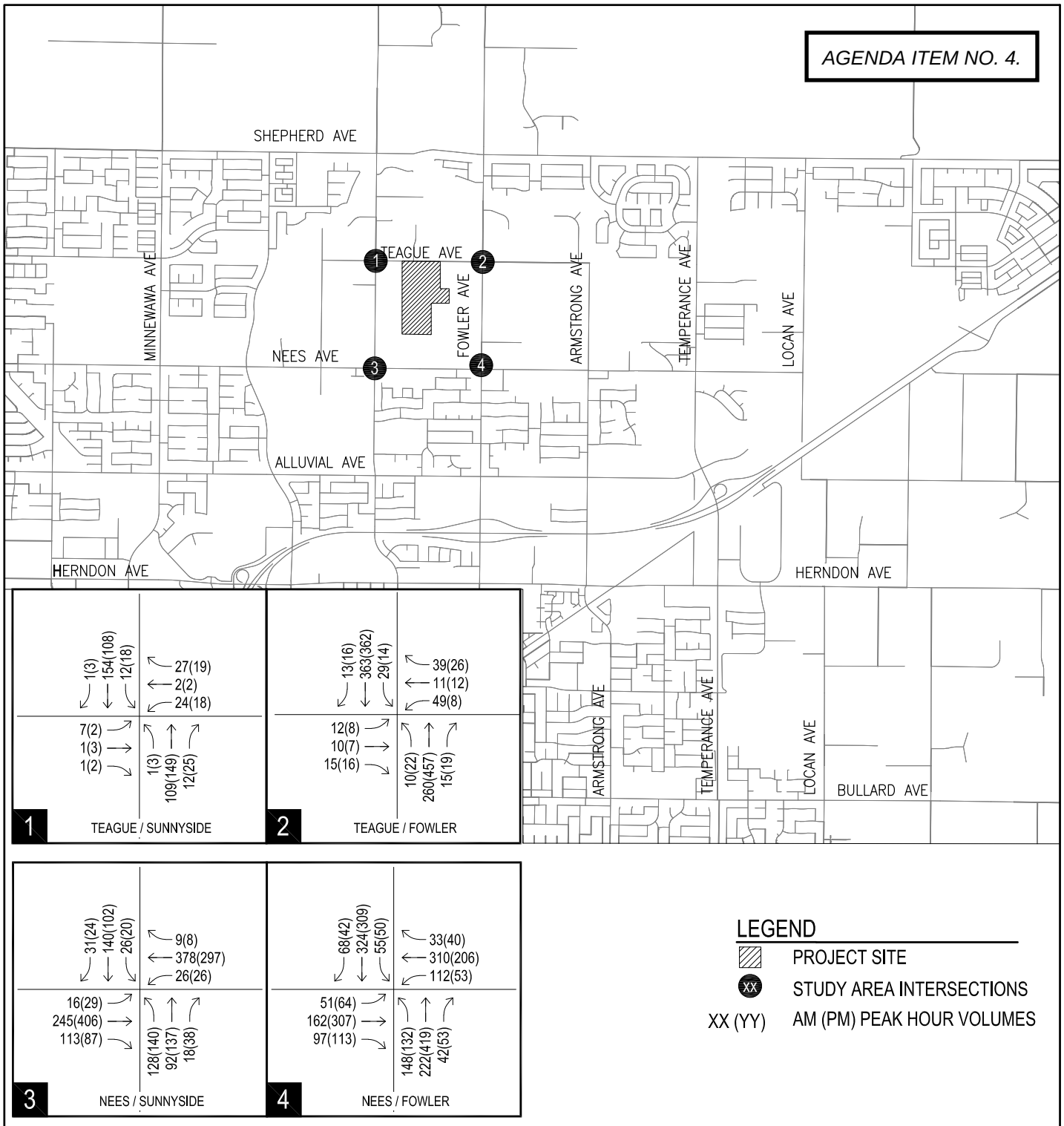


Proposed McKenney Assemblage
Clovis, California

LEGEND

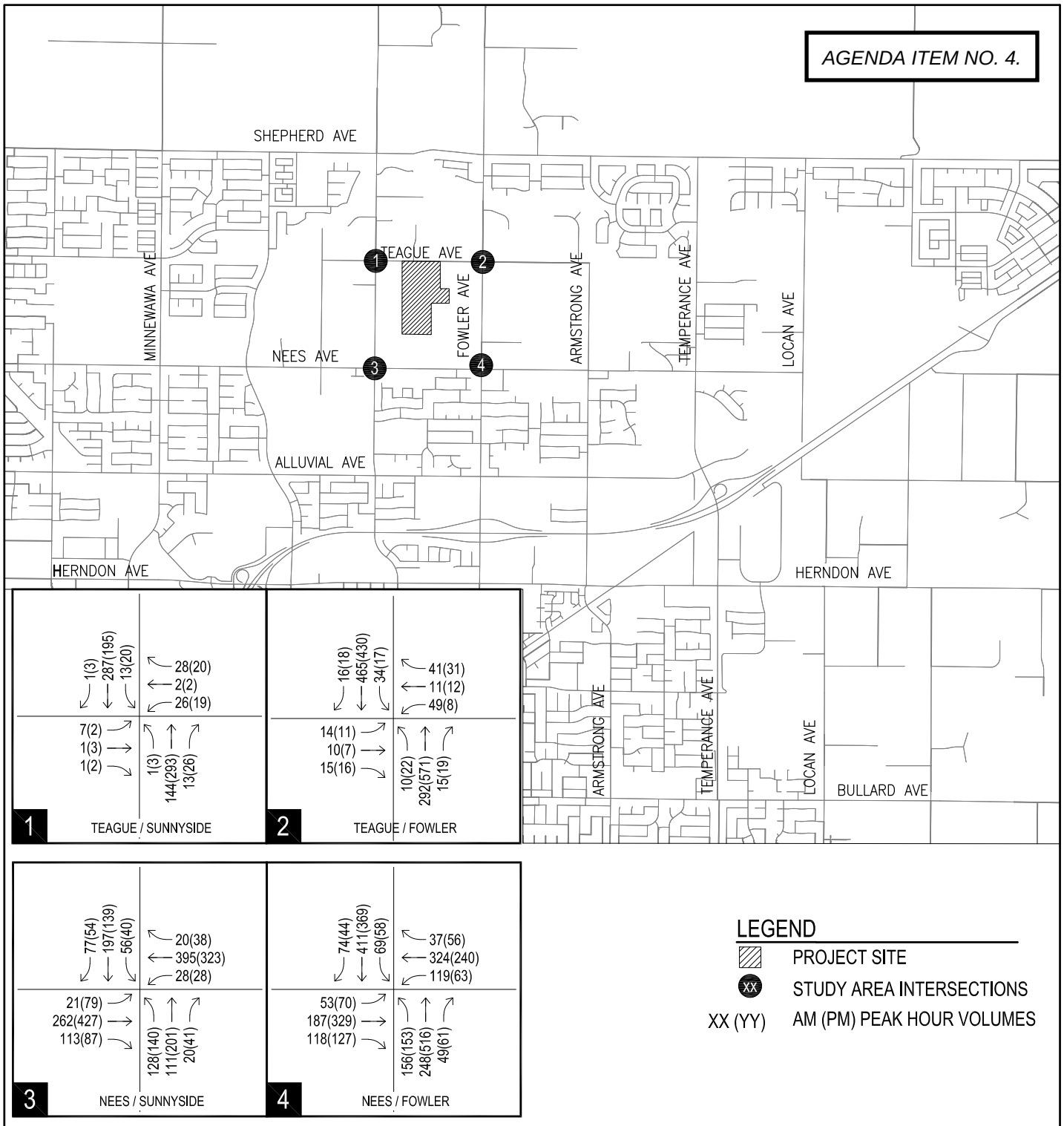
	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

PROJECT TRIPS AT SITE ACCESS ROADS-POTENTIAL FUTURE CONDITION



Proposed McKenney Assemblage
Clovis, California

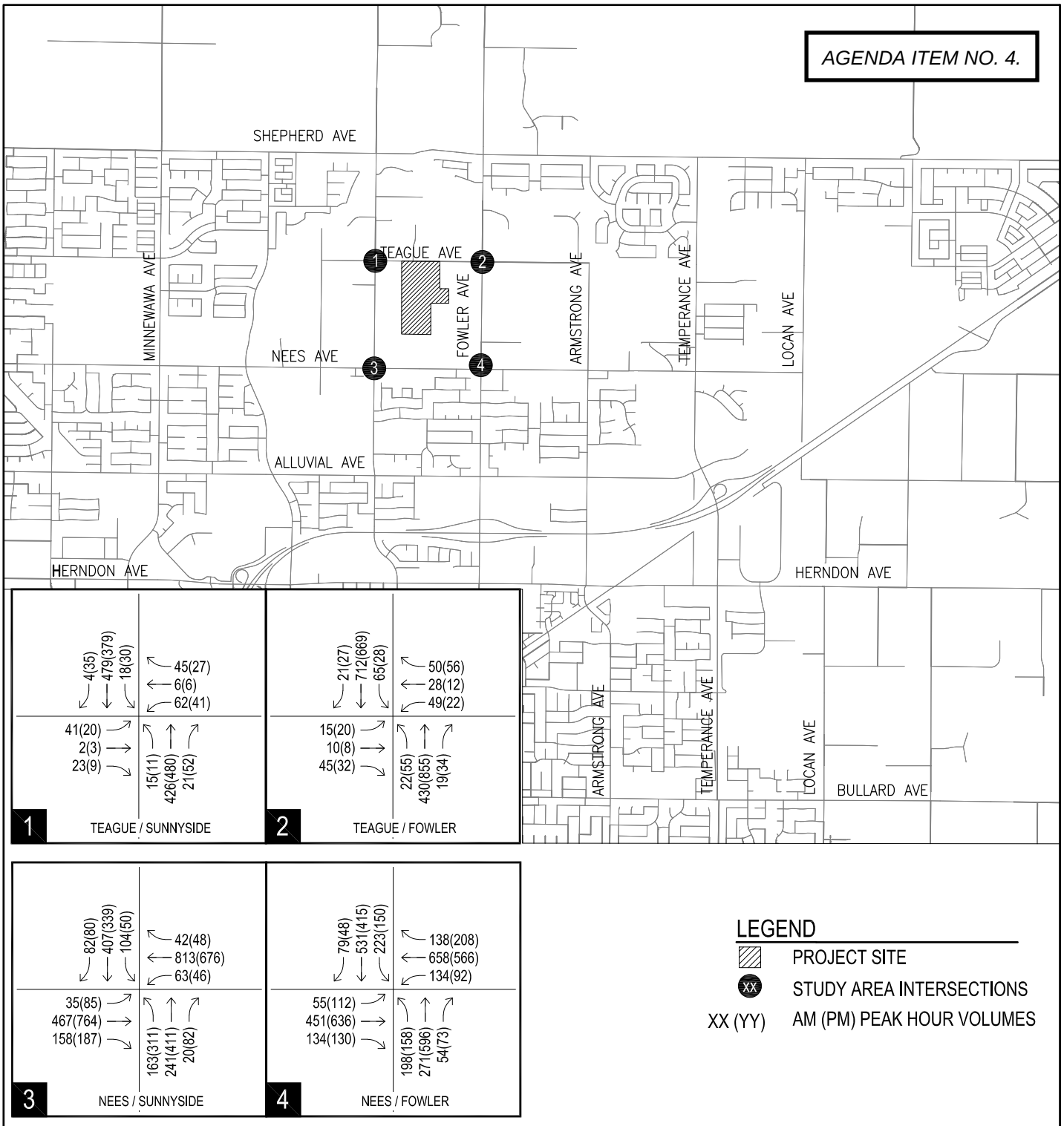
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES



Proposed McKenney Assemblage
Clovis, California

NEAR-TERM WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

Figure 8



Proposed McKenney Assemblage
Clovis, California

CUMULATIVE YEAR 2040 WITH PROJECT PEAK HOUR TRAFFIC VOLUMES

Figure 9

APPENDIX A
TRAFFIC COUNT DATA SHEETS

Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION Teague Ave @ Sunnyside Ave **LATITUDE** 36.8593

COUNTY Fresno **LONGITUDE** -119.6930

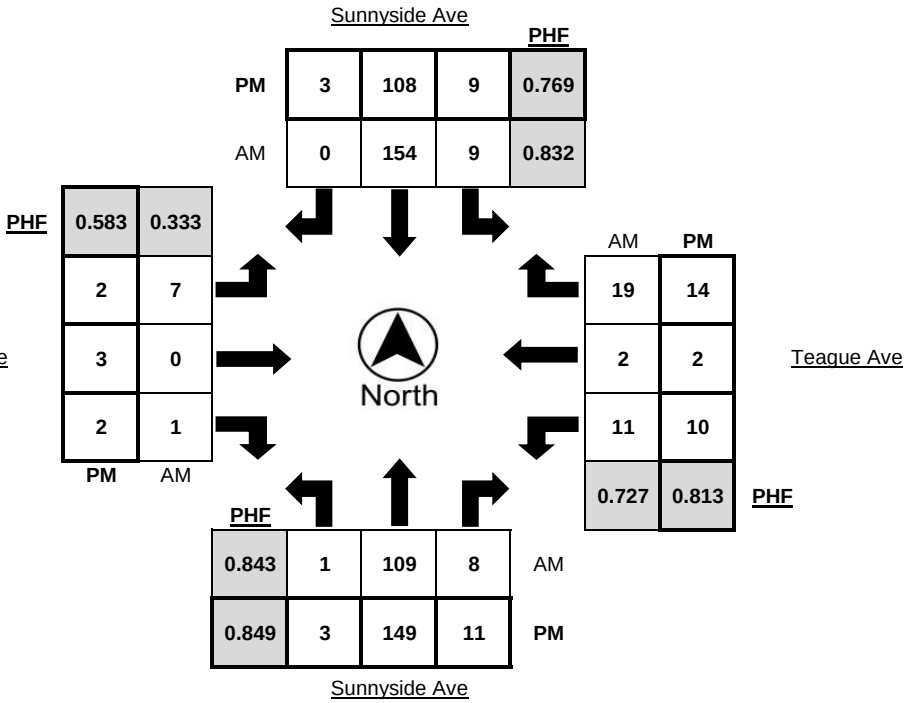
COLLECTION DATE Tuesday, February 25, 2020 **WEATHER** Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	0	22	1	2	1	27	1	1	1	0	1	0	1	0	4	0
7:15 AM - 7:30 AM	0	33	2	2	1	36	0	2	0	0	0	0	3	1	2	1
7:30 AM - 7:45 AM	0	31	2	3	3	35	0	3	1	0	0	0	1	1	5	0
7:45 AM - 8:00 AM	1	23	3	1	4	45	0	0	5	0	1	0	2	0	9	1
8:00 AM - 8:15 AM	0	22	1	0	1	38	0	1	1	0	0	0	5	0	3	0
8:15 AM - 8:30 AM	0	22	5	2	2	37	1	6	0	1	0	0	2	0	0	0
8:30 AM - 8:45 AM	0	18	1	0	0	25	3	4	2	0	1	1	2	1	2	0
8:45 AM - 9:00 AM	0	12	1	1	1	32	0	2	0	1	1	0	2	0	0	0
TOTAL	**1**	**183**	**16**	**11**	**13**	**275**	**5**	**19**	**10**	**2**	**4**	**1**	**18**	**3**	**25**	**2**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	2	32	2	0	2	36	0	3	1	1	1	0	1	1	1	0
4:15 PM - 4:30 PM	0	23	1	0	0	29	0	0	1	0	0	0	3	0	2	0
4:30 PM - 4:45 PM	2	33	6	1	2	28	0	1	2	1	0	0	1	0	3	0
4:45 PM - 5:00 PM	0	34	2	1	2	26	1	0	0	1	1	0	2	1	4	0
5:00 PM - 5:15 PM	0	47	1	0	1	19	2	0	0	0	1	0	5	1	2	0
5:15 PM - 5:30 PM	1	35	2	0	4	35	0	1	0	1	0	0	2	0	5	0
5:30 PM - 5:45 PM	1	23	2	0	1	30	0	0	1	0	0	0	2	2	1	0
5:45 PM - 6:00 PM	0	23	7	0	1	29	2	0	0	3	0	0	2	1	3	0
TOTAL	**6**	**250**	**23**	**2**	**13**	**232**	**5**	**5**	**5**	**7**	**3**	**0**	**18**	**6**	**21**	**0**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:15 AM - 8:15 AM	1	109	8	6	9	154	0	6	7	0	1	0	11	2	19	2
4:30 PM - 5:30 PM	3	149	11	2	9	108	3	2	2	3	2	0	10	2	14	0

	PHF	Trucks
AM	0.863	4.4%
PM	0.929	1.3%



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Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION Teague Ave @ Sunnyside Ave **LATITUDE** 36.8593

COUNTY Fresno **LONGITUDE** -119.6930

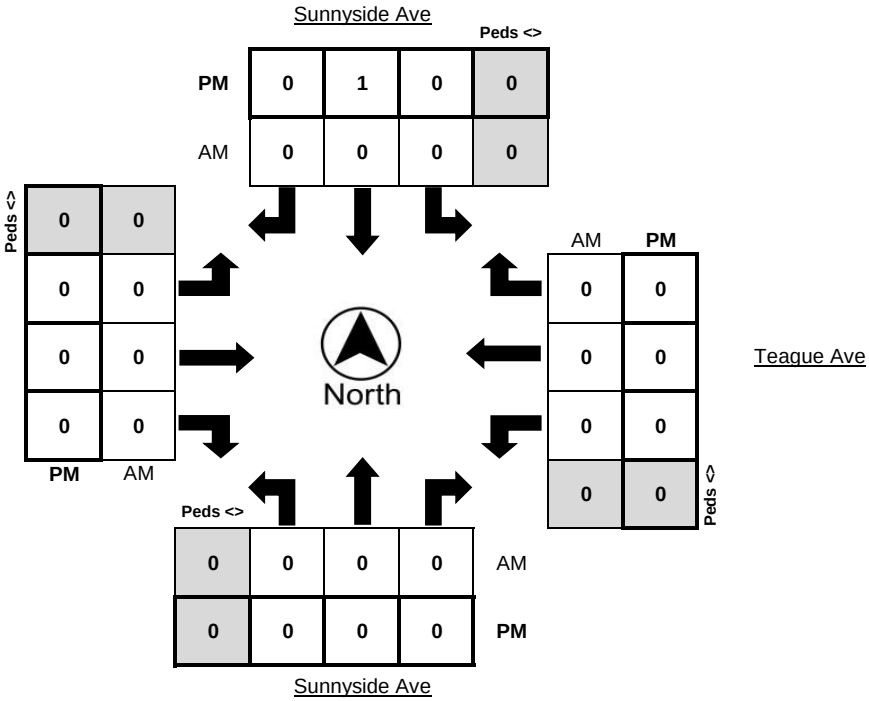
COLLECTION DATE Tuesday, February 25, 2020 **WEATHER** Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	**1**	**0**



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Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

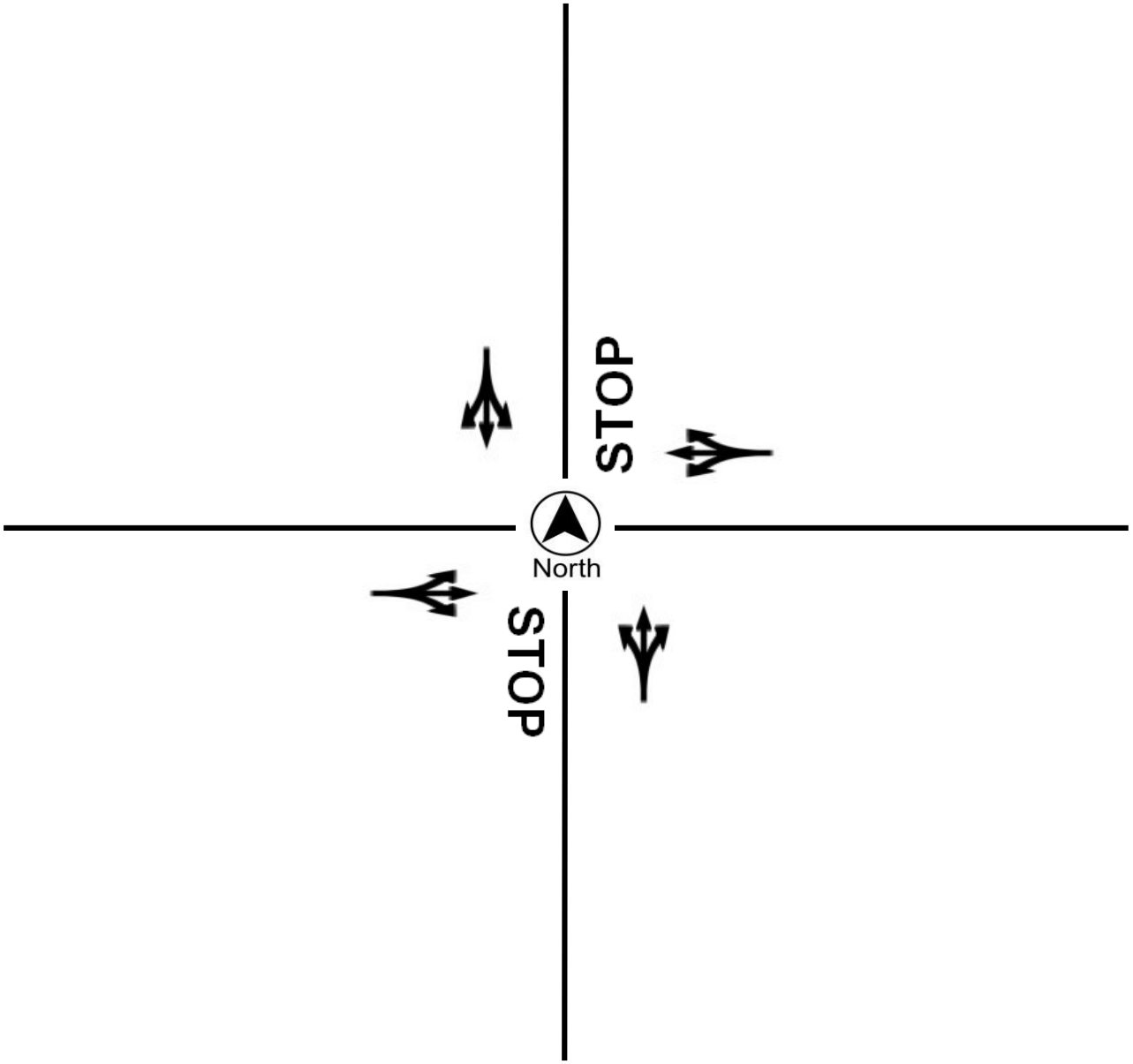
Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Teague Ave @ Sunnyside Ave	**N/S STREET**	Sunnyside Ave
COUNTY	Fresno	**E/W STREET**	Teague Ave
COLLECTION DATE	Tuesday, February 25, 2020	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	Two-Way Stop

COMMENTS



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Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

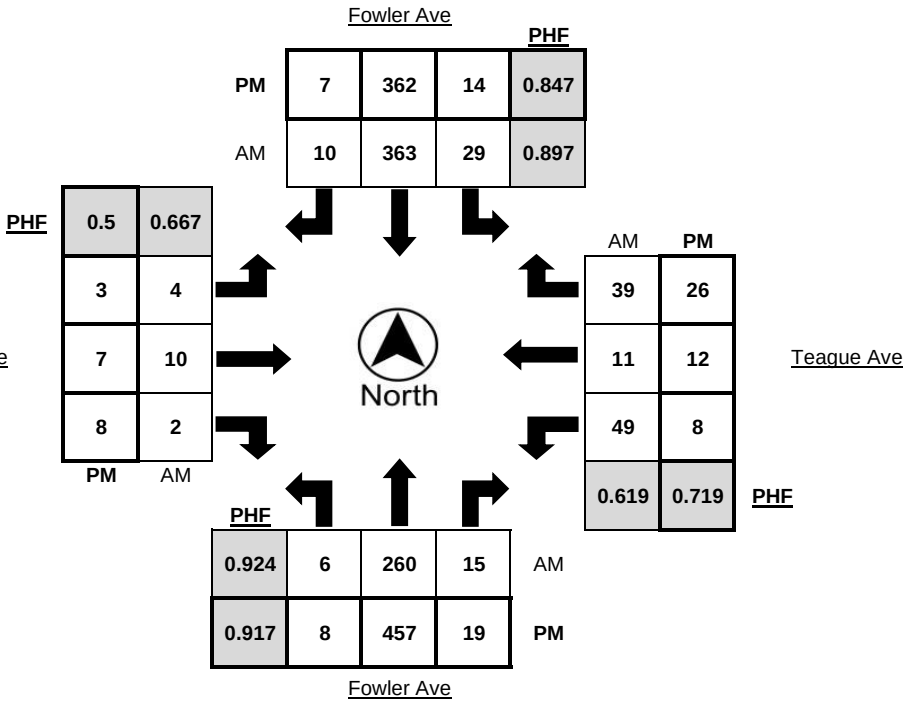
LOCATION Teague Ave @ Fowler Ave
LATITUDE 36.8593
COUNTY Fresno
LONGITUDE -119.6841
COLLECTION DATE Tuesday, February 25, 2020
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	3	53	2	7	3	58	1	7	1	1	2	0	0	1	4	1
7:15 AM - 7:30 AM	1	63	4	9	3	92	0	11	1	1	3	0	7	2	3	0
7:30 AM - 7:45 AM	2	70	2	8	5	100	7	9	0	2	1	1	6	1	5	0
7:45 AM - 8:00 AM	3	53	3	12	6	98	3	11	2	4	0	1	6	7	2	1
8:00 AM - 8:15 AM	1	66	5	11	14	91	0	11	0	1	0	0	21	3	16	0
8:15 AM - 8:30 AM	0	71	5	18	4	74	0	9	2	3	1	0	16	0	16	1
8:30 AM - 8:45 AM	2	63	5	11	1	84	0	10	0	0	0	0	6	1	3	1
8:45 AM - 9:00 AM	0	62	2	12	3	73	2	9	2	0	1	0	9	2	6	1
TOTAL	**12**	**501**	**28**	**88**	**39**	**670**	**13**	**77**	**8**	**12**	**8**	**2**	**71**	**17**	**55**	**5**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	2	91	4	3	7	69	0	1	1	0	3	0	3	0	3	1
4:15 PM - 4:30 PM	1	92	6	1	1	74	2	1	1	0	0	0	4	2	17	0
4:30 PM - 4:45 PM	1	92	0	0	6	78	1	1	2	4	0	0	1	1	11	0
4:45 PM - 5:00 PM	2	96	8	0	6	84	2	1	3	0	2	0	1	3	5	0
5:00 PM - 5:15 PM	2	102	5	0	2	85	3	0	0	1	0	0	3	3	7	0
5:15 PM - 5:30 PM	3	116	5	0	4	84	1	0	0	2	4	0	2	5	9	0
5:30 PM - 5:45 PM	3	120	9	0	1	90	0	0	0	1	1	0	1	2	3	0
5:45 PM - 6:00 PM	0	119	0	0	7	103	3	0	3	3	3	0	2	2	7	0
TOTAL	**14**	**828**	**37**	**4**	**34**	**667**	**12**	**4**	**10**	**11**	**13**	**0**	**17**	**18**	**62**	**1**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:30 AM - 8:30 AM	6	260	15	49	29	363	10	40	4	10	2	2	49	11	39	2
5:00 PM - 6:00 PM	8	457	19	0	14	362	7	0	3	7	8	0	8	12	26	0

	PHF	Trucks
AM	0.915	11.7%
PM	0.924	0.0%



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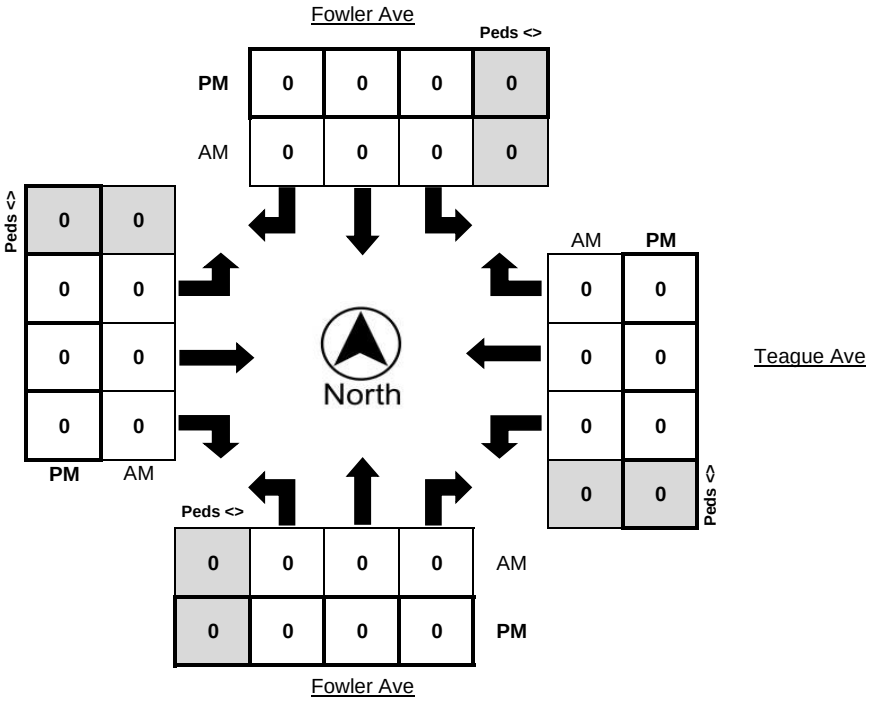
LOCATION Teague Ave @ Fowler Ave
LATITUDE 36.8593
COUNTY Fresno
LONGITUDE -119.6841
COLLECTION DATE Tuesday, February 25, 2020
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	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**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	0	0
PM Peak Total	**0**	**0**



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Turning Move

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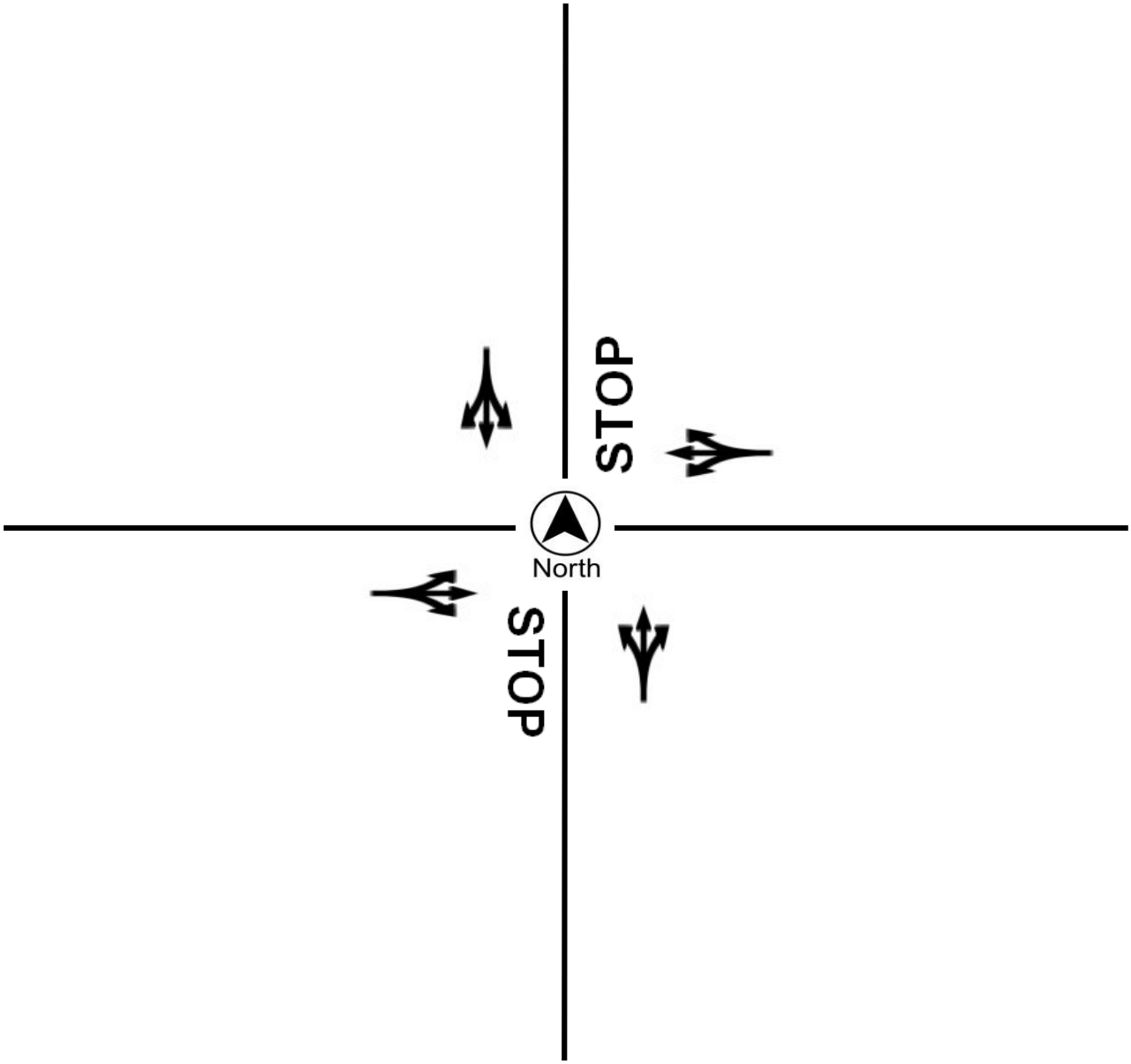
LOCATION	Teague Ave @ Fowler Ave	**N/S STREET**	Fowler Ave
COUNTY	Fresno	**E/W STREET**	Teague Ave
COLLECTION DATE	Tuesday, February 25, 2020	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	Two-Way Stop

COMMENTS



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230

800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION Nees Ave @ Sunnyside Ave **LATITUDE** 36.8520

COUNTY Fresno **LONGITUDE** -119.6931

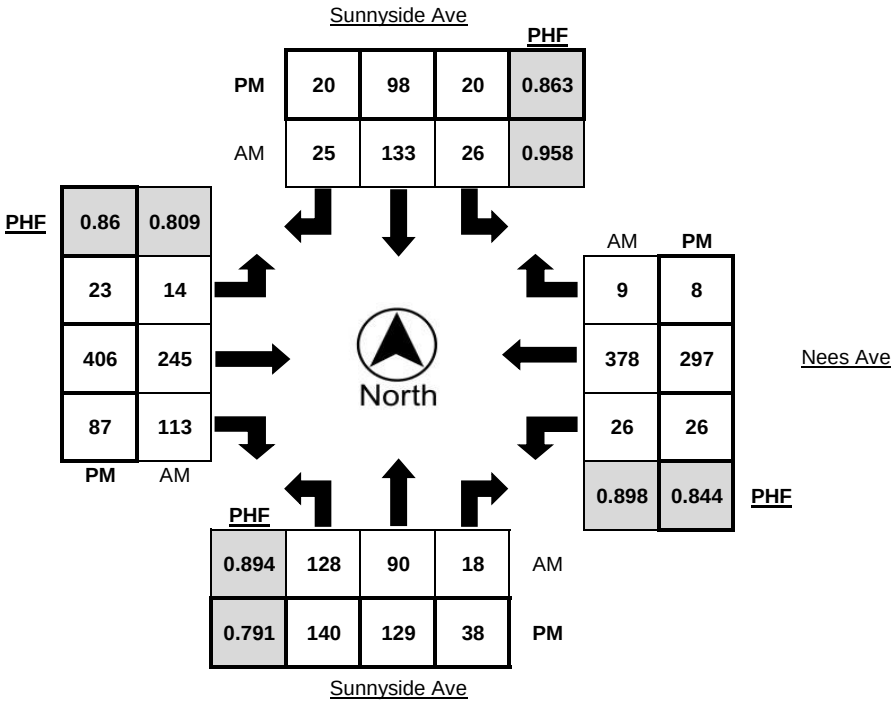
COLLECTION DATE Tuesday, February 25, 2020 **WEATHER** Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	23	21	0	1	3	23	2	1	1	45	9	9	1	67	3	3
7:15 AM - 7:30 AM	29	25	3	2	3	30	2	2	5	48	10	10	5	101	4	12
7:30 AM - 7:45 AM	27	26	1	1	8	31	7	3	2	54	26	11	2	105	3	8
7:45 AM - 8:00 AM	32	21	5	1	6	34	8	0	6	76	33	9	5	108	2	13
8:00 AM - 8:15 AM	38	23	5	1	6	36	6	1	2	72	33	13	9	71	2	8
8:15 AM - 8:30 AM	31	20	7	2	6	32	4	5	4	43	21	8	10	94	2	15
8:30 AM - 8:45 AM	24	18	2	1	9	20	5	6	2	45	10	12	5	69	2	8
8:45 AM - 9:00 AM	12	10	3	1	3	29	7	2	2	46	11	12	3	74	2	10
TOTAL	**216**	**164**	**26**	**10**	**44**	**235**	**41**	**20**	**24**	**429**	**153**	**84**	**40**	**689**	**20**	**77**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	29	29	6	1	5	27	2	3	5	74	19	0	4	74	7	1
4:15 PM - 4:30 PM	31	22	4	1	1	27	5	0	2	78	22	1	8	59	3	1
4:30 PM - 4:45 PM	35	26	14	0	3	24	1	1	10	105	14	2	6	56	6	0
4:45 PM - 5:00 PM	24	33	8	2	4	30	6	0	4	84	20	1	8	83	1	0
5:00 PM - 5:15 PM	28	41	8	0	2	12	7	0	5	90	23	0	4	64	5	0
5:15 PM - 5:30 PM	53	32	12	1	6	28	3	1	7	119	24	0	6	60	2	0
5:30 PM - 5:45 PM	35	23	10	0	8	28	4	0	7	113	20	0	8	90	0	0
5:45 PM - 6:00 PM	26	19	10	0	3	25	2	0	5	89	22	0	9	87	3	1
TOTAL	**261**	**225**	**72**	**5**	**32**	**201**	**30**	**5**	**45**	**752**	**164**	**4**	**53**	**573**	**27**	**3**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:30 AM - 8:30 AM	128	90	18	5	26	133	25	9	14	245	113	41	26	378	9	44
4:45 PM - 5:45 PM	140	129	38	3	20	98	20	1	23	406	87	1	26	297	8	0

	PHF	Trucks
AM	0.897	8.2%
PM	0.918	0.4%



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Turning Move

Prepared For:

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952 Pollasky Avenue
Clovis, CA 93612

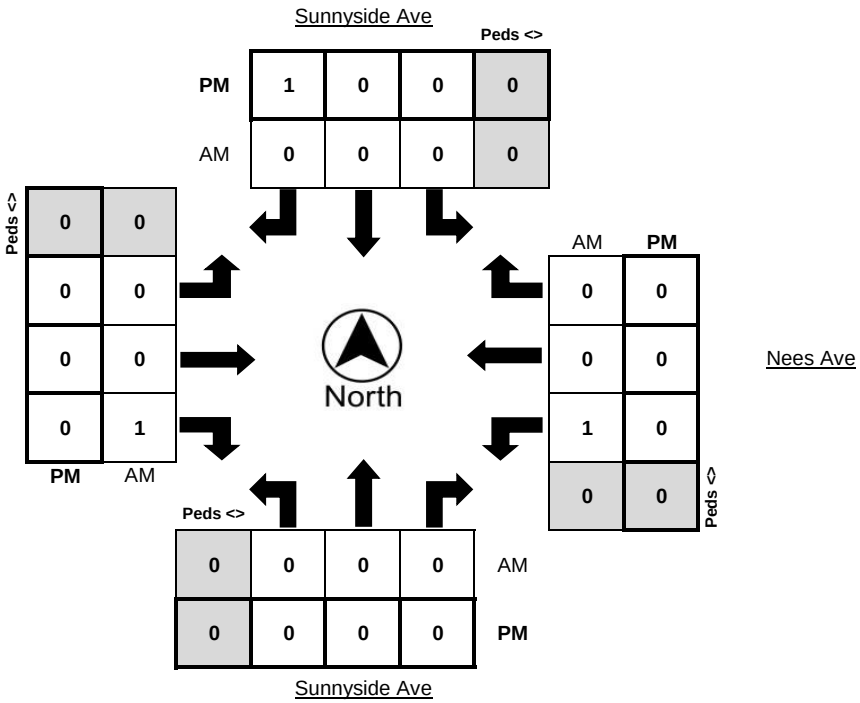
LOCATION Nees Ave @ Sunnyside Ave
LATITUDE 36.8520
COUNTY Fresno
LONGITUDE -119.6931
COLLECTION DATE Tuesday, February 25, 2020
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	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**	**1**	**0**	**1**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
4:45 PM - 5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

	Bikes	**Peds**
AM Peak Total	2	0
PM Peak Total	**1**	**0**



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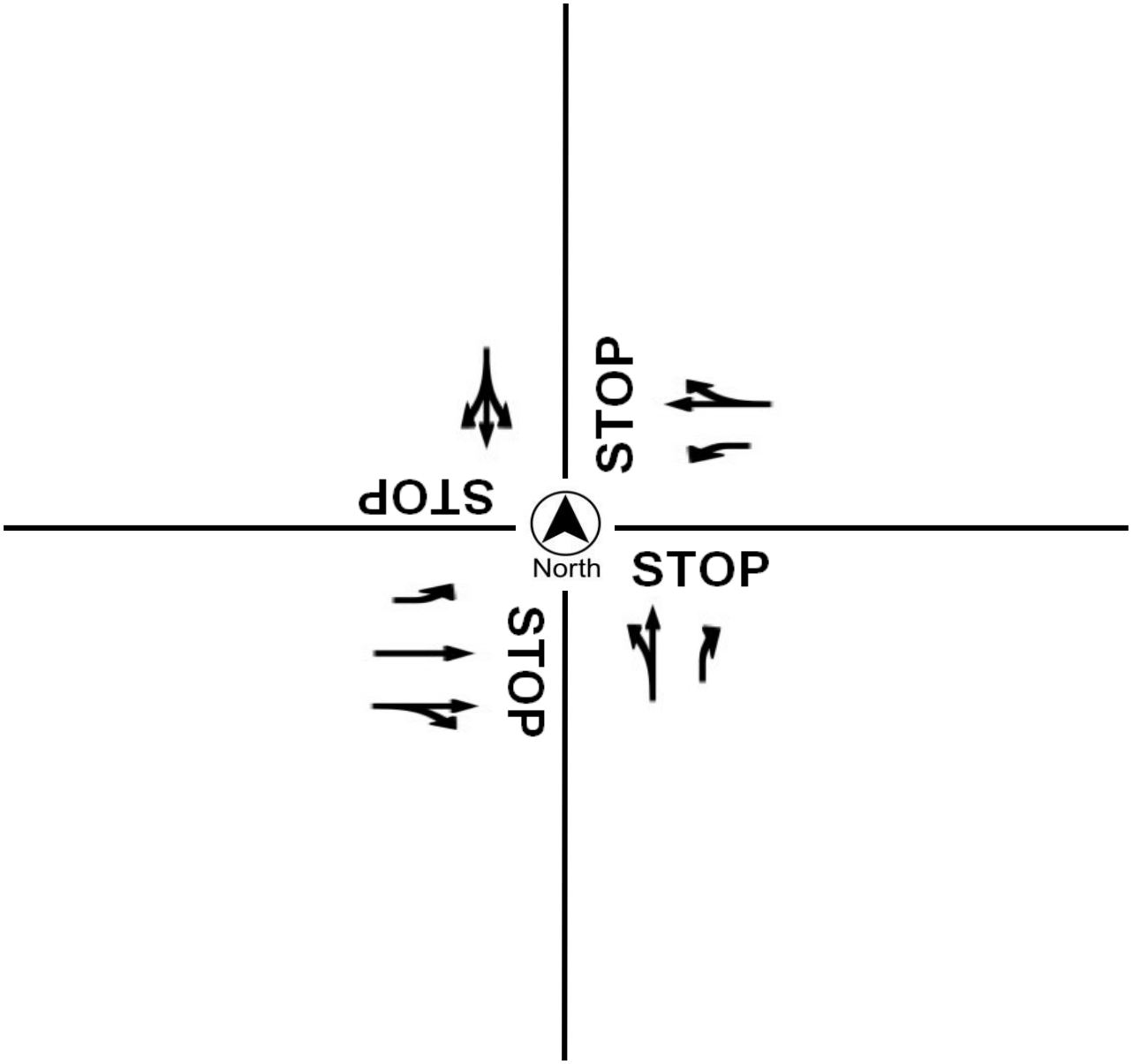
Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Nees Ave @ Sunnyside Ave	**N/S STREET**	Sunnyside Ave
COUNTY	Fresno	**E/W STREET**	Nees Ave
COLLECTION DATE	Tuesday, February 25, 2020	**WEATHER**	Clear
CYCLE TIME	N/A	**CONTROL TYPE**	All-Way Stop

COMMENTS



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Turning Move

Prepared For:

Peters Engineering Group
952 Pollasky Avenue
Clovis, CA 93612

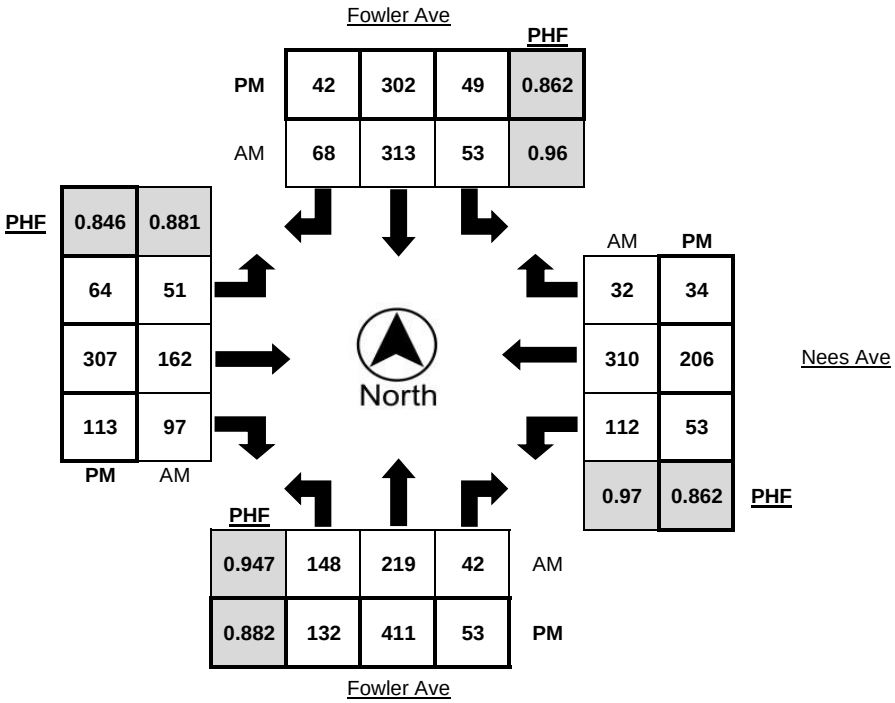
LOCATION Nees Ave @ Fowler Ave
LATITUDE 36.8520
COUNTY Fresno
LONGITUDE -119.6841
COLLECTION DATE Tuesday, February 25, 2020
WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:00 AM - 7:15 AM	28	40	12	4	2	57	5	5	10	21	16	8	10	42	12	2
7:15 AM - 7:30 AM	35	56	4	0	10	87	16	10	9	31	17	11	18	67	7	2
7:30 AM - 7:45 AM	46	53	9	4	14	76	17	10	11	34	23	7	19	87	11	1
7:45 AM - 8:00 AM	32	44	16	2	8	85	20	10	14	48	26	10	17	91	8	3
8:00 AM - 8:15 AM	34	66	4	9	19	74	14	7	17	48	23	11	39	59	8	1
8:15 AM - 8:30 AM	36	56	13	9	12	78	17	11	9	32	25	10	37	73	5	1
8:30 AM - 8:45 AM	25	50	4	4	11	77	14	14	15	27	17	12	17	74	10	1
8:45 AM - 9:00 AM	28	40	8	4	7	61	14	8	13	27	14	11	13	63	10	0
TOTAL	**264**	**405**	**70**	**36**	**83**	**595**	**117**	**75**	**98**	**268**	**161**	**80**	**170**	**556**	**71**	**11**

	Northbound				Southbound				Eastbound				Westbound			
Time	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
4:00 PM - 4:15 PM	33	67	14	0	7	70	5	1	14	45	21	2	9	65	9	3
4:15 PM - 4:30 PM	27	83	17	0	9	65	4	1	11	65	22	1	17	63	13	1
4:30 PM - 4:45 PM	39	83	9	0	11	70	3	2	11	67	38	2	13	47	8	0
4:45 PM - 5:00 PM	30	81	9	0	14	70	5	0	13	60	32	1	11	58	12	0
5:00 PM - 5:15 PM	29	83	10	0	12	69	12	0	12	75	26	0	14	61	10	0
5:15 PM - 5:30 PM	25	118	10	0	10	71	9	0	19	95	29	0	11	39	10	0
5:30 PM - 5:45 PM	48	104	17	0	12	76	8	1	19	75	31	0	13	51	8	1
5:45 PM - 6:00 PM	30	106	16	1	15	86	13	0	14	62	27	0	15	55	6	1
TOTAL	**261**	**725**	**102**	**1**	**90**	**577**	**59**	**5**	**113**	**544**	**226**	**6**	**103**	**439**	**76**	**6**

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**	**Left**	**Thru**	**Right**	**Trucks**
7:30 AM - 8:30 AM	148	219	42	24	53	313	68	38	51	162	97	38	112	310	32	6
5:00 PM - 6:00 PM	132	411	53	1	49	302	42	1	64	307	113	0	53	206	34	2

	PHF	Trucks
AM	0.982	6.6%
PM	0.956	0.2%



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Turning Move

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LOCATION Nees Ave @ Fowler Ave

LATITUDE 36.8520

COUNTY Fresno

LONGITUDE -119.6841

COLLECTION DATE Tuesday, February 25, 2020

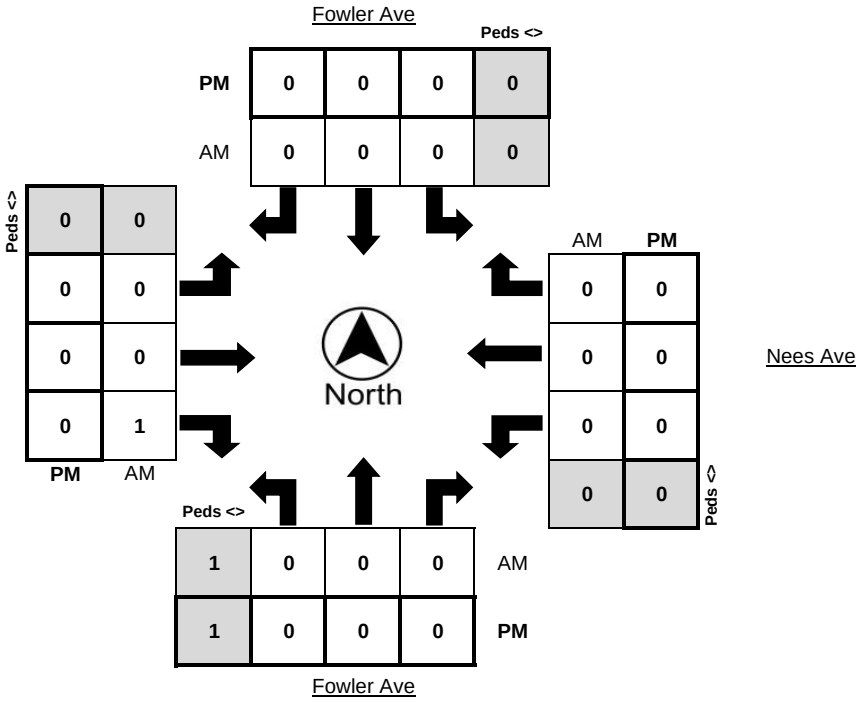
WEATHER Clear

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
Time	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
4:00 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM - 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM - 5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM - 5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM - 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM - 6:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Northbound Bikes			N.Leg	Southbound Bikes			S.Leg	Eastbound Bikes			E.Leg	Westbound Bikes			W.Leg
PEAK HOUR	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**	**Left**	**Thru**	**Right**	**Peds**
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

	Bikes	Peds
AM Peak Total	1	1
PM Peak Total	**0**	**1**



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Turning Move

Prepared For:

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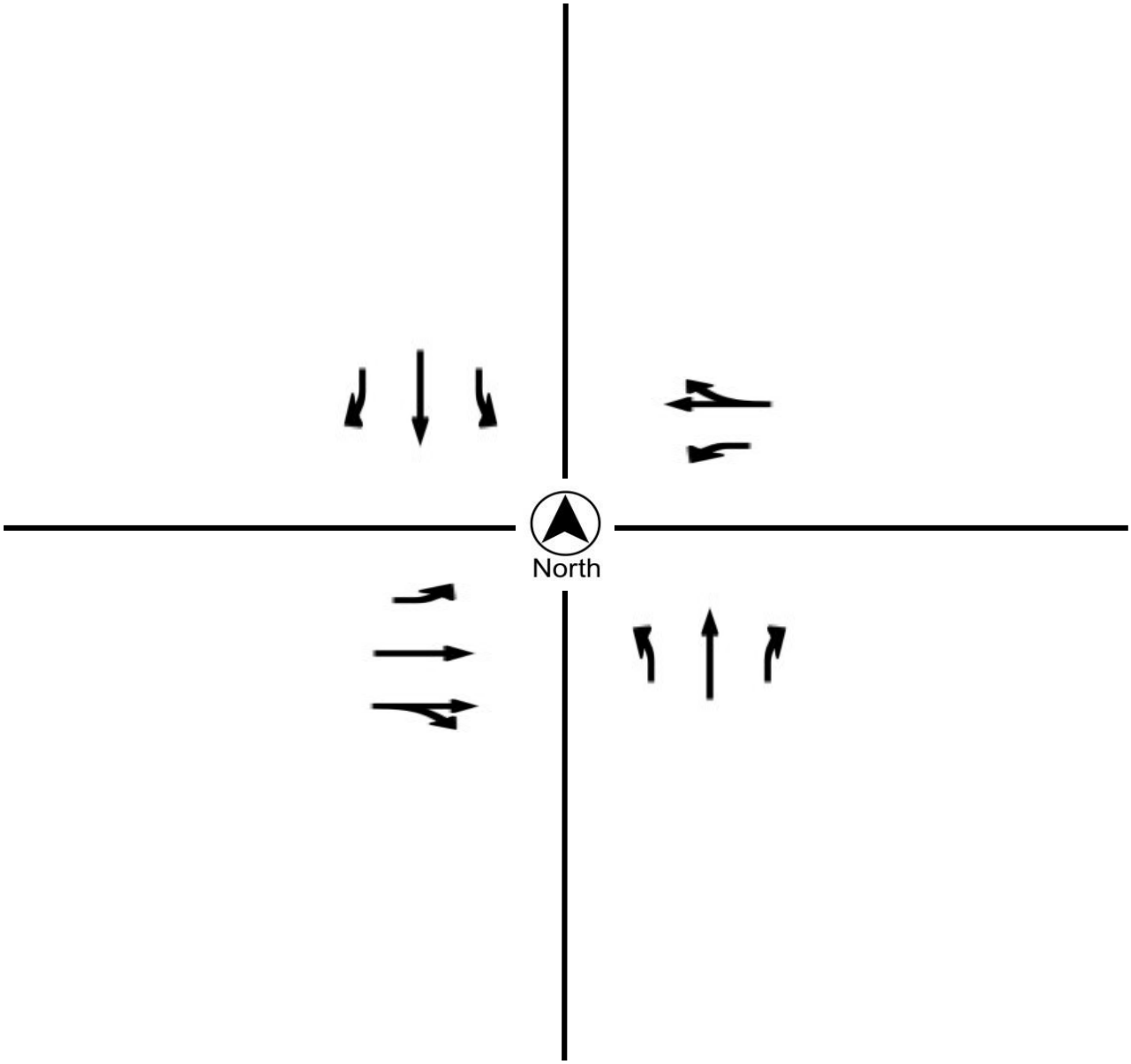
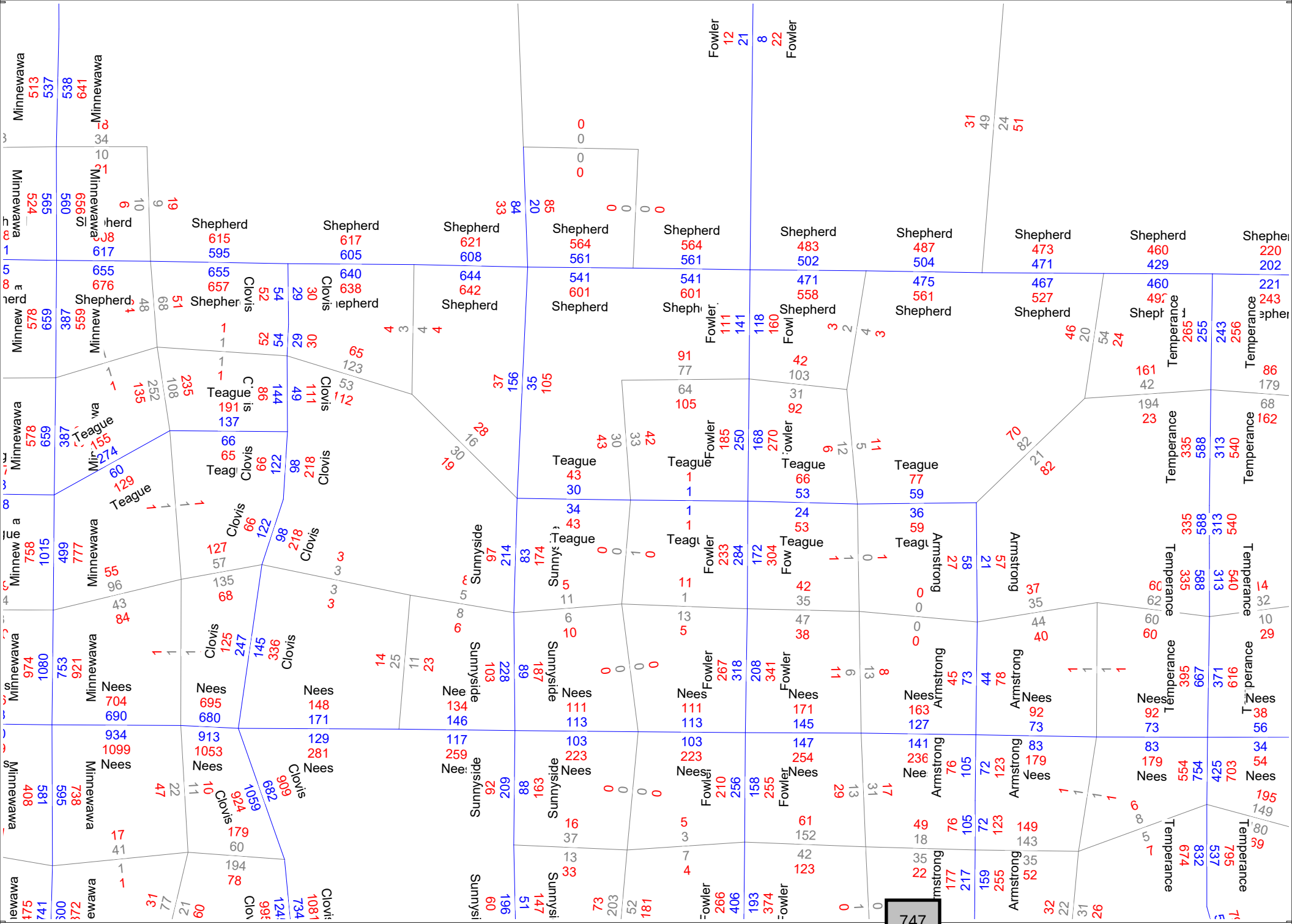
952 Pollasky Avenue
Clovis, CA 93612

LOCATION	Nees Ave @ Fowler Ave	**N/S STREET**	Fowler Ave
COUNTY	Fresno	**E/W STREET**	Nees Ave
COLLECTION DATE	Tuesday, February 25, 2020	**WEATHER**	Clear
CYCLE TIME	94 Seconds	**CONTROL TYPE**	Signal

COMMENTS All approaches have protected left turns.

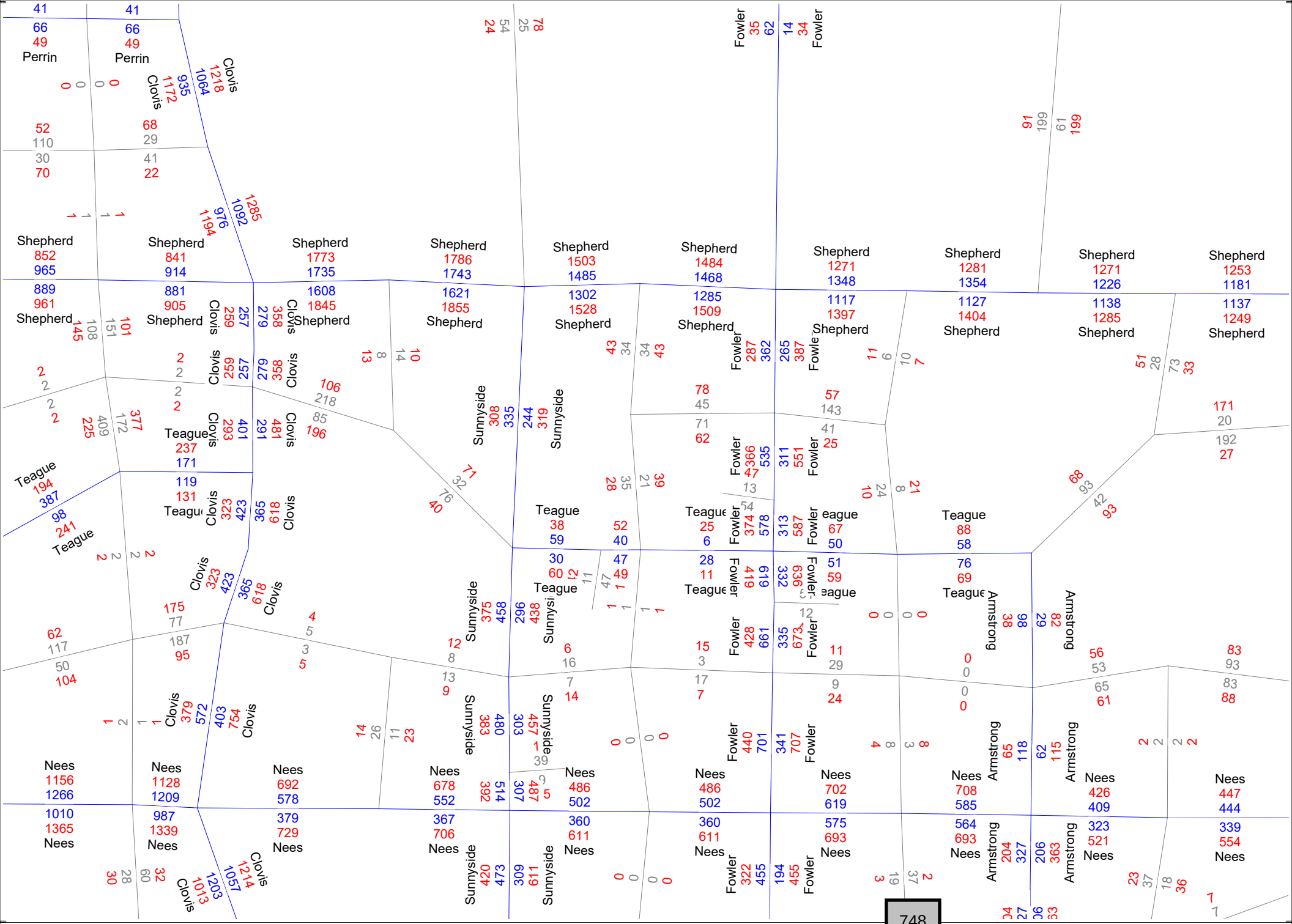


APPENDIX B
FRESNO COUNTY TRAVEL MODEL



2017 Council of Fresno County Governments Travel Demand Mo

AM and PM Peak Hour Traffic Volumes



748

2035 With Project Council of Fresno County Governments Travel Dema del
AM and PM Peak Hour Traffic Volumes

APPENDIX C
INTERSECTION ANALYSES

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	7	1	1	11	2	19	1	109	8	9	154	1
Future Vol, veh/h	7	1	1	11	2	19	1	109	8	9	154	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	13	2	22	1	127	9	10	179	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	356	348	190	345	344	142	185	0	0	141	0	0
Stage 1	205	205	-	139	139	-	-	-	-	-	-	-
Stage 2	151	143	-	206	205	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	594	571	844	604	574	898	1372	-	-	1424	-	-
Stage 1	790	726	-	857	776	-	-	-	-	-	-	-
Stage 2	844	773	-	789	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	568	560	836	593	563	889	1365	-	-	1417	-	-
Mov Cap-2 Maneuver	568	560	-	593	563	-	-	-	-	-	-	-
Stage 1	785	717	-	852	771	-	-	-	-	-	-	-
Stage 2	816	768	-	777	717	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	10.2	0.1	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1365	-	-	588	736	1417	-	-
HCM Lane V/C Ratio	0.001	-	-	0.018	0.051	0.007	-	-
HCM Control Delay (s)	7.6	0	-	11.2	10.2	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	10	2	49	11	39	6	260	15	29	363	10
Future Vol, veh/h	4	10	2	49	11	39	6	260	15	29	363	10
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	12	12	12	12	12	12	12	12	12
Mvmt Flow	4	11	2	53	12	42	7	283	16	32	395	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	807	788	411	786	785	301	411	0	0	304	0	0
Stage 1	470	470	-	310	310	-	-	-	-	-	-	-
Stage 2	337	318	-	476	475	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.22	6.62	6.32	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.608	4.108	3.408	2.308	-	-	2.308	-	-
Pot Cap-1 Maneuver	288	312	620	298	313	716	1096	-	-	1202	-	-
Stage 1	555	544	-	679	641	-	-	-	-	-	-	-
Stage 2	657	636	-	551	541	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	251	296	614	277	297	709	1091	-	-	1196	-	-
Mov Cap-2 Maneuver	251	296	-	277	297	-	-	-	-	-	-	-
Stage 1	548	522	-	670	633	-	-	-	-	-	-	-
Stage 2	598	628	-	516	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.6	18.8	0.2	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1091	-	-	302	368	1196	-	-
HCM Lane V/C Ratio	0.006	-	-	0.058	0.292	0.026	-	-
HCM Control Delay (s)	8.3	0	-	17.6	18.8	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.2	0.1	-	-

Intersection	
Intersection Delay, s/veh	28.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	245	113	26	378	9	128	90	18	26	133	25
Future Vol, veh/h	14	245	113	26	378	9	128	90	18	26	133	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	16	272	126	29	420	10	142	100	20	29	148	28
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	17.2	46.1	21.3	19.3
HCM LOS	C	E	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	59%	0%	10%	0%	100%	0%	14%
Vol Thru, %	41%	0%	90%	52%	0%	98%	72%
Vol Right, %	0%	100%	0%	48%	0%	2%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	18	137	236	26	387	184
LT Vol	128	0	14	0	26	0	26
Through Vol	90	0	123	123	0	378	133
RT Vol	0	18	0	113	0	9	25
Lane Flow Rate	242	20	152	262	29	430	204
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.574	0.042	0.331	0.542	0.065	0.905	0.483
Departure Headway (Hd)	8.53	7.504	7.854	7.454	8.109	7.578	8.509
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	477	458	484	444	482	423
Service Time	6.281	5.255	5.605	5.205	5.809	5.278	6.57
HCM Lane V/C Ratio	0.571	0.042	0.332	0.541	0.065	0.892	0.482
HCM Control Delay	22.2	10.6	14.5	18.7	11.4	48.4	19.3
HCM Lane LOS	C	B	B	C	B	E	C
HCM 95th-tile Q	3.5	0.1	1.4	3.2	0.2	10.2	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	162	97	112	310	32	148	219	42	53	313	68
Future Volume (veh/h)	51	162	97	112	310	32	148	219	42	53	313	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900	1776	1776	1776	1776	1776	1900
Adj Flow Rate, veh/h	52	165	99	114	316	33	151	223	43	54	319	69
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	81	464	263	146	415	43	190	629	532	82	411	89
Arrive On Green	0.05	0.22	0.22	0.09	0.26	0.26	0.11	0.35	0.35	0.05	0.29	0.29
Sat Flow, veh/h	1691	2067	1173	1691	1580	165	1691	1776	1503	1691	1414	306
Grp Volume(v), veh/h	52	133	131	114	0	349	151	223	43	54	0	388
Grp Sat Flow(s),veh/h/ln	1691	1687	1553	1691	0	1745	1691	1776	1503	1691	0	1720
Q Serve(g_s), s	1.9	4.1	4.4	4.1	0.0	11.5	5.4	5.8	1.2	1.9	0.0	12.8
Cycle Q Clear(g_c), s	1.9	4.1	4.4	4.1	0.0	11.5	5.4	5.8	1.2	1.9	0.0	12.8
Prop In Lane	1.00		0.76	1.00		0.09	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	81	378	348	146	0	459	190	629	532	82	0	500
V/C Ratio(X)	0.65	0.35	0.38	0.78	0.00	0.76	0.79	0.35	0.08	0.65	0.00	0.78
Avail Cap(c_a), veh/h	218	546	502	354	0	705	327	1003	849	218	0	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	20.3	20.4	27.8	0.0	21.1	26.9	14.8	13.3	29.0	0.0	20.2
Incr Delay (d2), s/veh	8.3	0.6	0.7	8.7	0.0	2.6	7.3	0.3	0.1	8.5	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	2.0	2.3	0.0	5.9	2.9	2.8	0.5	1.1	0.0	6.4
LnGrp Delay(d),s/veh	37.4	20.9	21.1	36.6	0.0	23.7	34.2	15.2	13.4	37.5	0.0	22.8
LnGrp LOS	D	C	C	D		C	C	B	B	D		C
Approach Vol, veh/h		316			463			417			442	
Approach Delay, s/veh		23.7			26.9			21.9			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	26.9	9.4	18.8	11.0	23.0	7.0	21.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	35.1	13.0	20.1	12.0	31.1	8.0	25.1
Max Q Clear Time (g_c+I1), s	3.9	7.8	6.1	6.4	7.4	14.8	3.9	13.5
Green Ext Time (p_c), s	0.0	3.7	0.1	3.0	0.1	3.2	0.0	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	264	114	349	151	223	43	54	388
v/c Ratio	0.31	0.36	0.49	0.72	0.60	0.30	0.06	0.32	0.75
Control Delay	43.1	19.7	42.4	36.7	47.0	20.3	0.2	43.4	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	19.7	42.4	36.7	47.0	20.3	0.2	43.4	35.2
Queue Length 50th (ft)	26	36	56	164	75	88	0	27	180
Queue Length 95th (ft)	67	78	119	#311	#176	153	0	69	295
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	195	984	317	636	292	901	830	195	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.36	0.55	0.52	0.25	0.05	0.28	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	2	10	2	14	3	149	11	9	108	3
Future Vol, veh/h	2	3	2	10	2	14	3	149	11	9	108	3
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	3	2	11	2	15	3	160	12	10	116	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	329	326	128	322	321	176	124	0	0	177	0	0
Stage 1	143	143	-	177	177	-	-	-	-	-	-	-
Stage 2	186	183	-	145	144	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	619	587	914	625	591	859	1444	-	-	1381	-	-
Stage 1	853	773	-	818	747	-	-	-	-	-	-	-
Stage 2	809	743	-	851	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	596	575	905	610	579	851	1437	-	-	1374	-	-
Mov Cap-2 Maneuver	596	575	-	610	579	-	-	-	-	-	-	-
Stage 1	847	763	-	812	742	-	-	-	-	-	-	-
Stage 2	787	738	-	835	762	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.2	0.1	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1437	-	-	649	716	1374	-	-
HCM Lane V/C Ratio	0.002	-	-	0.012	0.039	0.007	-	-
HCM Control Delay (s)	7.5	0	-	10.6	10.2	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	7	8	8	12	26	8	457	19	14	362	7
Future Vol, veh/h	3	7	8	8	12	26	8	457	19	14	362	7
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	8	9	9	13	28	9	497	21	15	393	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	983	973	407	972	967	518	406	0	0	523	0	0
Stage 1	432	432	-	531	531	-	-	-	-	-	-	-
Stage 2	551	541	-	441	436	-	-	-	-	-	-	-
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	228	252	644	232	254	558	1153	-	-	1043	-	-
Stage 1	602	582	-	532	526	-	-	-	-	-	-	-
Stage 2	519	521	-	595	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	242	638	216	244	553	1148	-	-	1038	-	-
Mov Cap-2 Maneuver	201	242	-	216	244	-	-	-	-	-	-	-
Stage 1	592	568	-	523	518	-	-	-	-	-	-	-
Stage 2	473	513	-	565	566	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17	17.2	0.1	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1148	-	-	319	345	1038	-	-
HCM Lane V/C Ratio	0.008	-	-	0.061	0.145	0.015	-	-
HCM Control Delay (s)	8.2	0	-	17	17.2	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	406	87	26	297	8	140	129	38	20	98	20
Future Vol, veh/h	23	406	87	26	297	8	140	129	38	20	98	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	441	95	28	323	9	152	140	41	22	107	22
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	19.4	24.7	22.9	15.9
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	52%	0%	10%	0%	100%	0%	14%
Vol Thru, %	48%	0%	90%	70%	0%	97%	71%
Vol Right, %	0%	100%	0%	30%	0%	3%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	269	38	226	290	26	305	138
LT Vol	140	0	23	0	26	0	20
Through Vol	129	0	203	203	0	297	98
RT Vol	0	38	0	87	0	8	20
Lane Flow Rate	292	41	246	315	28	332	150
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.652	0.081	0.503	0.621	0.063	0.694	0.349
Departure Headway (Hd)	8.029	7.042	7.365	7.097	8.067	7.533	8.375
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	507	486	508	443	477	427
Service Time	5.802	4.814	5.141	4.872	5.843	5.308	6.472
HCM Lane V/C Ratio	0.653	0.081	0.506	0.62	0.063	0.696	0.351
HCM Control Delay	24.7	10.4	17.4	20.9	11.4	25.8	15.9
HCM Lane LOS	C	B	C	C	B	D	C
HCM 95th-tile Q	4.5	0.3	2.8	4.2	0.2	5.3	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	307	113	53	206	34	132	411	53	49	302	42
Future Volume (veh/h)	64	307	113	53	206	34	132	411	53	49	302	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	68	327	120	56	219	36	140	437	56	52	321	45
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	580	209	90	346	57	182	639	540	86	462	65
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.10	0.34	0.34	0.05	0.29	0.29
Sat Flow, veh/h	1774	2543	916	1774	1558	256	1774	1863	1576	1774	1598	224
Grp Volume(v), veh/h	68	226	221	56	0	255	140	437	56	52	0	366
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	0	1814	1774	1863	1576	1774	0	1822
Q Serve(g_s), s	2.2	6.7	6.9	1.8	0.0	7.6	4.6	12.0	1.4	1.7	0.0	10.6
Cycle Q Clear(g_c), s	2.2	6.7	6.9	1.8	0.0	7.6	4.6	12.0	1.4	1.7	0.0	10.6
Prop In Lane	1.00		0.54	1.00		0.14	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	101	404	385	90	0	403	182	639	540	86	0	526
V/C Ratio(X)	0.68	0.56	0.57	0.62	0.00	0.63	0.77	0.68	0.10	0.60	0.00	0.70
Avail Cap(c_a), veh/h	242	682	651	212	0	669	421	1170	990	212	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	20.3	20.4	27.6	0.0	20.9	26.0	16.8	13.3	27.7	0.0	18.8
Incr Delay (d2), s/veh	7.6	1.2	1.4	6.8	0.0	1.6	6.8	1.3	0.1	6.7	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.4	3.3	1.1	0.0	3.9	2.6	6.3	0.6	1.0	0.0	5.5
LnGrp Delay(d),s/veh	35.1	21.5	21.7	34.5	0.0	22.6	32.7	18.1	13.4	34.4	0.0	20.5
LnGrp LOS	D	C	C	C		C	C	B	B	C		C
Approach Vol, veh/h		515			311			633			418	
Approach Delay, s/veh		23.4			24.7			20.9			22.2	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	25.3	7.9	18.4	11.0	22.1	8.3	18.1
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	37.3	7.1	22.9	14.1	30.3	8.1	21.9
Max Q Clear Time (g_c+I1), s	3.7	14.0	3.8	8.9	6.6	12.6	4.2	9.6
Green Ext Time (p_c), s	0.0	4.9	0.0	3.4	0.2	4.5	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	68	447	56	255	140	437	56	52	366
v/c Ratio	0.32	0.46	0.29	0.60	0.47	0.61	0.08	0.27	0.67
Control Delay	40.8	23.7	41.2	34.2	38.6	24.0	0.2	40.9	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	23.7	41.2	34.2	38.6	24.0	0.2	40.9	31.1
Queue Length 50th (ft)	30	85	25	106	61	176	0	23	151
Queue Length 95th (ft)	82	155	72	213	138	300	0	68	275
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	248	1385	217	694	433	1083	959	217	934
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.32	0.26	0.37	0.32	0.40	0.06	0.24	0.39

Intersection Summary

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	7	1	1	24	2	27	1	109	12	12	154	1
Future Vol, veh/h	7	1	1	24	2	27	1	109	12	12	154	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	28	2	31	1	127	14	14	179	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	371	361	190	355	354	144	185	0	0	146	0	0
Stage 1	213	213	-	141	141	-	-	-	-	-	-	-
Stage 2	158	148	-	214	213	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	580	561	844	595	566	895	1372	-	-	1418	-	-
Stage 1	782	721	-	855	774	-	-	-	-	-	-	-
Stage 2	837	769	-	781	721	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	548	549	836	582	554	886	1365	-	-	1411	-	-
Mov Cap-2 Maneuver	548	549	-	582	554	-	-	-	-	-	-	-
Stage 1	777	709	-	850	769	-	-	-	-	-	-	-
Stage 2	800	764	-	766	709	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	10.6	0.1	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1365	-	-	570	704	1411	-	-
HCM Lane V/C Ratio	0.001	-	-	0.018	0.088	0.01	-	-
HCM Control Delay (s)	7.6	0	-	11.4	10.6	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	10	15	49	11	39	10	260	15	29	363	13
Future Vol, veh/h	12	10	15	49	11	39	10	260	15	29	363	13
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	12	12	12	12	12	12	12	12	12
Mvmt Flow	13	11	16	53	12	42	11	283	16	32	395	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	816	797	412	803	796	301	414	0	0	304	0	0
Stage 1	471	471	-	318	318	-	-	-	-	-	-	-
Stage 2	345	326	-	485	478	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.22	6.62	6.32	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.608	4.108	3.408	2.308	-	-	2.308	-	-
Pot Cap-1 Maneuver	284	308	619	290	309	716	1093	-	-	1202	-	-
Stage 1	555	543	-	673	636	-	-	-	-	-	-	-
Stage 2	650	631	-	545	539	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	247	291	613	262	292	709	1088	-	-	1196	-	-
Mov Cap-2 Maneuver	247	291	-	262	292	-	-	-	-	-	-	-
Stage 1	546	521	-	662	625	-	-	-	-	-	-	-
Stage 2	589	620	-	499	517	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.8	19.6	0.3	0.6
HCM LOS	C	C		

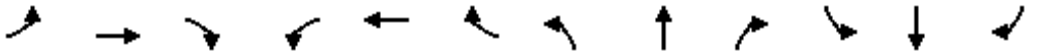
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1088	-	-	344	354	1196	-	-
HCM Lane V/C Ratio	0.01	-	-	0.117	0.304	0.026	-	-
HCM Control Delay (s)	8.3	0	-	16.8	19.6	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	1.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	29.3
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	245	113	26	378	9	128	92	18	26	140	31
Future Vol, veh/h	16	245	113	26	378	9	128	92	18	26	140	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	18	272	126	29	420	10	142	102	20	29	156	34
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	17.6	48.1	22.1	20.6
HCM LOS	C	E	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	58%	0%	12%	0%	100%	0%	13%
Vol Thru, %	42%	0%	88%	52%	0%	98%	71%
Vol Right, %	0%	100%	0%	48%	0%	2%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	18	139	236	26	387	197
LT Vol	128	0	16	0	26	0	26
Through Vol	92	0	123	123	0	378	140
RT Vol	0	18	0	113	0	9	31
Lane Flow Rate	244	20	154	262	29	430	219
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.586	0.042	0.341	0.551	0.066	0.914	0.521
Departure Headway (Hd)	8.634	7.61	7.988	7.581	8.188	7.656	8.567
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	418	470	449	476	438	473	420
Service Time	6.384	5.359	5.74	5.332	5.931	5.398	6.621
HCM Lane V/C Ratio	0.584	0.043	0.343	0.55	0.066	0.909	0.521
HCM Control Delay	23	10.7	14.8	19.3	11.5	50.6	20.6
HCM Lane LOS	C	B	B	C	B	F	C
HCM 95th-tile Q	3.6	0.1	1.5	3.3	0.2	10.4	2.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	162	97	112	310	33	148	222	42	55	324	68
Future Volume (veh/h)	51	162	97	112	310	33	148	222	42	55	324	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900	1776	1776	1776	1776	1776	1900
Adj Flow Rate, veh/h	52	165	99	114	316	34	151	227	43	56	331	69
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	80	456	259	145	408	44	191	640	542	84	424	88
Arrive On Green	0.05	0.22	0.22	0.09	0.26	0.26	0.11	0.36	0.36	0.05	0.30	0.30
Sat Flow, veh/h	1691	2067	1173	1691	1574	169	1691	1776	1503	1691	1425	297
Grp Volume(v), veh/h	52	133	131	114	0	350	151	227	43	56	0	400
Grp Sat Flow(s),veh/h/ln	1691	1687	1553	1691	0	1744	1691	1776	1503	1691	0	1722
Q Serve(g_s), s	1.9	4.2	4.5	4.2	0.0	11.7	5.5	5.9	1.2	2.0	0.0	13.4
Cycle Q Clear(g_c), s	1.9	4.2	4.5	4.2	0.0	11.7	5.5	5.9	1.2	2.0	0.0	13.4
Prop In Lane	1.00		0.76	1.00		0.10	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	80	372	343	145	0	452	191	640	542	84	0	512
V/C Ratio(X)	0.65	0.36	0.38	0.79	0.00	0.77	0.79	0.35	0.08	0.67	0.00	0.78
Avail Cap(c_a), veh/h	215	539	497	296	0	641	350	1048	887	215	0	879
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	20.7	20.8	28.2	0.0	21.6	27.2	14.7	13.2	29.4	0.0	20.2
Incr Delay (d2), s/veh	8.5	0.6	0.7	9.0	0.0	3.8	7.2	0.3	0.1	8.8	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	2.0	2.3	0.0	6.1	2.9	2.9	0.5	1.2	0.0	6.7
LnGrp Delay(d),s/veh	37.9	21.3	21.5	37.1	0.0	25.4	34.4	15.1	13.3	38.1	0.0	22.8
LnGrp LOS	D	C	C	D		C	C	B	B	D		C
Approach Vol, veh/h		316			464			421			456	
Approach Delay, s/veh		24.1			28.3			21.8			24.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	27.6	9.4	18.8	11.1	23.6	7.0	21.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	37.1	11.0	20.1	13.0	32.1	8.0	23.1
Max Q Clear Time (g_c+I1), s	4.0	7.9	6.2	6.5	7.5	15.4	3.9	13.7
Green Ext Time (p_c), s	0.0	3.8	0.1	3.0	0.2	3.3	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	264	114	350	151	227	43	56	400
v/c Ratio	0.31	0.36	0.52	0.74	0.59	0.30	0.06	0.33	0.76
Control Delay	43.5	19.7	45.7	39.1	45.6	19.4	0.2	44.0	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	19.7	45.7	39.1	45.6	19.4	0.2	44.0	35.2
Queue Length 50th (ft)	27	38	59	171	77	91	0	29	194
Queue Length 95th (ft)	67	78	#125	#337	#164	150	0	71	301
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	192	973	265	578	313	941	838	192	797
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.43	0.61	0.48	0.24	0.05	0.29	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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	2	3	2	18	2	19	3	149	25	18	108	3
Future Vol, veh/h	2	3	2	18	2	19	3	149	25	18	108	3
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	3	2	19	2	20	3	160	27	19	116	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	357	359	128	348	347	184	124	0	0	192	0	0
Stage 1	161	161	-	185	185	-	-	-	-	-	-	-
Stage 2	196	198	-	163	162	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	593	563	914	601	572	851	1444	-	-	1364	-	-
Stage 1	834	759	-	810	741	-	-	-	-	-	-	-
Stage 2	799	732	-	832	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	564	548	905	584	557	843	1437	-	-	1358	-	-
Mov Cap-2 Maneuver	564	548	-	584	557	-	-	-	-	-	-	-
Stage 1	828	744	-	804	736	-	-	-	-	-	-	-
Stage 2	772	727	-	810	743	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	10.6	0.1	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1437	-	-	623	685	1358	-	-
HCM Lane V/C Ratio	0.002	-	-	0.012	0.061	0.014	-	-
HCM Control Delay (s)	7.5	0	-	10.8	10.6	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

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	8	7	16	8	12	26	22	457	19	14	362	16
Future Vol, veh/h	8	7	16	8	12	26	22	457	19	14	362	16
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	8	17	9	13	28	24	497	21	15	393	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1018	1008	412	1010	1006	518	415	0	0	523	0	0
Stage 1	437	437	-	561	561	-	-	-	-	-	-	-
Stage 2	581	571	-	449	445	-	-	-	-	-	-	-
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	216	240	640	218	241	558	1144	-	-	1043	-	-
Stage 1	598	579	-	512	510	-	-	-	-	-	-	-
Stage 2	499	505	-	589	575	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	187	226	634	197	227	553	1139	-	-	1038	-	-
Mov Cap-2 Maneuver	187	226	-	197	227	-	-	-	-	-	-	-
Stage 1	577	565	-	494	492	-	-	-	-	-	-	-
Stage 2	445	487	-	552	561	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.9	18	0.4	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1139	-	-	313	327	1038	-	-
HCM Lane V/C Ratio	0.021	-	-	0.108	0.153	0.015	-	-
HCM Control Delay (s)	8.2	0	-	17.9	18	8.5	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.5	0	-	-

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	406	87	26	297	8	140	137	38	20	102	24
Future Vol, veh/h	29	406	87	26	297	8	140	137	38	20	102	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	441	95	28	323	9	152	149	41	22	111	26
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	20.2	25.7	24.6	16.7
HCM LOS	C	D	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	51%	0%	12%	0%	100%	0%	14%
Vol Thru, %	49%	0%	88%	70%	0%	97%	70%
Vol Right, %	0%	100%	0%	30%	0%	3%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	277	38	232	290	26	305	146
LT Vol	140	0	29	0	26	0	20
Through Vol	137	0	203	203	0	297	102
RT Vol	0	38	0	87	0	8	24
Lane Flow Rate	301	41	252	315	28	332	159
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.678	0.082	0.525	0.631	0.064	0.705	0.377
Departure Headway (Hd)	8.101	7.122	7.49	7.209	8.187	7.652	8.563
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	446	500	479	498	435	471	422
Service Time	5.888	4.907	5.282	5.002	5.979	5.444	6.563
HCM Lane V/C Ratio	0.675	0.082	0.526	0.633	0.064	0.705	0.377
HCM Control Delay	26.5	10.5	18.4	21.7	11.5	26.9	16.7
HCM Lane LOS	D	B	C	C	B	D	C
HCM 95th-tile Q	4.9	0.3	3	4.3	0.2	5.4	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	307	113	53	206	40	132	419	53	50	309	42
Future Volume (veh/h)	64	307	113	53	206	40	132	419	53	50	309	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	68	327	120	56	219	43	140	446	56	53	329	45
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	586	211	90	339	67	181	643	544	87	468	64
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.10	0.35	0.35	0.05	0.29	0.29
Sat Flow, veh/h	1774	2543	916	1774	1510	296	1774	1863	1576	1774	1603	219
Grp Volume(v), veh/h	68	226	221	56	0	262	140	446	56	53	0	374
Grp Sat Flow(s),veh/h/ln	1774	1770	1689	1774	0	1806	1774	1863	1576	1774	0	1823
Q Serve(g_s), s	2.3	6.8	7.0	1.9	0.0	7.9	4.6	12.4	1.5	1.8	0.0	11.0
Cycle Q Clear(g_c), s	2.3	6.8	7.0	1.9	0.0	7.9	4.6	12.4	1.5	1.8	0.0	11.0
Prop In Lane	1.00		0.54	1.00		0.16	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	100	408	389	90	0	405	181	643	544	87	0	532
V/C Ratio(X)	0.68	0.55	0.57	0.63	0.00	0.65	0.77	0.69	0.10	0.61	0.00	0.70
Avail Cap(c_a), veh/h	238	672	642	209	0	656	415	1153	975	209	0	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.9	20.5	20.6	28.1	0.0	21.2	26.4	17.0	13.4	28.1	0.0	19.0
Incr Delay (d2), s/veh	7.8	1.2	1.3	7.0	0.0	1.7	6.8	1.4	0.1	6.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.5	3.4	1.1	0.0	4.1	2.6	6.6	0.6	1.0	0.0	5.8
LnGrp Delay(d),s/veh	35.7	21.6	21.9	35.0	0.0	22.9	33.2	18.3	13.5	34.9	0.0	20.7
LnGrp LOS	D	C	C	D		C	C	B	B	C		C
Approach Vol, veh/h		515			318			642			427	
Approach Delay, s/veh		23.6			25.1			21.2			22.5	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	25.7	7.9	18.8	11.1	22.5	8.3	18.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	37.3	7.1	22.9	14.1	30.3	8.1	21.9
Max Q Clear Time (g_c+I1), s	3.8	14.4	3.9	9.0	6.6	13.0	4.3	9.9
Green Ext Time (p_c), s	0.0	5.0	0.0	3.4	0.2	4.5	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	68	447	56	262	140	446	56	53	374
v/c Ratio	0.33	0.46	0.29	0.61	0.47	0.62	0.08	0.27	0.68
Control Delay	41.3	23.8	41.6	34.6	39.0	24.3	0.2	41.4	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	23.8	41.6	34.6	39.0	24.3	0.2	41.4	31.4
Queue Length 50th (ft)	30	86	25	110	62	182	0	24	157
Queue Length 95th (ft)	82	155	72	218	138	308	0	68	282
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	246	1377	216	686	429	1076	954	216	929
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.32	0.26	0.38	0.33	0.41	0.06	0.25	0.40

Intersection Summary

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	1	1	26	2	28	1	144	13	13	287	1
Future Vol, veh/h	7	1	1	26	2	28	1	144	13	13	287	1
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	8	1	1	30	2	33	1	167	15	15	334	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	569	559	345	553	552	185	340	0	0	187	0	0
Stage 1	370	370	-	182	182	-	-	-	-	-	-	-
Stage 2	199	189	-	371	370	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	428	433	691	439	437	850	1203	-	-	1369	-	-
Stage 1	644	615	-	813	743	-	-	-	-	-	-	-
Stage 2	796	738	-	643	615	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	401	422	684	428	426	842	1197	-	-	1362	-	-
Mov Cap-2 Maneuver	401	422	-	428	426	-	-	-	-	-	-	-
Stage 1	640	603	-	808	739	-	-	-	-	-	-	-
Stage 2	758	734	-	629	603	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	12.2	0.1	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1197	-	-	423	567	1362	-	-
HCM Lane V/C Ratio	0.001	-	-	0.025	0.115	0.011	-	-
HCM Control Delay (s)	8	0	-	13.7	12.2	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	10	15	49	11	41	10	292	15	34	465	16
Future Vol, veh/h	14	10	15	49	11	41	10	292	15	34	465	16
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	12	12	12	12	12	12	12	12	12	12	12	12
Mvmt Flow	15	11	16	53	12	45	11	317	16	37	505	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	974	953	524	958	953	335	527	0	0	338	0	0
Stage 1	593	593	-	352	352	-	-	-	-	-	-	-
Stage 2	381	360	-	606	601	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.22	6.62	6.32	4.22	-	-	4.22	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.608	4.108	3.408	2.308	-	-	2.308	-	-
Pot Cap-1 Maneuver	222	249	534	227	249	685	991	-	-	1167	-	-
Stage 1	475	478	-	645	614	-	-	-	-	-	-	-
Stage 2	621	609	-	467	474	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	232	529	201	232	678	986	-	-	1161	-	-
Mov Cap-2 Maneuver	189	232	-	201	232	-	-	-	-	-	-	-
Stage 1	466	454	-	633	602	-	-	-	-	-	-	-
Stage 2	558	597	-	420	450	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.9	25.1	0.3	0.5
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	986	-	-	268	287	1161	-	-
HCM Lane V/C Ratio	0.011	-	-	0.158	0.383	0.032	-	-
HCM Control Delay (s)	8.7	0	-	20.9	25.1	8.2	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	1.7	0.1	-	-

Intersection	
Intersection Delay, s/veh	59.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	262	113	28	395	20	128	111	20	56	197	77
Future Vol, veh/h	21	262	113	28	395	20	128	111	20	56	197	77
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	23	291	126	31	439	22	142	123	22	62	219	86
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	24.4	107.8	31.4	58.6
HCM LOS	C	F	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	54%	0%	14%	0%	100%	0%	17%
Vol Thru, %	46%	0%	86%	54%	0%	95%	60%
Vol Right, %	0%	100%	0%	46%	0%	5%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	20	152	244	28	415	330
LT Vol	128	0	21	0	28	0	56
Through Vol	111	0	131	131	0	395	197
RT Vol	0	20	0	113	0	20	77
Lane Flow Rate	266	22	169	271	31	461	367
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.699	0.053	0.426	0.655	0.081	1.13	0.914
Departure Headway (Hd)	10.03	9.016	9.584	9.17	9.377	8.82	9.513
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	364	400	378	396	381	410	385
Service Time	7.73	6.716	7.284	6.87	7.159	6.601	7.513
HCM Lane V/C Ratio	0.731	0.055	0.447	0.684	0.081	1.124	0.953
HCM Control Delay	33	12.2	19.2	27.7	13	114.2	58.6
HCM Lane LOS	D	B	C	D	B	F	F
HCM 95th-tile Q	5.1	0.2	2.1	4.5	0.3	16.8	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	187	118	119	324	37	156	248	49	69	411	74
Future Volume (veh/h)	53	187	118	119	324	37	156	248	49	69	411	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900	1776	1776	1776	1776	1776	1900
Adj Flow Rate, veh/h	54	191	120	121	331	38	159	253	50	70	419	76
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	77	432	258	153	404	46	195	714	605	88	496	90
Arrive On Green	0.05	0.21	0.21	0.09	0.26	0.26	0.12	0.40	0.40	0.05	0.34	0.34
Sat Flow, veh/h	1691	2024	1208	1691	1563	179	1691	1776	1504	1691	1462	265
Grp Volume(v), veh/h	54	157	154	121	0	369	159	253	50	70	0	495
Grp Sat Flow(s),veh/h/ln	1691	1687	1546	1691	0	1742	1691	1776	1504	1691	0	1728
Q Serve(g_s), s	2.3	6.0	6.4	5.2	0.0	14.7	6.8	7.3	1.5	3.0	0.0	19.6
Cycle Q Clear(g_c), s	2.3	6.0	6.4	5.2	0.0	14.7	6.8	7.3	1.5	3.0	0.0	19.6
Prop In Lane	1.00		0.78	1.00		0.10	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	77	360	330	153	0	451	195	714	605	88	0	586
V/C Ratio(X)	0.70	0.44	0.46	0.79	0.00	0.82	0.81	0.35	0.08	0.79	0.00	0.85
Avail Cap(c_a), veh/h	183	444	407	298	0	576	252	838	710	206	0	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	25.1	25.3	32.8	0.0	25.7	31.8	15.4	13.6	34.5	0.0	22.6
Incr Delay (d2), s/veh	11.1	0.8	1.0	8.7	0.0	7.2	14.5	0.3	0.1	14.6	0.0	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.8	2.8	2.8	0.0	8.0	3.9	3.6	0.6	1.8	0.0	10.3
LnGrp Delay(d),s/veh	45.8	26.0	26.3	41.6	0.0	32.9	46.4	15.7	13.7	49.1	0.0	29.3
LnGrp LOS	D	C	C	D		C	D	B	B	D		C
Approach Vol, veh/h		365			490			462			565	
Approach Delay, s/veh		29.1			35.0			26.0			31.8	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	34.6	10.7	20.7	12.5	29.9	7.3	24.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	9.0	34.8	13.0	19.4	11.0	32.8	8.0	24.4
Max Q Clear Time (g_c+I1), s	5.0	9.3	7.2	8.4	8.8	21.6	4.3	16.7
Green Ext Time (p_c), s	0.0	4.7	0.1	3.0	0.1	3.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.7
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	54	311	121	369	159	253	50	70	495
v/c Ratio	0.35	0.43	0.54	0.79	0.70	0.35	0.07	0.42	0.83
Control Delay	46.4	20.8	46.4	42.8	56.6	21.6	0.2	47.0	39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	20.8	46.4	42.8	56.6	21.6	0.2	47.0	39.1
Queue Length 50th (ft)	31	49	68	199	92	109	0	40	259
Queue Length 95th (ft)	69	91	125	#349	#199	175	0	84	#426
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	176	891	286	559	242	807	760	198	746
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.35	0.42	0.66	0.66	0.31	0.07	0.35	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	3	2	19	2	20	3	293	26	20	195	3
Future Vol, veh/h	2	3	2	19	2	20	3	293	26	20	195	3
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	87
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	3	2	20	2	22	3	315	28	22	210	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	613	615	222	603	602	339	218	0	0	348	0	0
Stage 1	261	261	-	340	340	-	-	-	-	-	-	-
Stage 2	352	354	-	263	262	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	400	403	810	407	410	696	1334	-	-	1194	-	-
Stage 1	737	687	-	669	634	-	-	-	-	-	-	-
Stage 2	659	625	-	736	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	375	389	802	392	396	689	1328	-	-	1188	-	-
Mov Cap-2 Maneuver	375	389	-	392	396	-	-	-	-	-	-	-
Stage 1	731	669	-	664	629	-	-	-	-	-	-	-
Stage 2	631	620	-	712	668	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	12.9	0.1	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1328	-	-	450	497	1188	-	-
HCM Lane V/C Ratio	0.002	-	-	0.017	0.089	0.018	-	-
HCM Control Delay (s)	7.7	0	-	13.1	12.9	8.1	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-

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	11	7	16	8	12	31	22	571	19	17	430	18
Future Vol, veh/h	11	7	16	8	12	31	22	571	19	17	430	18
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	8	17	9	13	34	24	621	21	18	467	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1226	1213	487	1216	1213	642	492	0	0	647	0	0
Stage 1	518	518	-	685	685	-	-	-	-	-	-	-
Stage 2	708	695	-	531	528	-	-	-	-	-	-	-
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	155	182	581	158	182	474	1071	-	-	939	-	-
Stage 1	541	533	-	438	448	-	-	-	-	-	-	-
Stage 2	426	444	-	532	528	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	128	169	575	140	169	469	1066	-	-	935	-	-
Mov Cap-2 Maneuver	128	169	-	140	169	-	-	-	-	-	-	-
Stage 1	519	516	-	420	430	-	-	-	-	-	-	-
Stage 2	368	426	-	493	512	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.7	22.3	0.3	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1066	-	-	219	263	935	-	-
HCM Lane V/C Ratio	0.022	-	-	0.169	0.211	0.02	-	-
HCM Control Delay (s)	8.5	0	-	24.7	22.3	8.9	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.8	0.1	-	-

Intersection	
Intersection Delay, s/veh	56.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	427	87	28	323	38	140	201	41	40	139	54
Future Vol, veh/h	79	427	87	28	323	38	140	201	41	40	139	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	464	95	30	351	41	152	218	45	43	151	59
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	44.4	75.1	68.1	35.6
HCM LOS	E	F	F	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	41%	0%	27%	0%	100%	0%	17%
Vol Thru, %	59%	0%	73%	71%	0%	89%	60%
Vol Right, %	0%	100%	0%	29%	0%	11%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	341	41	293	301	28	361	233
LT Vol	140	0	79	0	28	0	40
Through Vol	201	0	214	214	0	323	139
RT Vol	0	41	0	87	0	38	54
Lane Flow Rate	371	45	318	327	30	392	253
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.987	0.107	0.836	0.827	0.084	1.012	0.718
Departure Headway (Hd)	9.583	8.637	9.465	9.111	9.885	9.283	10.213
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	416	382	398	364	392	355
Service Time	7.305	6.359	7.231	6.876	7.608	7.006	8.284
HCM Lane V/C Ratio	0.971	0.108	0.832	0.822	0.082	1	0.713
HCM Control Delay	74.8	12.4	45.7	43.2	13.5	79.9	35.6
HCM Lane LOS	F	B	E	E	B	F	E
HCM 95th-tile Q	11.5	0.4	7.7	7.6	0.3	12.4	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	329	127	63	240	56	153	516	61	58	369	44
Future Volume (veh/h)	70	329	127	63	240	56	153	516	61	58	369	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	74	350	135	67	255	60	163	549	65	62	393	47
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	588	223	92	338	80	204	722	611	88	526	63
Arrive On Green	0.05	0.23	0.23	0.05	0.23	0.23	0.11	0.39	0.39	0.05	0.32	0.32
Sat Flow, veh/h	1774	2504	949	1774	1455	342	1774	1863	1577	1774	1632	195
Grp Volume(v), veh/h	74	246	239	67	0	315	163	549	65	62	0	440
Grp Sat Flow(s),veh/h/ln	1774	1770	1683	1774	0	1798	1774	1863	1577	1774	0	1827
Q Serve(g_s), s	2.9	8.7	9.0	2.6	0.0	11.6	6.4	18.2	1.9	2.4	0.0	15.2
Cycle Q Clear(g_c), s	2.9	8.7	9.0	2.6	0.0	11.6	6.4	18.2	1.9	2.4	0.0	15.2
Prop In Lane	1.00		0.56	1.00		0.19	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	96	416	395	92	0	418	204	722	611	88	0	589
V/C Ratio(X)	0.77	0.59	0.61	0.73	0.00	0.75	0.80	0.76	0.11	0.70	0.00	0.75
Avail Cap(c_a), veh/h	178	501	477	203	0	535	303	1027	869	178	0	878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.1	24.1	24.2	33.1	0.0	25.3	30.6	18.9	13.9	33.2	0.0	21.4
Incr Delay (d2), s/veh	12.2	1.3	1.5	10.6	0.0	4.5	8.9	2.1	0.1	9.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.4	4.4	1.6	0.0	6.2	3.6	9.7	0.8	1.4	0.0	8.0
LnGrp Delay(d),s/veh	45.3	25.5	25.7	43.8	0.0	29.8	39.5	21.0	14.0	42.9	0.0	23.4
LnGrp LOS	D	C	C	D		C	D	C	B	D		C
Approach Vol, veh/h		559			382			777			502	
Approach Delay, s/veh		28.2			32.3			24.3			25.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	32.4	8.6	21.6	13.0	27.8	8.7	21.4
Change Period (Y+Rc), s	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Max Green Setting (Gmax), s	7.1	39.1	8.1	20.1	12.1	34.1	7.1	21.1
Max Q Clear Time (g_c+I1), s	4.4	20.2	4.6	11.0	8.4	17.2	4.9	13.6
Green Ext Time (p_c), s	0.0	5.9	0.0	3.1	0.1	5.6	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	27.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	74	485	67	315	163	549	65	62	440
v/c Ratio	0.45	0.62	0.39	0.75	0.63	0.72	0.09	0.39	0.77
Control Delay	49.1	29.9	45.3	42.3	48.6	28.5	0.2	46.5	35.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	29.9	45.3	42.3	48.6	28.5	0.2	46.5	35.0
Queue Length 50th (ft)	38	107	34	148	82	257	0	32	208
Queue Length 95th (ft)	#99	177	81	#295	#188	389	0	78	321
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	174	976	198	534	296	1010	904	174	868
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.50	0.34	0.59	0.55	0.54	0.07	0.36	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	41	2	23	62	6	45	15	426	21	18	479	4
Future Vol, veh/h	41	2	23	62	6	45	15	426	21	18	479	4
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	45	2	25	67	7	49	16	463	23	20	521	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1108	1091	533	1094	1082	485	530	0	0	491	0	0
Stage 1	568	568	-	512	512	-	-	-	-	-	-	-
Stage 2	540	523	-	582	570	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	186	214	545	191	217	580	1032	-	-	1067	-	-
Stage 1	506	505	-	543	535	-	-	-	-	-	-	-
Stage 2	524	529	-	497	504	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	158	202	540	172	205	574	1027	-	-	1062	-	-
Mov Cap-2 Maneuver	158	202	-	172	205	-	-	-	-	-	-	-
Stage 1	493	489	-	529	521	-	-	-	-	-	-	-
Stage 2	461	515	-	457	488	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.4	34.5	0.3	0.3
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1027	-	-	212	241	1062	-	-
HCM Lane V/C Ratio	0.016	-	-	0.338	0.51	0.018	-	-
HCM Control Delay (s)	8.6	0	-	30.4	34.5	8.5	0	-
HCM Lane LOS	A	A	-	D	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.4	2.6	0.1	-	-

Intersection	
Int Delay, s/veh	19.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	10	45	49	28	50	22	430	19	65	712	21
Future Vol, veh/h	15	10	45	49	28	50	22	430	19	65	712	21
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	11	49	53	30	54	24	467	21	71	774	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1506	1474	796	1494	1475	488	802	0	0	493	0	0
Stage 1	933	933	-	531	531	-	-	-	-	-	-	-
Stage 2	573	541	-	963	944	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	99	126	385	101	126	578	817	-	-	1065	-	-
Stage 1	318	344	-	530	524	-	-	-	-	-	-	-
Stage 2	503	519	-	306	340	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	105	381	71	105	573	813	-	-	1060	-	-
Mov Cap-2 Maneuver	61	105	-	71	105	-	-	-	-	-	-	-
Stage 1	303	301	-	506	500	-	-	-	-	-	-	-
Stage 2	408	495	-	225	298	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	50.3	190.2	0.4	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	813	-	-	152	122	1060	-	-
HCM Lane V/C Ratio	0.029	-	-	0.501	1.132	0.067	-	-
HCM Control Delay (s)	9.6	0	-	50.3	190.2	8.6	0	-
HCM Lane LOS	A	A	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.4	8.3	0.2	-	-

Intersection	
Intersection Delay, s/veh	385
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	467	158	63	813	42	163	241	20	104	407	82
Future Vol, veh/h	35	467	158	63	813	42	163	241	20	104	407	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	38	508	172	68	884	46	177	262	22	113	442	89
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	106.1	665.9	164.3	418.3
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	40%	0%	13%	0%	100%	0%	18%
Vol Thru, %	60%	0%	87%	60%	0%	95%	69%
Vol Right, %	0%	100%	0%	40%	0%	5%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	20	269	392	63	855	593
LT Vol	163	0	35	0	63	0	104
Through Vol	241	0	234	234	0	813	407
RT Vol	0	20	0	158	0	42	82
Lane Flow Rate	439	22	292	426	68	929	645
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	1.218	0.055	0.793	1.115	0.195	2.509	1.823
Departure Headway (Hd)	15.467	14.483	16.123	15.739	12.745	12.168	14.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	242	249	228	234	284	307	251
Service Time	13.167	12.183	13.823	13.439	10.445	9.868	12.735
HCM Lane V/C Ratio	1.814	0.088	1.281	1.821	0.239	3.026	2.57
HCM Control Delay	171.5	18	61.3	136.9	18.5	713.6	418.3
HCM Lane LOS	F	C	F	F	C	F	F
HCM 95th-tile Q	14	0.2	5.8	11.6	0.7	60.4	30.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	451	134	134	658	138	198	271	54	223	531	79
Future Volume (veh/h)	55	451	134	134	658	138	198	271	54	223	531	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	56	460	137	137	671	141	202	277	55	228	542	81
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	954	282	160	604	127	178	531	449	251	516	77
Arrive On Green	0.04	0.36	0.36	0.09	0.41	0.41	0.10	0.29	0.29	0.14	0.33	0.33
Sat Flow, veh/h	1757	2664	787	1757	1477	310	1757	1845	1560	1757	1568	234
Grp Volume(v), veh/h	56	301	296	137	0	812	202	277	55	228	0	623
Grp Sat Flow(s),veh/h/ln	1757	1752	1699	1757	0	1788	1757	1845	1560	1757	0	1802
Q Serve(g_s), s	4.7	19.7	20.0	11.4	0.0	60.5	15.0	18.6	3.9	18.9	0.0	48.7
Cycle Q Clear(g_c), s	4.7	19.7	20.0	11.4	0.0	60.5	15.0	18.6	3.9	18.9	0.0	48.7
Prop In Lane	1.00		0.46	1.00		0.17	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	71	628	609	160	0	731	178	531	449	251	0	593
V/C Ratio(X)	0.78	0.48	0.49	0.86	0.00	1.11	1.13	0.52	0.12	0.91	0.00	1.05
Avail Cap(c_a), veh/h	95	628	609	237	0	731	178	531	449	285	0	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.4	36.8	36.9	66.3	0.0	43.8	66.5	44.2	38.9	62.5	0.0	49.7
Incr Delay (d2), s/veh	25.8	0.6	0.6	17.6	0.0	68.2	108.3	0.9	0.1	29.1	0.0	51.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	9.6	9.5	6.3	0.0	43.7	12.6	9.6	1.7	11.2	0.0	32.6
LnGrp Delay(d),s/veh	96.2	37.4	37.5	83.9	0.0	111.9	174.8	45.1	39.0	91.6	0.0	100.6
LnGrp LOS	F	D	D	F		F	F	D	D	F		F
Approach Vol, veh/h		653			949			534			851	
Approach Delay, s/veh		42.5			107.9			93.5			98.2	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.1	47.5	17.5	57.9	19.0	53.6	10.0	65.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	24.0	39.7	20.0	48.5	15.0	48.7	8.0	60.5
Max Q Clear Time (g_c+I1), s	20.9	20.6	13.4	22.0	17.0	50.7	6.7	62.5
Green Ext Time (p_c), s	0.2	5.4	0.2	10.8	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.3
HCM 2010 LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	56	597	137	812	202	277	55	228	623
v/c Ratio	0.62	0.52	0.72	1.10	1.13	0.53	0.10	0.87	1.04
Control Delay	97.2	39.7	84.0	105.3	165.5	50.6	0.4	91.7	95.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	39.7	84.0	105.3	165.5	50.6	0.4	91.7	95.3
Queue Length 50th (ft)	55	233	131	~910	~232	236	0	218	~664
Queue Length 95th (ft)	#116	304	203	#1169	#400	335	0	#355	#909
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	95	1161	237	736	178	520	525	285	598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.51	0.58	1.10	1.13	0.53	0.10	0.80	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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	20	3	9	41	6	27	11	480	52	30	379	35
Future Vol, veh/h	20	3	9	41	6	27	11	480	52	30	379	35
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	3	10	44	6	29	12	516	56	32	408	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1087	1097	437	1076	1088	554	451	0	0	577	0	0
Stage 1	496	496	-	573	573	-	-	-	-	-	-	-
Stage 2	591	601	-	503	515	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	193	212	617	196	215	530	1104	-	-	992	-	-
Stage 1	554	544	-	503	502	-	-	-	-	-	-	-
Stage 2	492	488	-	549	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	168	198	611	180	200	525	1099	-	-	987	-	-
Mov Cap-2 Maneuver	168	198	-	180	200	-	-	-	-	-	-	-
Stage 1	542	518	-	492	491	-	-	-	-	-	-	-
Stage 2	449	478	-	511	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.9	27.4	0.2	0.6
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1099	-	-	215	239	987	-	-
HCM Lane V/C Ratio	0.011	-	-	0.16	0.333	0.033	-	-
HCM Control Delay (s)	8.3	0	-	24.9	27.4	8.8	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	19.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	8	32	22	12	56	55	855	34	28	669	27
Future Vol, veh/h	20	8	32	22	12	56	55	855	34	28	669	27
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	9	35	24	13	61	60	929	37	30	727	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1917	1898	752	1902	1894	958	761	0	0	971	0	0
Stage 1	807	807	-	1073	1073	-	-	-	-	-	-	-
Stage 2	1110	1091	-	829	821	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	51	69	409	52	69	311	847	-	-	706	-	-
Stage 1	374	393	-	265	295	-	-	-	-	-	-	-
Stage 2	253	290	-	363	387	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	28	53	405	34	53	308	843	-	-	703	-	-
Mov Cap-2 Maneuver	28	53	-	34	53	-	-	-	-	-	-	-
Stage 1	315	362	-	223	248	-	-	-	-	-	-	-
Stage 2	162	244	-	298	356	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	226.2	233.3	0.6	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	843	-	-	64	85	703	-	-
HCM Lane V/C Ratio	0.071	-	-	1.019	1.151	0.043	-	-
HCM Control Delay (s)	9.6	0	-	226.2	233.3	10.4	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	5	6.9	0.1	-	-

Intersection	
Intersection Delay, s/veh	401
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	764	187	46	676	48	311	411	82	50	339	80
Future Vol, veh/h	85	764	187	46	676	48	311	411	82	50	339	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	92	830	203	50	735	52	338	447	89	54	368	87
Number of Lanes	0	2	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	2
HCM Control Delay	295	514.1	512.8	257.6
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	43%	0%	18%	0%	100%	0%	11%
Vol Thru, %	57%	0%	82%	67%	0%	93%	72%
Vol Right, %	0%	100%	0%	33%	0%	7%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	722	82	467	569	46	724	469
LT Vol	311	0	85	0	46	0	50
Through Vol	411	0	382	382	0	676	339
RT Vol	0	82	0	187	0	48	80
Lane Flow Rate	785	89	508	618	50	787	510
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	2.179	0.225	1.387	1.635	0.143	2.132	1.438
Departure Headway (Hd)	12.901	11.916	16.292	15.938	12.555	11.966	15.506
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	290	303	228	235	288	315	240
Service Time	10.601	9.616	13.992	13.638	10.255	9.666	13.506
HCM Lane V/C Ratio	2.707	0.294	2.228	2.63	0.174	2.498	2.125
HCM Control Delay	569	18	239.3	340.8	17.3	545.7	257.6
HCM Lane LOS	F	C	F	F	C	F	F
HCM 95th-tile Q	46.1	0.8	17.3	23.8	0.5	47.6	19.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	636	130	92	566	208	158	596	73	150	415	48
Future Volume (veh/h)	112	636	130	92	566	208	158	596	73	150	415	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	119	677	138	98	602	221	168	634	78	160	441	51
Adj No. of Lanes	1	2	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	105	1173	239	119	531	195	176	606	513	141	501	58
Arrive On Green	0.06	0.40	0.40	0.07	0.41	0.41	0.10	0.33	0.33	0.08	0.31	0.31
Sat Flow, veh/h	1757	2898	590	1757	1286	472	1757	1845	1561	1757	1623	188
Grp Volume(v), veh/h	119	409	406	98	0	823	168	634	78	160	0	492
Grp Sat Flow(s),veh/h/ln	1757	1752	1736	1757	0	1758	1757	1845	1561	1757	0	1810
Q Serve(g_s), s	9.0	27.2	27.2	8.3	0.0	61.9	14.3	49.3	5.3	12.0	0.0	38.7
Cycle Q Clear(g_c), s	9.0	27.2	27.2	8.3	0.0	61.9	14.3	49.3	5.3	12.0	0.0	38.7
Prop In Lane	1.00		0.34	1.00		0.27	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	105	709	703	119	0	725	176	606	513	141	0	559
V/C Ratio(X)	1.13	0.58	0.58	0.82	0.00	1.13	0.96	1.05	0.15	1.14	0.00	0.88
Avail Cap(c_a), veh/h	105	709	703	187	0	725	176	606	513	141	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.5	34.7	34.7	69.0	0.0	44.1	67.2	50.4	35.6	69.0	0.0	49.2
Incr Delay (d2), s/veh	126.6	1.2	1.2	14.9	0.0	77.0	55.0	49.1	0.1	117.9	0.0	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	13.4	13.3	4.5	0.0	45.5	9.6	33.4	2.3	10.4	0.0	21.7
LnGrp Delay(d),s/veh	197.1	35.8	35.8	83.9	0.0	121.0	122.2	99.4	35.7	186.9	0.0	64.3
LnGrp LOS	F	D	D	F		F	F	F	D	F		E
Approach Vol, veh/h		934			921			880			652	
Approach Delay, s/veh		56.4			117.1			98.1			94.4	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	54.2	14.2	65.6	19.0	51.2	13.0	66.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	12.0	49.3	16.0	54.9	15.0	46.3	9.0	61.9
Max Q Clear Time (g_c+I1), s	14.0	51.3	10.3	29.2	16.3	40.7	11.0	63.9
Green Ext Time (p_c), s	0.0	0.0	0.1	12.6	0.0	3.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	91.0
HCM 2010 LOS	F

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	119	815	98	823	168	634	78	160	492
v/c Ratio	1.13	0.62	0.64	1.13	0.96	1.05	0.14	1.14	0.88
Control Delay	188.0	39.3	84.6	113.4	124.1	97.3	3.3	177.9	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	188.0	39.3	84.6	113.4	124.1	97.3	3.3	177.9	66.5
Queue Length 50th (ft)	~135	332	94	~921	167	~671	0	~182	454
Queue Length 95th (ft)	#271	415	157	#1180	#319	#912	22	#337	#654
Internal Link Dist (ft)		2542		4993		1407			2554
Turn Bay Length (ft)	260		170		285			100	
Base Capacity (vph)	105	1318	186	731	175	606	570	140	561
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.62	0.53	1.13	0.96	1.05	0.14	1.14	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX D
MITIGATED INTERSECTION ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	262	113	28	395	20	128	111	20	56	197	77
Future Volume (veh/h)	21	262	113	28	395	20	128	111	20	56	197	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1759	1759	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	28	345	136	37	520	19	171	148	26	64	226	72
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.75	0.87	0.87	0.87
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	50	844	327	61	616	23	207	429	75	84	282	90
Arrive On Green	0.03	0.36	0.36	0.04	0.37	0.37	0.12	0.29	0.29	0.05	0.22	0.22
Sat Flow, veh/h	1675	2351	911	1675	1686	62	1675	1457	256	1675	1276	406
Grp Volume(v), veh/h	28	243	238	37	0	539	171	0	174	64	0	298
Grp Sat Flow(s),veh/h/ln	1675	1671	1591	1675	0	1748	1675	0	1713	1675	0	1682
Q Serve(g_s), s	1.2	7.9	8.1	1.6	0.0	20.3	7.2	0.0	5.7	2.7	0.0	12.1
Cycle Q Clear(g_c), s	1.2	7.9	8.1	1.6	0.0	20.3	7.2	0.0	5.7	2.7	0.0	12.1
Prop In Lane	1.00		0.57	1.00		0.04	1.00		0.15	1.00		0.24
Lane Grp Cap(c), veh/h	50	600	571	61	0	639	207	0	504	84	0	372
V/C Ratio(X)	0.56	0.41	0.42	0.61	0.00	0.84	0.82	0.00	0.34	0.76	0.00	0.80
Avail Cap(c_a), veh/h	186	723	688	186	0	756	235	0	550	212	0	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	17.3	17.4	34.2	0.0	20.9	30.8	0.0	19.9	33.7	0.0	26.5
Incr Delay (d2), s/veh	9.5	0.4	0.5	9.4	0.0	7.6	18.8	0.0	0.4	13.2	0.0	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.7	3.6	0.9	0.0	11.1	4.4	0.0	2.8	1.6	0.0	6.2
LnGrp Delay(d),s/veh	43.9	17.7	17.9	43.6	0.0	28.5	49.6	0.0	20.3	46.9	0.0	32.7
LnGrp LOS	D	B	B	D		C	D		C	D		C
Approach Vol, veh/h		509			576			345			362	
Approach Delay, s/veh		19.2			29.5			34.8			35.2	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	26.1	6.6	30.7	13.8	20.8	6.1	31.2
Change Period (Y+Rc), s	4.9	4.9	4.0	4.9	4.9	4.9	4.0	4.9
Max Green Setting (Gmax), s	9.1	23.1	8.0	31.1	10.1	22.1	8.0	31.1
Max Q Clear Time (g_c+I1), s	4.7	7.7	3.6	10.1	9.2	14.1	3.2	22.3
Green Ext Time (p_c), s	0.0	2.3	0.0	6.3	0.0	1.6	0.0	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	494	37	546	171	175	64	315
v/c Ratio	0.18	0.44	0.24	0.85	0.73	0.29	0.37	0.77
Control Delay	39.6	18.5	40.3	38.0	56.5	23.8	42.0	40.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	18.5	40.3	38.0	56.5	23.8	42.0	40.3
Queue Length 50th (ft)	12	84	16	206	77	61	28	125
Queue Length 95th (ft)	35	107	42	334	#163	110	72	#247
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	184	1404	184	750	233	611	209	524
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.35	0.20	0.73	0.73	0.29	0.31	0.60

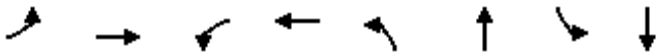
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	427	87	28	323	38	140	201	41	40	139	54
Future Volume (veh/h)	79	427	87	28	323	38	140	201	41	40	139	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	93	502	102	31	359	42	165	236	48	46	160	62
Adj No. of Lanes	1	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	947	191	61	471	55	208	380	77	82	253	98
Arrive On Green	0.07	0.32	0.32	0.03	0.29	0.29	0.12	0.25	0.25	0.05	0.20	0.20
Sat Flow, veh/h	1774	2930	592	1774	1636	191	1774	1501	305	1774	1274	494
Grp Volume(v), veh/h	93	302	302	31	0	401	165	0	284	46	0	222
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1774	0	1827	1774	0	1807	1774	0	1768
Q Serve(g_s), s	2.8	7.6	7.7	0.9	0.0	10.9	4.9	0.0	7.6	1.4	0.0	6.3
Cycle Q Clear(g_c), s	2.8	7.6	7.7	0.9	0.0	10.9	4.9	0.0	7.6	1.4	0.0	6.3
Prop In Lane	1.00		0.34	1.00		0.10	1.00		0.17	1.00		0.28
Lane Grp Cap(c), veh/h	123	572	566	61	0	526	208	0	457	82	0	350
V/C Ratio(X)	0.76	0.53	0.53	0.51	0.00	0.76	0.79	0.00	0.62	0.56	0.00	0.63
Avail Cap(c_a), veh/h	261	588	583	261	0	607	261	0	601	231	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	15.0	15.1	25.8	0.0	17.7	23.4	0.0	18.0	25.4	0.0	20.0
Incr Delay (d2), s/veh	9.1	0.8	0.9	6.4	0.0	4.9	12.3	0.0	1.4	6.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.8	3.8	0.6	0.0	6.2	3.1	0.0	4.0	0.8	0.0	3.2
LnGrp Delay(d),s/veh	33.9	15.9	16.0	32.2	0.0	22.6	35.7	0.0	19.4	31.4	0.0	21.9
LnGrp LOS	C	B	B	C		C	D		B	C		C
Approach Vol, veh/h		697			432			449			268	
Approach Delay, s/veh		18.3			23.3			25.4			23.5	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	18.7	5.9	22.5	10.4	15.7	7.8	20.6
Change Period (Y+Rc), s	4.9	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	7.1	18.1	8.0	18.1	8.0	18.1	8.0	18.1
Max Q Clear Time (g_c+I1), s	3.4	9.6	2.9	9.7	6.9	8.3	4.8	12.9
Green Ext Time (p_c), s	0.0	1.8	0.0	3.7	0.0	1.9	0.0	2.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	604	31	401	165	284	46	222
v/c Ratio	0.43	0.50	0.16	0.80	0.69	0.49	0.24	0.55
Control Delay	35.0	18.5	30.1	37.2	47.6	23.5	31.8	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	18.5	30.1	37.2	47.6	23.5	31.8	25.3
Queue Length 50th (ft)	36	77	12	150	67	101	18	70
Queue Length 95th (ft)	76	155	36	#306	#154	163	46	125
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	242	1327	242	571	242	598	215	566
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.46	0.13	0.70	0.68	0.47	0.21	0.39

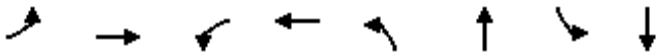
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	10	45	49	28	50	22	430	19	65	712	21
Future Volume (veh/h)	15	10	45	49	28	50	22	430	19	65	712	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	16	11	49	53	30	54	24	467	21	71	774	23
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	35	34	151	95	88	158	51	1242	56	115	1391	41
Arrive On Green	0.02	0.12	0.12	0.05	0.15	0.15	0.03	0.36	0.36	0.07	0.40	0.40
Sat Flow, veh/h	1757	292	1302	1757	588	1058	1757	3416	153	1757	3475	103
Grp Volume(v), veh/h	16	0	60	53	0	84	24	239	249	71	390	407
Grp Sat Flow(s),veh/h/ln	1757	0	1595	1757	0	1645	1757	1752	1816	1757	1752	1826
Q Serve(g_s), s	0.4	0.0	1.5	1.3	0.0	2.0	0.6	4.5	4.5	1.7	7.6	7.6
Cycle Q Clear(g_c), s	0.4	0.0	1.5	1.3	0.0	2.0	0.6	4.5	4.5	1.7	7.6	7.6
Prop In Lane	1.00		0.82	1.00		0.64	1.00		0.08	1.00		0.06
Lane Grp Cap(c), veh/h	35	0	185	95	0	246	51	637	660	115	702	731
V/C Ratio(X)	0.45	0.00	0.32	0.56	0.00	0.34	0.47	0.38	0.38	0.62	0.56	0.56
Avail Cap(c_a), veh/h	317	0	686	317	0	708	317	1385	1436	396	1464	1526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	18.0	20.5	0.0	16.9	21.2	10.4	10.4	20.2	10.3	10.3
Incr Delay (d2), s/veh	8.7	0.0	1.0	5.0	0.0	0.8	6.7	0.4	0.4	5.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.8	0.0	1.0	0.4	2.2	2.3	1.0	3.8	4.0
LnGrp Delay(d),s/veh	30.2	0.0	19.0	25.5	0.0	17.7	27.9	10.8	10.8	25.4	11.0	10.9
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		76			137			512			868	
Approach Delay, s/veh		21.4			20.7			11.6			12.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	21.0	6.4	10.0	5.3	22.7	4.9	11.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	10.0	35.1	8.0	19.1	8.0	37.1	8.0	19.1
Max Q Clear Time (g_c+I1), s	3.7	6.5	3.3	3.5	2.6	9.6	2.4	4.0
Green Ext Time (p_c), s	0.1	8.2	0.0	0.6	0.0	8.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	60	53	84	24	488	71	797
v/c Ratio	0.06	0.20	0.18	0.19	0.09	0.24	0.22	0.34
Control Delay	26.2	13.1	25.4	11.7	26.0	13.4	24.4	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	13.1	25.4	11.7	26.0	13.4	24.4	9.7
Queue Length 50th (ft)	4	3	14	6	7	65	19	77
Queue Length 95th (ft)	24	36	53	49	30	118	64	194
Internal Link Dist (ft)		2542		2955		2554		1670
Turn Bay Length (ft)								
Base Capacity (vph)	359	804	359	834	359	2649	449	2727
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.07	0.15	0.10	0.07	0.18	0.16	0.29

Intersection Summary

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

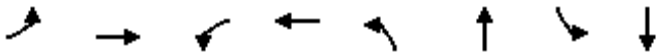
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	76	137	512	868
Demand Flow Rate, veh/h	77	140	521	884
Vehicles Circulating, veh/h	915	516	99	109
Vehicles Exiting, veh/h	78	104	893	547
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	5	5	5	5
Ped Cap Adj	1.000	0.999	0.995	0.995
Approach Delay, s/veh	7.7	6.6	5.9	8.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.469	0.531
Critical Headway, s	4.113	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	77	140	245	276	415	469
Cap Entry Lane, veh/h	596	787	1049	1054	1041	1047
Entry HV Adj Factor	0.984	0.981	0.982	0.983	0.983	0.980
Flow Entry, veh/h	76	137	240	271	408	460
Cap Entry, veh/h	586	772	1024	1030	1018	1021
V/C Ratio	0.129	0.178	0.235	0.263	0.401	0.450
Control Delay, s/veh	7.7	6.6	5.8	6.1	7.9	8.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	2	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	467	158	63	813	42	163	241	20	104	407	82
Future Volume (veh/h)	35	467	158	63	813	42	163	241	20	104	407	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	38	508	172	68	884	46	177	262	22	113	442	89
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	730	246	87	1010	53	212	611	51	144	485	98
Arrive On Green	0.04	0.28	0.28	0.05	0.30	0.30	0.12	0.36	0.36	0.08	0.33	0.33
Sat Flow, veh/h	1757	2570	865	1757	3388	176	1757	1678	141	1757	1490	300
Grp Volume(v), veh/h	38	346	334	68	457	473	177	0	284	113	0	531
Grp Sat Flow(s),veh/h/ln	1757	1752	1683	1757	1752	1812	1757	0	1819	1757	0	1790
Q Serve(g_s), s	1.7	14.2	14.4	3.1	20.0	20.0	8.0	0.0	9.5	5.1	0.0	23.0
Cycle Q Clear(g_c), s	1.7	14.2	14.4	3.1	20.0	20.0	8.0	0.0	9.5	5.1	0.0	23.0
Prop In Lane	1.00		0.51	1.00		0.10	1.00		0.08	1.00		0.17
Lane Grp Cap(c), veh/h	62	498	478	87	522	540	212	0	662	144	0	582
V/C Ratio(X)	0.61	0.69	0.70	0.78	0.88	0.88	0.83	0.00	0.43	0.78	0.00	0.91
Avail Cap(c_a), veh/h	174	536	514	174	536	554	217	0	662	261	0	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	25.8	25.9	38.0	26.9	26.9	34.7	0.0	19.4	36.4	0.0	26.2
Incr Delay (d2), s/veh	9.2	3.6	3.9	13.9	14.8	14.4	22.9	0.0	0.4	9.0	0.0	16.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	7.3	7.2	1.8	11.8	12.1	5.2	0.0	4.8	2.8	0.0	14.0
LnGrp Delay(d),s/veh	47.6	29.4	29.7	51.9	41.7	41.3	57.7	0.0	19.8	45.4	0.0	42.3
LnGrp LOS	D	C	C	D	D	D	E		B	D		D
Approach Vol, veh/h		718			998			461			644	
Approach Delay, s/veh		30.5			42.2			34.3			42.8	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	34.3	8.0	27.8	13.8	31.2	6.9	29.0
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	12.0	27.5	8.0	24.7	10.0	29.5	8.0	24.7
Max Q Clear Time (g_c+I1), s	7.1	11.5	5.1	16.4	10.0	25.0	3.7	22.0
Green Ext Time (p_c), s	0.1	4.3	0.0	5.5	0.0	1.3	0.0	2.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	680	68	930	177	284	113	531
v/c Ratio	0.26	0.70	0.44	0.86	0.83	0.43	0.54	0.90
Control Delay	42.9	30.5	48.2	39.0	71.3	25.7	46.3	48.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	30.5	48.2	39.0	71.3	25.7	46.3	48.0
Queue Length 50th (ft)	21	170	37	270	100	126	61	275
Queue Length 95th (ft)	51	233	80	#405	#223	207	114	#471
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	169	1036	169	1098	212	653	254	648
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.66	0.40	0.85	0.83	0.43	0.44	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	451	134	134	658	138	198	271	54	223	531	79
Future Volume (veh/h)	55	451	134	134	658	138	198	271	54	223	531	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	56	460	96	137	671	111	202	277	43	228	542	73
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	74	1030	213	171	759	643	236	599	92	263	658	88
Arrive On Green	0.04	0.36	0.36	0.10	0.41	0.41	0.13	0.20	0.20	0.15	0.21	0.21
Sat Flow, veh/h	1757	2889	599	1757	1845	1562	1757	3044	467	1757	3103	417
Grp Volume(v), veh/h	56	278	278	137	671	111	202	158	162	228	305	310
Grp Sat Flow(s),veh/h/ln	1757	1752	1736	1757	1845	1562	1757	1752	1758	1757	1752	1768
Q Serve(g_s), s	2.8	10.8	10.9	6.8	30.0	4.0	10.0	7.1	7.3	11.3	14.8	14.9
Cycle Q Clear(g_c), s	2.8	10.8	10.9	6.8	30.0	4.0	10.0	7.1	7.3	11.3	14.8	14.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.27	1.00		0.24
Lane Grp Cap(c), veh/h	74	624	619	171	759	643	236	345	346	263	372	375
V/C Ratio(X)	0.76	0.44	0.45	0.80	0.88	0.17	0.85	0.46	0.47	0.87	0.82	0.83
Avail Cap(c_a), veh/h	158	651	645	296	831	704	256	376	377	296	415	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	21.9	22.0	39.4	24.2	16.6	37.7	31.6	31.6	37.0	33.5	33.5
Incr Delay (d2), s/veh	14.5	0.5	0.5	8.5	10.5	0.1	22.2	1.0	1.0	20.9	11.4	11.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.3	5.3	3.7	17.3	1.7	6.3	3.5	3.6	7.0	8.3	8.4
LnGrp Delay(d),s/veh	56.7	22.4	22.5	47.8	34.8	16.7	59.9	32.5	32.6	57.9	44.9	45.3
LnGrp LOS	E	C	C	D	C	B	E	C	C	E	D	D
Approach Vol, veh/h		612			919			522			843	
Approach Delay, s/veh		25.6			34.5			43.2			48.6	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	22.4	12.7	36.6	16.0	23.8	7.7	41.5
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	15.0	19.1	15.0	33.1	13.0	21.1	8.0	40.1
Max Q Clear Time (g_c+I1), s	13.3	9.3	8.8	12.9	12.0	16.9	4.8	32.0
Green Ext Time (p_c), s	0.1	3.6	0.2	8.1	0.1	2.0	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	56	597	137	671	141	202	332	228	623
v/c Ratio	0.40	0.54	0.60	0.91	0.21	0.83	0.48	0.83	0.84
Control Delay	52.8	26.2	51.3	46.3	7.1	69.5	35.3	66.4	46.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	26.2	51.3	46.3	7.1	69.5	35.3	66.4	46.7
Queue Length 50th (ft)	35	144	84	395	13	128	94	144	197
Queue Length 95th (ft)	75	203	144	#619	51	#259	139	#277	#287
Internal Link Dist (ft)		2542		4993			1407		2554
Turn Bay Length (ft)	260		170		25	285		100	
Base Capacity (vph)	156	1297	292	823	745	253	740	292	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.46	0.47	0.82	0.19	0.80	0.45	0.78	0.76

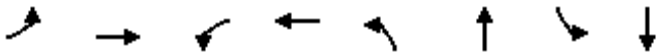
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	8	32	22	12	56	55	855	34	28	669	27
Future Volume (veh/h)	20	8	32	22	12	56	55	855	34	28	669	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	9	35	24	13	61	60	929	37	30	727	29
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	35	135	50	30	142	101	1637	65	61	1558	62
Arrive On Green	0.03	0.11	0.11	0.03	0.11	0.11	0.06	0.47	0.47	0.03	0.45	0.45
Sat Flow, veh/h	1774	330	1284	1774	282	1325	1774	3469	138	1774	3469	138
Grp Volume(v), veh/h	22	0	44	24	0	74	60	474	492	30	371	385
Grp Sat Flow(s),veh/h/ln	1774	0	1614	1774	0	1607	1774	1770	1837	1774	1770	1837
Q Serve(g_s), s	0.6	0.0	1.2	0.7	0.0	2.1	1.6	9.5	9.5	0.8	7.2	7.2
Cycle Q Clear(g_c), s	0.6	0.0	1.2	0.7	0.0	2.1	1.6	9.5	9.5	0.8	7.2	7.2
Prop In Lane	1.00		0.80	1.00		0.82	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	47	0	170	50	0	172	101	835	867	61	795	825
V/C Ratio(X)	0.47	0.00	0.26	0.48	0.00	0.43	0.60	0.57	0.57	0.50	0.47	0.47
Avail Cap(c_a), veh/h	287	0	592	287	0	589	287	1365	1417	287	1365	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	20.3	23.6	0.0	20.6	22.7	9.4	9.4	23.4	9.5	9.5
Incr Delay (d2), s/veh	7.2	0.0	0.8	6.8	0.0	1.7	5.5	0.6	0.6	6.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.4	0.0	1.0	1.0	4.7	4.9	0.5	3.6	3.7
LnGrp Delay(d),s/veh	30.9	0.0	21.1	30.5	0.0	22.3	28.3	10.0	10.0	29.6	9.9	9.9
LnGrp LOS	C		C	C		C	C	B	A	C	A	A
Approach Vol, veh/h		66			98			1026			786	
Approach Delay, s/veh		24.4			24.3			11.1			10.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	28.2	5.4	10.1	6.8	27.1	5.3	10.2
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	38.1	8.0	18.1	8.0	38.1	8.0	18.1
Max Q Clear Time (g_c+I1), s	2.8	11.5	2.7	3.2	3.6	9.2	2.6	4.1
Green Ext Time (p_c), s	0.0	11.8	0.0	0.5	0.0	12.2	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	44	24	74	60	966	30	756
v/c Ratio	0.09	0.16	0.09	0.26	0.22	0.39	0.12	0.33
Control Delay	28.9	15.4	28.9	14.0	28.5	10.0	28.6	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	15.4	28.9	14.0	28.5	10.0	28.6	10.8
Queue Length 50th (ft)	5	2	5	3	13	46	6	72
Queue Length 95th (ft)	31	32	33	42	63	243	38	178
Internal Link Dist (ft)		2542		2955		2554		1670
Turn Bay Length (ft)								
Base Capacity (vph)	333	709	333	720	333	2777	333	2777
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.06	0.07	0.10	0.18	0.35	0.09	0.27

Intersection Summary

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

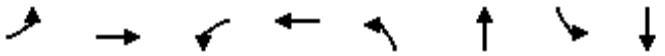
Approach	EB	WB	NB	SB
Entry Lanes	1	1	2	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	66	98	1026	786
Demand Flow Rate, veh/h	67	99	1047	803
Vehicles Circulating, veh/h	797	1031	62	98
Vehicles Exiting, veh/h	104	78	802	1032
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	5	5	5	5
Ped Cap Adj	0.999	1.000	0.995	0.995
Approach Delay, s/veh	6.8	9.0	9.1	7.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.469	0.531
Critical Headway, s	4.113	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	67	99	492	555	377	426
Cap Entry Lane, veh/h	647	549	1079	1082	1050	1055
Entry HV Adj Factor	0.982	0.987	0.981	0.980	0.980	0.978
Flow Entry, veh/h	66	98	482	544	370	417
Cap Entry, veh/h	635	542	1052	1055	1024	1027
V/C Ratio	0.104	0.180	0.459	0.516	0.361	0.406
Control Delay, s/veh	6.8	9.0	8.6	9.6	7.3	7.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	1	2	3	2	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	764	187	46	676	48	311	411	82	50	339	80
Future Volume (veh/h)	85	764	187	46	676	48	311	411	82	50	339	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	92	830	149	50	735	41	338	447	67	54	368	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	927	167	69	962	54	359	667	100	71	400	71
Arrive On Green	0.07	0.31	0.31	0.04	0.28	0.28	0.20	0.42	0.42	0.04	0.26	0.26
Sat Flow, veh/h	1774	2995	538	1774	3407	190	1774	1583	237	1774	1541	272
Grp Volume(v), veh/h	92	490	489	50	382	394	338	0	514	54	0	433
Grp Sat Flow(s),veh/h/ln	1774	1770	1763	1774	1770	1827	1774	0	1820	1774	0	1813
Q Serve(g_s), s	4.8	24.9	24.9	2.6	18.5	18.5	17.6	0.0	21.4	2.8	0.0	21.8
Cycle Q Clear(g_c), s	4.8	24.9	24.9	2.6	18.5	18.5	17.6	0.0	21.4	2.8	0.0	21.8
Prop In Lane	1.00		0.30	1.00		0.10	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	117	548	546	69	500	516	359	0	767	71	0	471
V/C Ratio(X)	0.79	0.89	0.89	0.73	0.76	0.76	0.94	0.00	0.67	0.76	0.00	0.92
Avail Cap(c_a), veh/h	151	548	546	151	548	566	359	0	767	151	0	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.2	30.9	30.9	44.6	30.8	30.8	36.9	0.0	21.9	44.6	0.0	33.8
Incr Delay (d2), s/veh	18.3	17.1	17.2	13.5	5.8	5.6	32.7	0.0	2.3	14.9	0.0	21.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	14.7	14.7	1.5	9.8	10.1	11.9	0.0	11.2	1.7	0.0	13.8
LnGrp Delay(d),s/veh	61.5	48.1	48.1	58.2	36.6	36.4	69.6	0.0	24.1	59.5	0.0	55.3
LnGrp LOS	E	D	D	E	D	D	E		C	E		E
Approach Vol, veh/h		1071			826			852			487	
Approach Delay, s/veh		49.3			37.8			42.2			55.8	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	44.5	7.6	34.0	23.0	29.3	10.2	31.4
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	8.0	37.1	8.0	29.1	19.0	26.1	8.0	29.1
Max Q Clear Time (g_c+I1), s	4.8	23.4	4.6	26.9	19.6	23.8	6.8	20.5
Green Ext Time (p_c), s	0.0	4.7	0.0	1.8	0.0	0.6	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	45.5
HCM 2010 LOS	D



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	92	1033	50	787	338	536	54	455
v/c Ratio	0.65	0.98	0.38	0.75	0.97	0.72	0.41	0.94
Control Delay	66.7	57.9	52.2	36.2	82.1	32.4	53.4	65.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	57.9	52.2	36.2	82.1	32.4	53.4	65.1
Queue Length 50th (ft)	58	~350	31	238	~219	294	33	279
Queue Length 95th (ft)	#130	#492	69	310	#399	#444	73	#477
Internal Link Dist (ft)		3084		2542		1124		2564
Turn Bay Length (ft)								
Base Capacity (vph)	147	1052	147	1061	349	743	147	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.98	0.34	0.74	0.97	0.72	0.37	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	636	130	92	566	208	158	596	73	150	415	48
Future Volume (veh/h)	112	636	130	92	566	208	158	596	73	150	415	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	119	677	117	98	602	155	168	634	57	160	441	36
Adj No. of Lanes	1	2	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1160	200	125	692	586	202	791	71	193	781	64
Arrive On Green	0.08	0.38	0.38	0.07	0.37	0.37	0.11	0.24	0.24	0.11	0.24	0.24
Sat Flow, veh/h	1774	3017	521	1774	1863	1577	1774	3283	295	1774	3313	269
Grp Volume(v), veh/h	119	397	397	98	602	155	168	341	350	160	235	242
Grp Sat Flow(s),veh/h/ln	1774	1770	1768	1774	1863	1577	1774	1770	1809	1774	1770	1813
Q Serve(g_s), s	6.0	16.2	16.3	5.0	27.4	6.2	8.4	16.5	16.6	8.1	10.7	10.7
Cycle Q Clear(g_c), s	6.0	16.2	16.3	5.0	27.4	6.2	8.4	16.5	16.6	8.1	10.7	10.7
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.16	1.00		0.15
Lane Grp Cap(c), veh/h	148	680	680	125	692	586	202	426	436	193	417	427
V/C Ratio(X)	0.80	0.58	0.58	0.78	0.87	0.26	0.83	0.80	0.80	0.83	0.56	0.57
Avail Cap(c_a), veh/h	156	680	680	234	778	659	253	487	498	214	448	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	22.3	22.3	41.7	26.6	20.0	39.5	32.5	32.6	39.8	30.7	30.7
Incr Delay (d2), s/veh	24.5	1.3	1.3	10.1	9.6	0.2	16.9	8.2	8.2	21.4	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	8.2	8.2	2.8	15.9	2.8	5.1	9.0	9.2	5.1	5.4	5.6
LnGrp Delay(d),s/veh	65.5	23.5	23.6	51.7	36.2	20.2	56.4	40.8	40.7	61.2	32.1	32.2
LnGrp LOS	E	C	C	D	D	C	E	D	D	E	C	C
Approach Vol, veh/h		913			855			859			637	
Approach Delay, s/veh		29.0			35.1			43.8			39.4	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	26.9	10.4	39.9	14.4	26.4	11.6	38.8
Change Period (Y+Rc), s	4.0	4.9	4.0	4.9	4.0	4.9	4.0	4.9
Max Green Setting (Gmax), s	11.0	25.1	12.0	34.1	13.0	23.1	8.0	38.1
Max Q Clear Time (g_c+I1), s	10.1	18.6	7.0	18.3	10.4	12.7	8.0	29.4
Green Ext Time (p_c), s	0.0	3.4	0.1	8.2	0.1	4.7	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	36.5
HCM 2010 LOS	D

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	119	815	98	602	221	168	712	160	492
v/c Ratio	0.78	0.63	0.52	0.89	0.35	0.74	0.83	0.78	0.61
Control Delay	77.4	27.7	51.7	46.0	12.8	60.8	43.2	69.4	36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.4	27.7	51.7	46.0	12.8	60.8	43.2	69.4	36.0
Queue Length 50th (ft)	76	221	60	346	47	104	221	101	144
Queue Length 95th (ft)	#178	294	111	#540	105	#201	291	#213	199
Internal Link Dist (ft)		2542		4993			1407		2554
Turn Bay Length (ft)	260		170		25	285		100	
Base Capacity (vph)	153	1306	230	770	704	249	955	211	879
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.62	0.43	0.78	0.31	0.67	0.75	0.76	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

PETERS ENGINEERING GROUP
A CALIFORNIA CORPORATION

Mr. Matt Smith
Woodside 06N, LP
9 River Park Place East, Suite 430
Fresno, California 93720

March 3, 2020

Subject: Addendum 2 - Traffic Impact Study
Proposed McKenney Assemblage – Tract 6284
South of Teague Avenue Between Sunnyside and Fowler Avenues
Clovis, California

Dear Mr. Smith:

This addendum report presents supplemental information requested by the City of Clovis. Peters Engineering Group previously performed a traffic impact study for the proposed single-family residential development and presented the results in reports dated February 4, 2020 and March 3, 2020 (March 3 TIS). The City of Clovis has requested that intersection operational analyses be performed for the future site access road connecting to Sunnyside Avenue (at the location of the proposed emergency vehicle access). This addendum letter supersedes a previous letter dated February 20, 2020.

It is assumed that the approaches to the intersection will consist of one lane in each direction with no turn lanes and that a stop sign will be installed on the westbound approach to the intersection. Traffic volumes at the intersection are based on traffic counts, trip generation estimates, and future traffic projections as described and presented in the TIS. Peak-hour traffic volumes at the intersection of Sunnyside Avenue and the site access are presented in the attached figures as follows:

Figure 1: Existing Peak-Hour Traffic Volumes

Figure 2: Peak-Hour Project Trips at Site Access Road

Figure 3: Cumulative Year 2040 With-Project Peak-Hour Traffic Volumes.

Table 1 presents the results of the intersection analyses. For one-way stop-controlled intersections, the Highway Capacity Manual does not define an overall intersection LOS; therefore, the average delay and LOS for the approach with the greatest delay is presented.

Table 1
Intersection LOS Summary – Cumulative Year 2040 With-Project Conditions

Intersection	Control	A.M. Peak Hour		P.M. Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Site Access / Sunnyside	One-way stop	17.7	C	17.3	C

The results of the intersection operational analyses include an estimate of the 95th-percentile queue lengths. The calculated 95th-percentile queue lengths are presented in Table 2.

Table 2
Intersection Queuing Summary – Cumulative Year 2040 With-Project Conditions

Intersection	Calculated 95th-Percentile Queue Length (feet)	
Approach	A.M. Peak Hour	P.M. Peak Hour
Site Access / Sunnyside		
Westbound LR	3	3
Northbound TR	Does not stop	Does not stop
Southbound LT	0	0

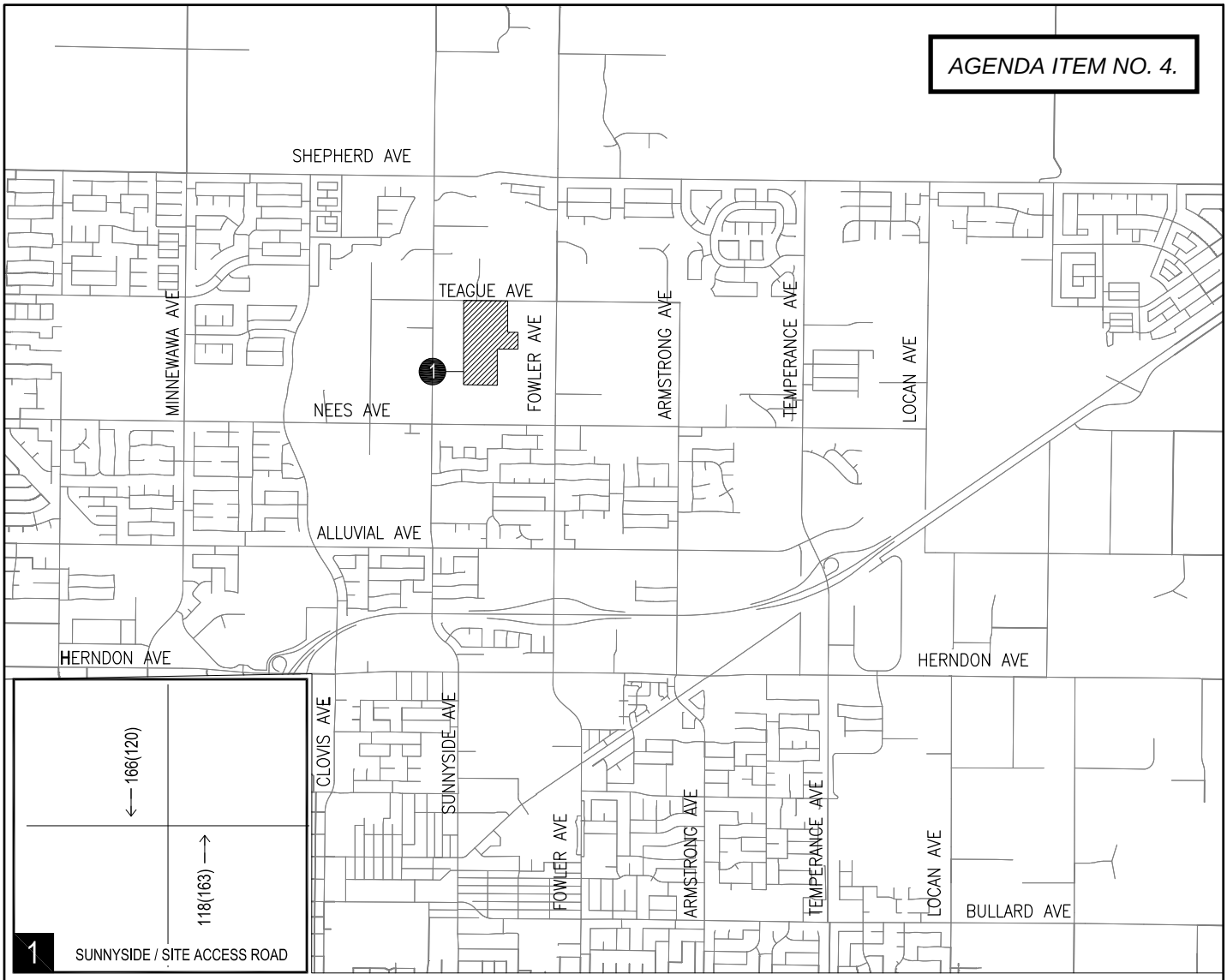
Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the project, and to analyze the traffic conditions that are expected to occur in the future. The analyses indicate that the intersection of the future site access and Sunnyside Avenue is expected to operate at acceptable levels of service through the year 2040. All of the conclusions and recommendations presented in the March 3 TIS remain applicable.

Thank you for the opportunity to continue to work with you on this project. Please feel free to contact me if you have any questions.

PETERS ENGINEERING GROUP

John Rowland, PE, TE

Attachments: Figures 1 through 3
Intersection Analyses

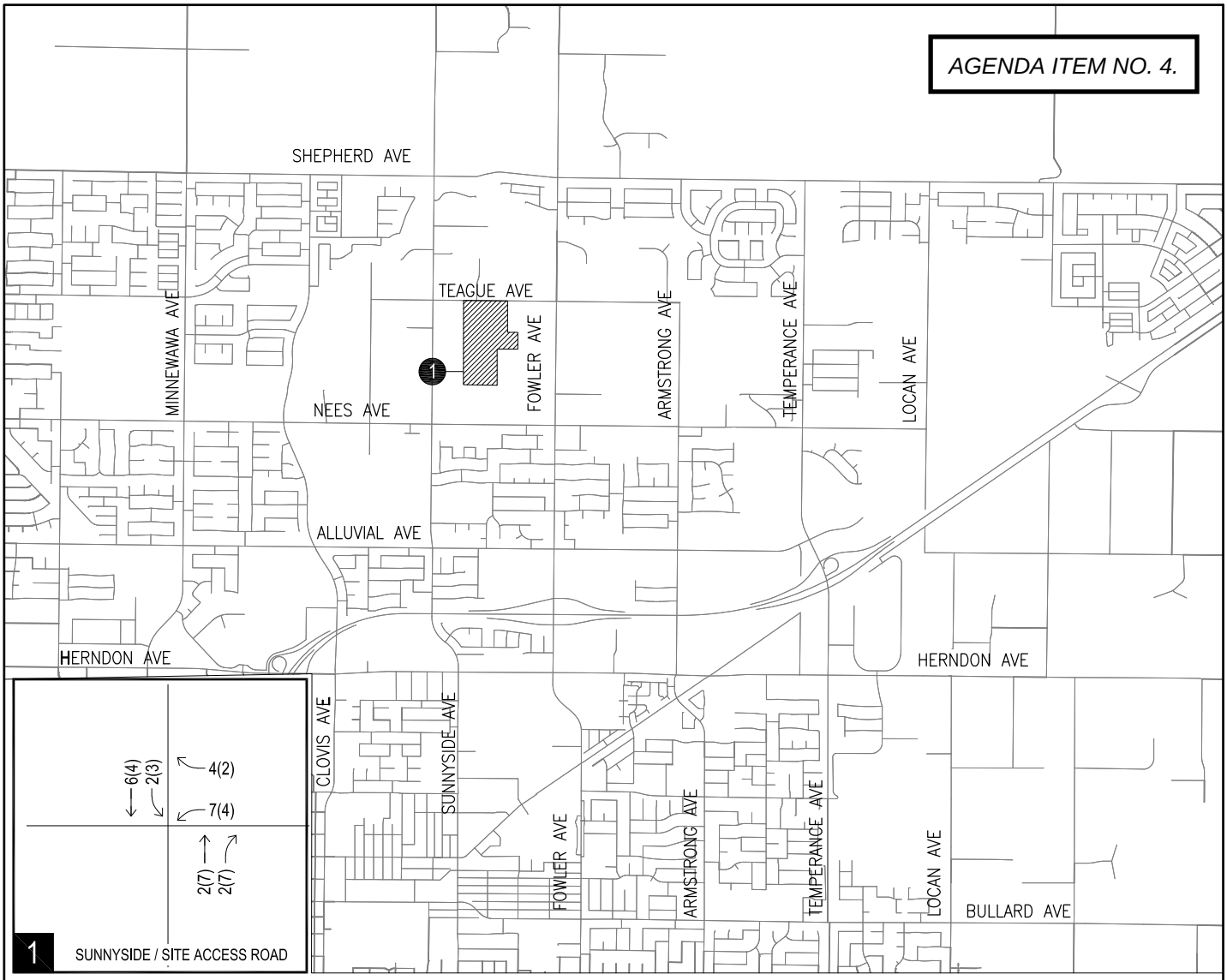


Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

EXISTING PEAK-HOUR TRAFFIC VOLUMES

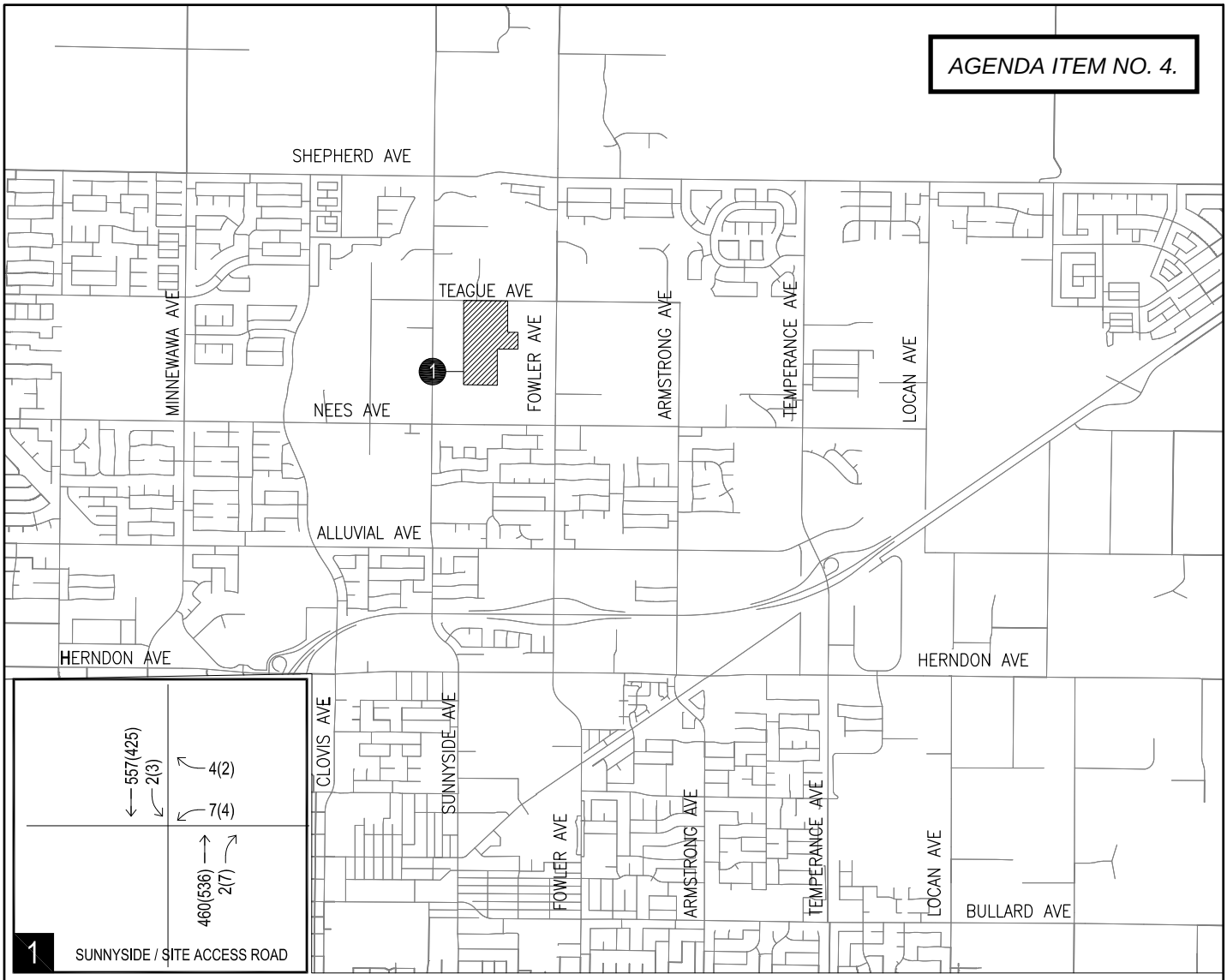


Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

PEAK-HOUR PROJECT TRIPS AT SITE ACCESS ROAD



Proposed McKenney Assemblage
Clovis, California

LEGEND

	PROJECT SITE
XX	STUDY AREA INTERSECTIONS
XX (YY)	AM (PM) PEAK HOUR VOLUMES

CUMULATIVE YEAR 2040 WITH -PROJECT PEAK-HOUR TRAFFIC VOLUMES

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	4	460	2	2	557
Future Vol, veh/h	7	4	460	2	2	557
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	4	500	2	2	605

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1110	501	0	0	502	0
Stage 1	501	-	-	-	-	-
Stage 2	609	-	-	-	-	-
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	232	570	-	-	1062	-
Stage 1	609	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	231	570	-	-	1062	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	541	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	295	1062	-
HCM Lane V/C Ratio	-	-	0.041	0.002	-
HCM Control Delay (s)	-	-	17.7	8.4	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	2	536	7	3	425
Future Vol, veh/h	4	2	536	7	3	425
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	2	583	8	3	462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1055	587	0	0	591	0
Stage 1	587	-	-	-	-	-
Stage 2	468	-	-	-	-	-
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	250	510	-	-	985	-
Stage 1	556	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	249	510	-	-	985	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	627	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	300	985	-
HCM Lane V/C Ratio	-	-	0.022	0.003	-
HCM Control Delay (s)	-	-	17.3	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

DRAFT
RESOLUTION 20-__

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING AN ENVIRONMENTAL FINDING OF A MITIGATED NEGATIVE DECLARATION FOR GENERAL PLAN AMENDMENT GPA2019-006, PREZONE R2019-007, PREZONE R2020-002, AND VESTING TENTATIVE TRACT MAP TM6284, PURSUANT TO CEQA GUIDELINES

WHEREAS, the project proponent, Woodside Homes of Fresno, LP., 9 River Park Place, Suite 430, Fresno, CA 93720, has submitted various applications including a General Plan Amendment (GPA2019-006), Prezone (R2019-007), Prezone (R2020-002), and Vesting Tentative Tract Map (TM6284) for property located in the southwest area of Teague and N. Fowler Avenues, in the County of Fresno ("Project"); and

WHEREAS, the City of Clovis ("City") caused to be prepared an initial study (hereinafter incorporated by reference) in February 2020, for the Project to evaluate potentially significant adverse environmental impacts. On the basis of that study, it was determined that no significant environmental impacts would result from this Project if certain mitigation measures were included; and

WHEREAS, on the basis of this initial study, a mitigated negative declaration has been prepared, circulated, and made available for public comment pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code, section 21000, et seq., and Guidelines for implementation of CEQA, 14 California Code of Regulations, sections 15000, et seq.; and

WHEREAS, the City Council has independently reviewed, evaluated, and considered the CEQA analysis outlined in the staff report, initial study, mitigated negative declaration and all comments, written and oral, received from persons who reviewed the mitigated negative declaration, or otherwise commented on the Project ("Administrative Record").

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. Adopts the foregoing recitals as true and correct.

2. Finds that the initial study and mitigated negative declaration for the Project are adequate, reflect the City's independent judgement and analysis, and have been completed in compliance with CEQA and the CEQA Guidelines.

3. Finds and declares that the initial study and mitigated negative declaration were presented to the City Council and that the City Council has independently reviewed, evaluated, and considered the initial study, mitigated negative declaration and all comments, written and oral, received from persons who reviewed the initial study and mitigated negative declaration, or otherwise

commented on the Project ("Administrative Record") prior to approving the Project and recommends the adoption of a mitigated negative declaration for this project.

4. Finds, on the basis of the whole record, that there is no substantial evidence that the Project will have a significant effect on the environment with the mitigation measures identified in the mitigated negative declaration.

5. Approves and adopts the mitigation monitoring program set forth in **Attachment A**, including the mitigation measures identified therein and as described in the mitigated negative declaration.

6. Directs that the record of these proceedings be contained in the Department of Planning and Development Services located at 1033 Fifth Street, Clovis, California 93612, and that the custodian of the record be the City Planner or other person designated by the Planning and Development Services Director.

7. The Planning and Development Services Director, or his/her designee, is authorized to file a notice of determination for the Project in accordance with CEQA and to pay any fees required for such filing.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on May 11, 2020, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: May 11, 2020

_____ Mayor

_____ City Clerk

ATTACHMENT A:
Mitigation Monitoring Program
GPA2019-006/R2019-007/TM6284

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
G.1 Aesthetics				
G.1-d	The developer shall direct all on-site lighting downward and provide physical shields to prevent direct view of the light source from adjacent rural residential properties surrounding the proposed residential development. Street lighting shall be spaced in accordance with City Standards to reduce up-lighting. The applicant shall utilize a PG&E street light which directs light downward.	City of Clovis Planning	*Prior to Permits and During Construction*	
G.4 Biological				
G.4-a1	**Western Burrowing Owl.** A preconstruction survey for potential occupation of the site by Western burrowing owl and nesting Swainson's hawk is recommended if ground disturbing activities are scheduled during the nesting period (Feb – August). This species, although not observed during the field review, could occupy the site in the near future. The survey should be performed within 30-45 days prior to construction (ground disturbance).	City of Clovis Planning	*Prior to Permits and During Construction*	
G.4-a2	**Swainson's Hawk.** The only suitable nesting habitat for Swainson's hawk is in the northeast			

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
	portion near Teague Avenue and on properties adjacent to the Study Area. No active nests were found. A nest survey should be conducted prior to removal (if needed) of the eucalyptus/pine stand or individual trees in the northeast corner of the Study Area if tree removal is to occur during the nesting season of February 1 – August 31).			
G.5 Cultural Resources				
G.5-b	Although no prehistoric sites were found during the survey, there is a slight possibility that a site may exist and be totally obscured by vegetation, fill, or other historic activities, leaving no surface evidence. Should artifacts or unusual amounts of stone, bone, or shell be uncovered during construction activities, an archeologist should be consulted for on-the-spot evaluation of the findings.	City of Clovis Planning	*Prior to Permits and During Construction*	
G.5-c	The possibility of encountering human remains cannot be entirely discounted. If human graves are encountered, work should halt, and the Fresno County Coroner should be notified. The California Health and Safety Code Section 7050.5 states it is a misdemeanor to knowingly disturb a human grave. Upon discovery, the Project owner should contact a qualified archaeologist to evaluate the historical significance of the remains. If human remains			

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
	are of Native American origin, the Coroner must notify the NAHC within 24 hours of the identification.			
G.7 Geology and Soils				
G.7-f	If prehistoric or historic-era cultural materials are encountered during construction activities, all work in the immediate vicinity of the find shall halt until a qualified professional archaeologist and/or paleontologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, can evaluate the significance of the find and make recommendations. Cultural resource materials may include prehistoric resources such as flaked and ground stone tools and debris, shell, bone, ceramics, and fire-affected rock as well as historic resources such as glass, metal, wood, brick, or structural remnants. If the qualified professional determines that the discovery represents a potentially significant cultural resource, additional investigations may be required to mitigate adverse impacts from project implementation. These additional studies may include avoidance, testing, and evaluation or data recovery excavation. If a potentially-eligible resource is encountered, then the qualified professional	City of Clovis Planning	*During Construction and Prior to Occupancy*	

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
	archaeologist and/or paleontologist, the Lead Agency, and the project proponent shall arrange for either 1) total avoidance of the resource or 2) test excavations to evaluate eligibility and, if eligible, total data recovery. The determination shall be formally documented in writing and submitted to the Lead Agency as verification that the provisions for managing unanticipated discoveries have been met.			
G.13 Noise				
G.13-a1	The Project contractor shall locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.	City of Clovis Engineering	*Prior to Permits*	
G.13-a2	The Project contractor shall ensure that all general construction related activities are restricted to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturday and Sunday.			
G.17 Transportation				

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
G.17-a1	The Project proponent and/or applicant shall contribute their proportional share of traffic impact fees (street fees) for the future complete signalization of following three (3) intersections: (1) signalization at the intersection of Teague and Fowler Avenues; (2) signalization at the intersection of Nees and Sunnyside Avenues; and (3) signalization at the intersection of Nees and Fowler Avenues.	City of Clovis Planning	*Prior to Permits and During Construction*	
G.17-a2	The Project proponent and/or applicant shall improve ¾ of Teague Avenue from the western boundaries of TM6284 and Fowler Avenue per the City standards and the Dry Creek Preserve Master Plan circulation design.			
G.18 Tribal Cultural Resources				
G.18-b1	There is a possibility that subsurface cultural resources exist in the study area, as archaeological sites may be buried with no surface manifestation. If concentrations of prehistoric or historic-period materials are encouraged during ground disturbing activities, all work in the immediate vicinity shall halt until a qualified professional/archaeologist can evaluate the finds and make specific recommendations. Examples of prehistoric materials include obsidian and chert flake stone tools (e.g. projectile points, knives, scrapers) or toolmaking debitage, cultural	City of Clovis Planning	*Prior to Permits and During Construction*	

Proposed Mitigation	Summary of Measure	Monitoring Responsibility	Timing	Verification (Date and Initials)
	darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains, and stone milling equipment (e.g. mortars, pestles, handstones). Examples of historical materials include stone, concrete, or adobe footings and walls, filled wells or privies, and deposits of metal, grass, and/or ceramic refuse.			
G.18-b2	If human remains are discovered during construction or operational activities, further excavation or disturbance shall be prohibited pursuant to Section 7050.5 of the California Health and Safety Code. The specific protocol, guidelines, and channels of communication outlined by the Native American Heritage Commission, in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the Public Resources Code (Chapter 1492, Statutes of 1982, Senate Bill 297), and Senate Bill 447 (Chapter 44, Statutes of 1987), shall be followed. Section 7050.5(c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County coroner. All reports, correspondence, and determinations regarding the discovery of human remains on the project site shall be submitted to the Lead Agency.			

RESOLUTION 20-___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING A GENERAL PLAN AMENDMENT AMENDING THE LAND USE ELEMENT FOR APPROXIMATELY 34.3 ACRES LOCATED IN THE SOUTHWEST AREA OF TEAGUE AND N. FOWLER AVENUES AND APPROVING A MITIGATED NEGATIVE DECLARATION FOR GPA2019-006, PURSUANT TO CEQA GUIDELINES

WHEREAS, Woodside 06N, LP., 9 River Park Place, Suite 430, Fresno, CA 93720, has applied for a general plan amendment (GPA2019-006); and

WHEREAS, the applicant submitted an application for a general plan amendment (GPA2019-006) to amend the Clovis General Plan to change the land use designation from Rural Residential (1 lot per 2 acres) to Low Density Residential (2.1 to 4 DU/Ac), for approximately 34.3 acres of land located in the southwest area of Teague and N. Fowler Avenues, in the County of Fresno, California ("Project"); and

WHEREAS, the proposed general plan amendment GPA2019-006, was assessed under the provisions of the California Environmental Quality Act (CEQA) and the potential effects on the environment were considered by the City Council, together with comments received and public comments, and the entire public record was reviewed; and

WHEREAS, on April 9, 2020, the Planning Commission considered general plan amendment GPA2019-006; and

WHEREAS, the Planning Commission voted to recommend approval of GPA2019-006, to the City Council; and

WHEREAS, the Planning Commission's recommendations were forwarded to the City Council for consideration; and

WHEREAS, the City published a Notice of the City Council Public Hearing for May 11, 2020, to consider GPA2019-006, in the Fresno Business Journal and posted notice of the Public Hearing according to applicable law; and

WHEREAS, a public notice was sent out to area residents within 800 feet of said property boundaries and the entire Dry Creek Preserve area residents ten days prior to said hearing; and

WHEREAS, a duly noticed hearing was held on May 11, 2020; and

WHEREAS, on May 11, 2020, the City Council considered testimony and information received at the public hearing and the oral and written reports from City staff, as well as other documents contained in the record of proceedings relating ("Administrative Record") to general plan amendment GPA2019-006, which are maintained at the offices of the City of Clovis Department of Planning and Development Services; and

WHEREAS, the City Council considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determined the approval of a Mitigated Negative Declaration pursuant to CEQA guidelines; and

WHEREAS, the Council, has reviewed and considered the staff report and all written materials submitted in connection with the request and hearing and considering the testimony presented during the public hearing; and

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The proposed amendment is internally consistent with the goals, policies, and actions of the General Plan; and

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City; and

3. If applicable, the parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested/anticipated project.

4. There is a compelling reason for the amendment.

5. The City Council does approve a mitigated negative declaration for the project, pursuant to CEQA guidelines.

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the Clovis City Council does hereby approve general plan amendment GPA2019-006.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on May 11, 2020, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: May 11, 2020

_____ _____

Mayor City Clerk

ORDINANCE 20-___

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CLOVIS *AMENDING AND CHANGING* THE OFFICIAL ZONE MAP OF THE CITY OF CLOVIS IN ACCORDANCE WITH SECTION 9.08.020 AND 9.86.010 OF THE CLOVIS MUNICIPAL CODE TO RECLASSIFY LAND LOCATED IN THE SOUTHWEST AREA OF TEAGUE AND N. FOWLER AVENUES AND APPROVING A MITIGATED NEGATIVE DECLARATION FOR R2019-007, PURSUANT TO CEQA GUIDELINES

LEGAL DESCRIPTION:

See the attached **Attachment A**.

WHEREAS, Woodside 06N, LP., 9 River Park Place, Suite 430, Fresno, CA 93720, has applied for a Prezone (R2019-007); and

WHEREAS, this is a request to prezone approximately 50.80 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts for property located in the southwest area of Teague and N. Fowler Avenues, in the County of Fresno, California ("Project") and approval of a mitigated negative declaration for R2019-007; and

WHEREAS, the proposed Prezone was assessed under the provisions of the California Environmental Quality Act (CEQA) and the potential effects on the environment were considered by the City Council, together with comments received and public comments, and the entire public record was reviewed ("Administrative Record"); and

WHEREAS, the Planning Commission held a noticed public hearing on April 9, 2020, to consider the project approval, at which time interested persons were given opportunity to comment on the project; and

WHEREAS, the Planning Commission voted and recommended that the City Council approve Prezone R2019-007; and

WHEREAS, the Planning Commission's recommendations were forwarded to the City Council for consideration; and

WHEREAS, the City published a Notice of the City Council Public Hearing for May 11, 2020, to consider Prezone R2019-007, in the Fresno Business Journal and posted notice of the Public Hearing according to applicable law; and

WHEREAS, a public notice was sent out to area residents within 800 feet of said property boundaries and the entire Dry Creek Preserve area residents ten days prior to said hearing; and

WHEREAS, the City Council held a noticed public hearing on May 11, 2020, to consider the approval of Prezone R2019-007; and

WHEREAS, on May 11, 2020, the City Council considered testimony and information received at the public hearing and the oral and written reports from City staff, as well as other documents contained in the record of proceedings ("Administrative Record") relating to Prezone R2019-007, which are maintained at the offices of the City of Clovis Department of Planning and Development Services; and

WHEREAS, the City Council considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determined the approval of a Mitigated Negative Declaration pursuant to CEQA guidelines; and

WHEREAS, the Council, has reviewed and considered the staff report and all written materials submitted in connection with the request and hearing and considering the testimony presented during the public hearing; and

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

Section 1

1. The proposed amendment is consistent with the goals, policies, and actions of the General Plan; and

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or general welfare of the City.

3. The parcel is physically suitable (including absence of physical constraints, access, compatibility with adjoining land uses, and provision of utilities) for the requested zoning designations and anticipated land uses/projects. (§ 2, Ord. 14-13, eff. October 8, 2014)

4. The City Council considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determined the approval of a Mitigated Negative Declaration for the project pursuant to CEQA guidelines.

Section 2 The Official Map of the City is amended in accordance with Sections 9.8.020 and 9.86.010 of the Clovis Municipal Code by reclassification of certain land in the County of Fresno, State of California, to wit:

From County Classification RR to Clovis Classifications R-1 & RR for the area described in Attachment A.

Section 3 This Ordinance shall go into effect and be in full force from and after thirty (30) days after its final passage and adoption.

APPROVED: May 11, 2020

_____ _____

Mayor City Clerk

* * * * * * * * * *

The foregoing Ordinance was introduced and read at a regular meeting of the City Council held on May 11, 2020, and was adopted at a regular meeting of said Council held on May 18, 2020, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: May 18, 2020

_____

City Clerk

DRAFT
RESOLUTION 20-__

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING A VESTING TENTATIVE TRACT MAP FOR A 74-LOT SINGLE-FAMILY SUBDIVISION ON APPROXIMATELY 32.19 ACRES OF PROPERTY LOCATED IN THE SOUTHWEST AREA OF TEAGUE AND N. FOWLER AVENUES AND APPROVING A MITIGATED NEGATIVE DECLARATION PURSUANT TO CEQA GUIDELINES

WHEREAS, Woodside 06N, LP, 9 River Park Place, Suite 430, Fresno, CA 93720, has applied for a vesting tentative tract map (TM6284) for a 74-lot single-family subdivision on approximately 32.19 acres of property located in the southwest area of Teague and N. Fowler Avenues, in the County of Fresno ("Project"); and

WHEREAS, vesting tentative tract map TM6284, was filed on August 22, 2019, and was presented to the Clovis Planning Commission for approval in accordance with the Subdivision Map Act of the Government of the State of California and Title 9, Chapter 2, of the Municipal Code and the City of Clovis; and

WHEREAS, the Planning Commission has considered said map on April 9, 2020, approving said map; and

WHEREAS, a public notice was sent out to area residents within 800 feet of said property boundaries and the entire Dry Creek Preserve area residents twenty-one days prior to said Planning Commission hearing; and

WHEREAS, the City scheduled a noticed Public Hearing on the Project for May 11, 2020; and

WHEREAS, the City published notice of the Public Hearing in the Fresno Business Journal, mailed notice to area residents within 800 feet of said property boundaries and the entire Dry Creek Preserve area residents ten days prior to the Public Hearing, and otherwise posted notice of the Public Hearing according to applicable law; and

WHEREAS, a duly noticed hearing was held on May 11, 2020; and

WHEREAS, the City Council has given careful consideration to this map on May 11, 2020, and considered the CEQA analysis outlined in the staff report and elsewhere in the Administrative Record which determined the approval of a Mitigated Negative Declaration for the project, and

WHEREAS, this Council finds and determines that approval of said map should be conditioned on all conditions recommended by the City staff, as set forth in **Attachment 2** which is on file with the City Clerk's office.

NOW, THEREFORE, BASED UPON THE ENTIRE RECORD OF THE PROCEEDINGS, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

a. The proposed map, subdivision design, and improvements are consistent with the General Plan and any applicable specific plan;

b. The site is physically suitable for the type and proposed density of development;

c. The design of the subdivision and the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat;

d. The design of the subdivision or type of improvements is not likely to cause serious public health or safety problems;

e. The design of the subdivision or the type of improvements will not conflict with easements acquired by the public at large for access through or use of property within the proposed subdivision. This finding may also be made if the review authority finds that alternate easements for access or use will be provided, and that they will be substantially equivalent to ones previously acquired by the public. This finding shall apply only to easements of record, or to easements established by judgment of a court of competent jurisdiction, and no authority is hereby granted to the review authority to determine that the public at large has acquired easements of access through or use of property within the proposed subdivision;

f. The discharge of sewage from the proposed subdivision into the community sewer system will not result in violation of existing requirements prescribed by the California Regional Water Quality Control Board;

g. The design of the subdivision provides, to the extent feasible, passive or natural heating and cooling opportunities;

h. The proposed subdivision, its design, density, and type of development and improvements conform to the regulations of this Development Code and the regulations of any public agency having jurisdiction by law;

i. The proposed project has been reviewed in compliance with the provisions of the California Environmental Quality Act (CEQA) and to this end the City Council does approve a mitigated negative declaration for the project pursuant to CEQA guidelines;

j. Without the conditions of approval (Attachment 2 to this Resolution), the City Council could not make the findings necessary for approval of Vesting Tentative Tract Map TM6284; and

k. The basis for the findings is detailed in the May 11, 2020, staff report, which is hereby incorporated by reference, as well as the evidence and comments presented during the Public Hearing.

* * * * *

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on May 11, 2020, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: May 11, 2020

_____ _____

Mayor City Clerk

6. Consider items associated with approximately 50.80 acres of property located in the southwest area of Teague and N. Fowler Avenues. Multiple property owners; Woodside Homes of Fresno, LP., applicant; Yamabe & Horn Engineering, Inc., representative.

    a. Consider Approval, Res. 20-17, A request to approve an environmental finding of a Mitigated Negative Declaration for General Plan Amendment GPA2019-006, Prezone R2019-007, Prezone R2020-002, & Vesting Tentative Tract Map TM6284.

    b. Consider Approval, Res. 20-18, **GPA2019-006**, A request to amend the General Plan to re-designate approximately 34.3 acres from Rural Residential (1 lot per 2 acres) classification to Low Density Residential (2.1 to 4 DU/Ac) classification.

    c. Consider Approval, Res. 20-19, **R2019-007**, A request to approve a prezone of approximately 36.80 acres from the County R-R (Rural Residential) Zone District to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

    d. Consider Approval, Res. 20-20, **TM6284**, A request to approve a vesting tentative tract map for a 74-lot single-family subdivision on 32.19 acres of land.

Associate Planner George Gonzalez presented the staff report and addressed several points that had been asserted in written comments from surrounding property owners and interested parties.

Commissioner Bedsted, referencing one of the opposition letters, inquired as to the maximum allowable number of units possible in a future development on the properties proposed to be prezoned from County Rural Residential to Clovis Rural Residential. Associate Planner Gonzalez provided the maximum number under current applicable standards, informing that any development on those nine properties above the current Rural Residential designation will require both a general plan amendment and accompanying CEQA analysis.

Commissioner Bedsted stated that he chose to address this in order to clarify for the record that as long as the development was greater than ten acres, it would fall under the 2.3 unit per acre limit imposed by the Dry Creek Preserve Master Plan.

Commissioner Hinkle referenced a letter the Commission had received earlier in the day, from Amardeep Aulakh in support of the project, seeking and receiving clarification that the current access easement road used to access his property from Fowler Avenue would not be used as part of the proposed project.

Commissioner Hinkle sought and received confirmation that the fire apparatus access road would be closed off to regular traffic while still being accessible to the fire department.

Commissioner Hinkle sought information regarding the potential widening of Sunnyside Avenue in connection with this project. Associate Planner Gonzalez provided details.

At this point, the Chair opened the floor to the applicant.

Matt Smith, Land Acquisition Manager of Woodside Homes, provided background on the project and offered to answer questions.

At this point, the Chair opened the floor to those in favor or opposition.

Correspondence from Dale Mitchell was placed into the record, as he wished for an opportunity to speak in person.

Correspondence from Amardeep Aulakh in support of the project was read and then placed into the record.

Correspondence from Rick Warren in support of the project was read and then placed into the record.

Correspondence from Charles Merrill in support of the project was read and then placed into the record.

Correspondence from Dean Uhrig in opposition of the project was read and then placed into the record.

Correspondence from Katherine Ross in opposition of the project was read and then placed into the record.

Correspondence from Phillip Ross in opposition of the project was read and then placed into the record.

Correspondence from Kathleen Powell in opposition of the project was read and then placed into the record.

Correspondence from Corey File was read and then placed into the record.

Correspondence from Troy McKinney in support of the project was read and then placed into the record.

Correspondence from Charles Keller was read and then placed into the record.

Correspondence from Norman Morrison was placed into the record, as it was received after 3:00 p.m.

Dale Mitchell informed that he had been part of the formation of the Dry Creek Preserve Master Plan and that, despite the numerous neighborhood committee meetings, they were unable to

get their view for their neighborhood memorialized into any kind of plan previously. After Woodside Homes came into the process, they were at first confrontational until the City Council instructed them to work and compromise with the neighborhood and create a master plan. The two most important features of the DCP Master Plan are the 2.3 unit per acre limitation on any development and the requirement for projects to be a minimum of ten acres in size to be developed beyond the rural residential standards, providing the reasoning behind these two features. He concluded by expressing that the Woodside development is entirely consistent with the DCP Master Plan.

Correspondence from Marcus DiBuduo was read and then placed into the record, as his phone connection was lost.

City Attorney David Wolfe expressed that, though Mr. Morrison's letter arrived after 3:00 p.m., since this is a noticed public hearing, it should be read into the record as the other items of correspondence were, as long as they arrived before the close of the public hearing.

Correspondence from Norman Morrison was read and then placed into the record.

City Attorney Wolfe clarified that, in the case of verbal participation, there is a little flexibility for the Chair to allow someone to finish a comment going beyond the three-minute limit. This could be an option for Mr. Mitchell, whose final comment was interrupted by reaching the three-minute limit.

Chair Hatcher allowed Deputy City Planner Ramirez to offer Mr. Mitchell the chance to finish his interrupted comment.

Mr. Mitchell stated that the concerns raised in the opposing correspondence are the same issues that were addressed during the many meetings that took place during the formation of the DCP Master Plan, and expressed that at the time of the master plan's approval, there had been a strong consensus across the Dry Creek Preserve. However, he is troubled that a project that is consistent with and will implement that plan is facing objections, and asks the Commission to uphold the approved development standards.

Chair Hatcher inquired as to whether Mr. DiBuduo had been able to call back in. Deputy City Planner Ramirez responded that staff apparently hadn't been able to reach him.

At this point, the Chair closed the public portion.

Chair Hatcher sought clarification, for the record, regarding a comment from one of the letters about new mitigation measures in the revised traffic study. Associate Planner Gonzalez confirmed that, as Chair Hatcher had understood, there were no new mitigation measures in the revised traffic study and that he had informed Mr. Corey File of such.

Chair Hatcher sought clarification regarding several comments from the correspondence for the sake of the record. The first item was a comment in one of the letters regarding wear-and-tear on the County roads. Chair Hatcher sought and received confirmation that the City will not have

any control over updating or fixing these roads until they are annexed. Associate Planner Gonzalez also informed that there could potentially be agreements between the two entities regarding maintenance of certain roads; however, that has yet to be determined in regards to the subject streets.

Chair Hatcher next inquired as to how long completion of the annexation is expected to take. Associate Planner Gonzalez responded that, provided the project moves forward and is approved, then the annexation is likely to be complete by the end of the year, before the project is developed and generate traffic on those roads.

Chair Hatchers then sought clarification regarding a comment mentioning that the Master Plan had standards of development of 2.3 units per acre that would be interspersed with less dense development. Chair Hatcher recalled no such standard from the Master Plan, and wondered if it was merely the writer's desire. Associate Planner Gonzalez confirmed that there is no such standard, providing a detailed explanation for what the standard actually is.

Chair Hatcher finally referenced the letter commenting on the emergency vehicle access, seeking and receiving confirmation that Fresno County not approving it as a road is moot at this point, as it is not currently planned to be one and there are no plans for annexation of it at this time.

At this point, the Chair reopened the floor to the applicant.

Mr. Smith expressed his gratitude to staff for keeping the doors of the City open and providing the public hearing during these strange times, as Woodside is under commitments to the four project site landowners on when escrow must be closed by.

Commissioner Bedsted expressed his gratitude to staff for the presentation and to members of the public for their feedback and input. There had been a great deal of effort and compromise that went into the Dry Creek Preserve Master Plan and this project, he believes, conforms to that Master Plan. Therefore, he is in support of it.

Commissioner Cunningham stated that he echoes Commissioner Bedsted's comments and is ready to make a motion.

Chair Hatcher expressed her agreement that this project is consistent with the Master Plan, which took a lot of time and effort to put together. She expressed her appreciation for how many members of the public in the area came forward with comments in support and opposition, in light of everything being closed due to Covid19. She sees this project as consistent and will vote in favor.

At this point, a motion was made by Commissioner Cunningham and seconded by Chair Hatcher to approve a finding of a Mitigated Negative Declaration for GPA2019-006, R2019-007, R2020-002, and TM6284. The motion was approved by a vote of 4-0-1.

At this point, a motion was made by Commissioner Cunningham and seconded by Chair Hatcher to approve GPA2019-006. The motion was approved by a vote of 4-0-1.

At this point, a motion was made by Commissioner Cunningham and seconded by Chair Hatcher to approve R2019-007. The motion was approved by a vote of 4-0-1.

At this point, a motion was made by Commissioner Cunningham and seconded by Chair Hatcher to approve TM6284 with the modified conditions of approval. The motion was approved by a vote of 4-0-1.

Woodside Homes Tract 6284
General Plan Amendment Justification
August 19, 2019

Applicant: **Woodside 06N, LP (Woodside Homes)**
9 River Park Place East, Suite 430
Fresno, CA 93720

Owners: **Amardeep Aulakh**
Charles and Sheree Merrill
Rick and Susan Warren
Troy and Debra McKenney

Area: **37.27 gross +/- acres**

Request:

Woodside Homes is requesting the re-designation of approximately 37.27 gross acres near the South-West corner of Fowler and Teague Avenues from Rural Residential (1 lot per 2 acres) to Low Residential (2.1 to 4.0 lots per acre) which is consistent with the density of development allowed under the Dry Creek Preserve Master Plan (the "Master Plan"), which was approved by the Clovis City Council in June 2018. The proposed project will develop at a density of 2.2 units per acre, and the lots will range in size from approximately 11,375 Sq. Ft. to 38,163 Sq. Ft., as detailed in the Tentative Tract No. 6284 prepared by Yamabe & Horn.

There are a number of City of Clovis residents, who enjoy the Clovis way of life, and who would like to move up into a larger home on a larger lot and stay within the City to enjoy City services and the quality Clovis Unified schools. However, with most new homebuilding in Clovis moving towards greater density, there are few options available. In addition, while many of these people could afford a home in the $525,000 - $900,000 range, they are not able or willing to pay the additional amount to purchase a custom home or a large home on a 2acre rural residential lot. Even in those cases where rural residential homes are more affordable, many homebuyers prefer City services to managing septic, well, and propane. Woodside Homes proposes to offer large single story and two-story homes ranging from approximately 2,900 to 5,500 square feet on lots that are 80 and 100 feet wide (10,000 sq. ft. minimum and 18,000 sq. ft. minimum respectively) creating a unique offering in the City of Clovis.

The proposed General Plan Amendment for this area is justified for the following reasons:

1. This General Plan Amendment is consistent with and contemplated in the Dry Creek Preserve Master Plan, which was approved by the Clovis City Council in June 2018. The Master Plan details the compromises made between large and small landowners in the area and states that "... larger properties will be able to reasonably develop, subject to General Plan Amendment applications..." (Page 5 of the Master Plan).
2. The proposed project and General Plan Amendment comply with the standards listed in the Master Plan, including the minimum size of development (10.0 net acres), and maximum allowable density (2.3 units/acre).
3. The General Plan Amendment, proposed project, and associated annexation will not cause nearby owners of rural residential properties to lose their rural residential way of life, as an annexation agreement between the neighborhood and City of Clovis was finalized and then memorialized at the time of the Master Plan approval.
4. The proposed increase in density to Low Density Residential is consistent with the stated general plan goal of improving service delivery efficiency. Many land studies including the ones used for the new City development fees demonstrate that slight increases in density lead to more efficient delivery of City services. As an example, with the current drought, water is at the forefront of many discussions and it is very costly for the City of Clovis to provide and maintain water to anything less than 2.1 lots to the acre, a fact encapsulated in the City's current and proposed fee structures. The proposed project seeks to provide low density and larger homes to be compatible with the neighborhood without making delivery of City services inefficient.
5. As mentioned above, the proposed development provides lot sizes and housing types not readily available in other parts of Clovis thereby achieving the New Housing Goal of the Fresno Multi-Jurisdictional Housing Element recently adopted in April 2016 to "facilitate and encourage the provision of a range of housing types to meet the diverse needs of residents." It also meets the Clovis General Plan Land Use Goal of 'a city with housing, employment, and lifestyle opportunities for all ages and incomes of residents." While we don't normally think of above average income housing as a place of need, the movement towards density over the years has led to smaller lot sizes and fewer options for higher income families. In addition, by providing lot widths of 80 feet and 100 feet which are not commonly used in Clovis, the project will be able to offer unique house plans and designs which will address the needs of Clovis families and residents that are currently being ignored.

Consistent with the Clovis General Plan Land Use Element Goals

Goal 5: A city with housing, employment, and lifestyle opportunities for all ages and incomes of residents

By providing 10,000 and 18,000 minimum square foot lots with lot widths of 80' and 100' respectively, the proposed project offers lot sizes that are relatively unique for the City of Clovis. Our initial research has shown many Clovis families want more home and yard than they

currently have but they want to stay within the City of Clovis so that they can enjoy City services and Clovis Unified Schools. By offering two different lot sizes that are not easily found in Clovis and by targeting a price point of $525,000 to $900,000, the project is targeting specific stages of life and incomes that are not being met by other parts of the new home market in Clovis.

Policy 5.1 Housing variety in developments. *The Clovis General Plan has been planned to provide a variety of housing product types suitable to each stage of a person's life. Each development should contribute to a diversity of housing sizes and types within the standards appropriate to the land use designation. This policy does not apply to projects smaller than five acres.*

The proposed project offers two minimum lot sizes. While they are both larger than most of the new home lots in Clovis, they will target different income brackets and provide two different sets of homes and home designs to help meet this policy. In addition, Woodside has historically provided floorplans with numerous structural options to allow buyers to customize for their lifestyle and stage of life.

Policy 5.2 Ownership and rental. *Encourage a mixture of both ownership and rental options to meet varied preferences and income affordability needs.*

While the proposed project addresses a void in the new home market, it is at a price point that will not typically lead to renters. The only way to attract renters would be to add density and lower the price point which would not be compatible with the surrounding neighborhood.

Policy 5.3 Innovative housing. *Encourage innovative housing product types, including multigenerational, cooperative, and variations on live-work housing.*

By offering lot sizes not typically found in the City of Clovis, the proposed project will also offer housing product types that are not easily found elsewhere in Clovis. For example, the proposed project will allow the construction of large single story homes that still have a large usable backyard. With the movement to density, we continually hear people wish you could still buy wider single story homes with some room around them. For this project, a 3,300 square foot single story home with a 3 bay garage could fit on most of the proposed lots and still have a nice backyard with a swimming pool. In addition, Woodside Homes currently offers homes with numerous structural options to allow buyers to customize the home to better meet their lifestyle needs.

Policy 5.5 Jobs for residents. *Encourage development that provides job opportunities in industries and occupations currently underserved in Clovis.*

By addressing an underserved but higher income market, the proposed project will encourage a number of high income families from multiple industries to move to Clovis or to remain in Clovis rather than more to the County or other cities to get more home and yard.

Policy 5.6 Workforce housing. *Encourage the development of workforce housing that serves the needs of those working in Clovis.*

The movement in recent years towards greater density has left a void at the upper-end of the market. There are fewer and fewer opportunities for families who want more than a typical home on a typical lot in a typical subdivision in Clovis. Many of them live in homes that worked when their children were younger but now they need more house and more yard. Rather than have them leave for the County or other cities, this project provides a unique offering which helps to keep Clovis workers in Clovis and may also serve to attract workers from neighboring cities as well.

Policy 6.1 Amendment criteria: *The City Council may approve amendments to the General Plan when the City Council is satisfied that the following conditions are met:*

A. The proposed change is and will be fiscally neutral or positive.

By increasing the density, the proposed project is more efficient for the delivery of services. As an example, water is more cost-effective for the City to provide when the density is above 2.0 units to the acre. The current designation of 0.5 units to the acre would be more costly for the City to provide and maintain services. In addition, the higher density will also provide a higher property tax base for the City. The proposed change will be fiscally positive for the City of Clovis.

B. The proposed change can be adequately served by public facilities and would not negatively impact service on existing development or the ability to service future development.

There is currently planned capacity to service up to 2.5 units to the acre for the area where the project is located. This was built into the existing projections for this area and no additional change is required by granting the change in general plan designation requested for this project. By increasing the density, the project makes the provision of services more efficient and cost effective than the current designation.

C. The proposed change is consistent with the Urban Village Neighborhood Concept when within an Urban Center.

Not applicable … the proposed project is not located in an Urban Center.

D. General Plan amendments proposing a change from industrial, mixed-use business campus, or office (employment generating) land use designations to non-employment-generating land use designation shall be accompanied by an analysis of the potential impacts on the City's current and long-term jobs-housing ratio, as well as an evaluation on the change or loss in the types of jobs.

Not applicable … the proposed project does not fall within any of these categories.

For the reasons above, Woodside Homes respectfully requests that the General Plan be amended for this area from Rural Residential to Low Density Residential.

Fresno Metropolitan Flood Control District

Capturing Stormwater since 1956

File 210.434
210.45 "6284"
310. "BT"
400.11

October 1, 2019

Mr. George Gonzalez, MPA, Associate Planner
City of Clovis
Department of Planning & Development Services
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez,

Rezone Application No. R2019-007
General Plan Amendment GPA 2019-006
Drainage Area "BT"

The proposed rezone and general plan amendment lie within the District's Drainage Area "BT". Based on information submitted at this time, the District's system can accommodate the proposed rezone. The existing Master Plan system has been designed for runoff from a Medium Density Residential land use at this location. Lot coverage must be provided to the District prior to submittal of improvement plans for this project. Should the density of the project be commensurate with a density higher than the system design, mitigation may be required.

Please contact us if you need further information at (559) 456-3292.

Very truly yours,

Michael Maxwell
Engineering Technician III

MM/lrl

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5469 E. Olive Avenue • Fresno. CA 93727 • (559) 456-3292 • FAX (559) 456-3194

ATTACHMENT 10

DEPARTMENT OF TRANSPORTATION
DISTRICT 6
1352 WEST OLIVE AVENUE
P.O. BOX 12616
FRESNO, CA 93778-2616
PHONE (559) 488-7307
FAX (559) 488-4088
TTY 711
www.dot.ca.gov

AGENDA ITEM NO. 4.

Making Conservation a California Way of Life.

September 16, 2019

FRE-168-8.045
GPA2019-006, RO301, R2019-007, TM6284
Woodside Subdivision

George Gonzalez
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mx. Gonzalez:

Caltrans has completed its review of the proposal to prezone and reorganize approximately 53.4 acres of land into the City of Clovis for development into a 74-lot single-family home subdivision. The project will be sited at the southwest quadrant of the intersection of Teague Avenue and Fowler Avenue in Clovis. Consistent with Caltrans' mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability, the following comments are offered:

Caltrans anticipates the westbound State Route (SR) 168 onramp at Fowler Avenue will be impacted by southbound traffic. Caltrans proposes the addition of a lane, widening the ramp to accommodate traffic growth. At this time, estimated costs per vehicle trip have not been determined. Therefore, Caltrans recommends the city account for the cost of this improvement when adjusting their impact fee schedule.

If there are questions regarding these comments, please contact me at (559) 488-7307 or email Jamaica.Gentry@dot.ca.gov .

Sincerely,

JAMAICA GENTRY
Associate Transportation Planner
Transportation Planning - North

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

September 17, 2019

George Gonzalez
City of Clovis
1033 Fifth Street
Clovis, California 93612

SUBJECT: Teague Fowler Southwest Reorganization

Dear Mr. Gonzalez:

The County of Fresno appreciates the opportunity to review and comment on the subject Teague-Fowler SW RO301, GPA2019-006, R2019-007 and TM6284. Fresno County requests that the following items be addressed in the Conditions of Approval and CEQA review:

Environmental Health Division:

Construction permits for development should be subject to assurance of sewer capacity of the Regional Wastewater Treatment Facility. Concurrence should be obtained from the California Regional Water Quality Control Board (RWQCB). For more information, contact staff at (559) 445-5116.

Construction permits for the development should be subject to assurance that the City of Clovis community water system has the capacity and quality to serve this project. Concurrence should be obtained from the State Water Resources Control Board, Division of Drinking Water-Southern Branch. For more information call (559) 447-3300.

The proposed demolition/construction project has the potential to expose nearby residents and tenants to elevated noise levels. Consideration should be given to your City's municipal code.

As a measure to protect ground water, all water wells and/or septic systems that exist or have been abandoned within the project area should be properly destroyed by an appropriately licensed contractor.

Prior to destruction of agricultural wells, a sample of the upper most fluid in the water well column should be sampled for lubricating oil. The presence of oil staining around the water well may indicate the use of lubricating oil to maintain the well pump. Should lubricating oil be found in the well, the oil should be removed from the well prior to placement of fill material for destruction. The "oily water" removed from the well must be handled in accordance with federal, state and local government requirements.

Should any underground storage tank(s) be found during the project, the applicant shall apply for and secure an Underground Storage Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division. Contact the Certified Unified Program Agency at (559) 600-3271 for more information.

The following comments pertain to the demolition of existing structures: Should the structures have an active rodent or insect infestation, the infestation should be abated prior to demolition of the structures in order to prevent the spread of vectors to adjacent properties. In the process of demolishing the existing structures, the contractor may encounter asbestos containing construction materials and materials coated with lead based paints. If asbestos containing materials are encountered, contact the San Joaquin Valley Air Pollution Control District at (559) 230-6000 for more information.

If the structures were constructed prior to 1979 or if lead-based paint is suspected to have been used in these structures, then prior to demolition and/or remodel work the contractor should contact the following agencies for current regulations and requirements:

California Department of Public Health, Childhood Lead Poisoning Prevention Branch, at (510) 620-5600.

United States Environmental Protection Agency, Region 9, at (415) 947-8000.

State of California, Industrial Relations Department, Division of Occupational Safety and Health, Consultation Service (CAL-OSHA) at (559) 454-5302.

Any construction materials deemed hazardous as identified in the demolition process must be characterized and disposed of in accordance with current federal, state, and local requirements.

Land Use/Planning:

Annexation of the subject 53.4-acre territory to the City requires a Notice of Intent (NOI) to be submitted to the County 30 days prior to the submission of the annexation application to the Fresno Local Agency Formation commission (LAFCO) for a determination of consistency of the proposed annexation with the Standards of Annexation contained in the Memorandum of Understanding between the City of Clovis and the County of Fresno. The NOI must include the Resolution of Annexation, and Pre-Zoning of the territory approved by the City Council, and approval of the entitlements by the City (City Council or Planning Commission), and the environmental assessment conducted by the city for the project per the California Environmental Quality Act (CEQA), if applicable to the project.

Transportation:

County staff is currently working with the City of Clovis and project applicant to assist in the preparation of a Traffic Impact Study (TIS) for the proposed project. County staff will comment on potential impacts to the County's road maintained system after it has been given the opportunity to review the TIS. However, in the interim, the County does reiterate the previous comments provided to the City associated with City applications GPA2016-06, Prezone R2016-07, and Vesting Tentative Tract Map TM6154 (see attached). In addition, the County requests that Teague Avenue be improved from the project limits west to the Teague/Sunnyside Avenue intersection consistent with prior developments and the this segment of right-of-way, including the Teague/Sunnyside Avenue intersection, be included in the annexation request. Further, the County requests that the City of Clovis be responsible for maintenance of the remaining segment of Fowler Avenue south of the proposed annexation boundary to Nees Avenue.

AGENDA ITEM NO. 4.

If you have any questions, you may e-mail me at thdavis@fresnocountyca.gov or contact me at (559) 600-9669.

Sincerely,

Ethan Davis, Planner
Development Services and Capital Projects Division

ED:
G:\4360Devs&Pln\PROJSEC\PROJDOCS\Environmental\OAR\City of Clovis\Teague-Fowler SW RO301 GPA2019-006 R2019-007 and TM6284\OAR S\ Teague Fowler Comment Letter.docx

cc. Steve White, Director
Bernard Jimenez, Assistant Director
William M. Kettler, Development Services and Capital Projects Division
Chris Motta, Development Services and Capital Projects Division

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
STEVEN E. WHITE, DIRECTOR

August 22, 2016

Bryan Araki, City Planner
Planning and Development Services Department
1033 Fifth Street
Clovis, CA 93612

VIA EMAIL

Subject: Teague Assemblage: General Plan Amendment GPA2016-06, Prezone R2016-07, Vesting Tentative Tract Map TM6154

Dear Mr. Araki,

The County appreciates the opportunity to review and comment on the subject applications. The County is aware that the Clovis Planning Commission considered the subject applications on July 26, 2016, without benefit of the County's comments. As you are aware, the California Environmental Quality Act (CEQA) requires a Lead Agency (City of Clovis) to consult with affected and Responsible Agencies prior to a decision made on a project. As a result, the County requests that Clovis consider, respond to, and amend, as necessary, its CEQA document to address the County's comments contained in this letter. The County further requests that this occur before the next public hearing is held to consider the above applications. The following comments and request for information are based upon the County's review of the subject applications.

Transportation/Circulation:

Please provide a complete Project Description including any phasing for the proposed development. Please also provide the project's trip generation and trip distribution breakdown to the County threshold of 100 or more daily trips along a road segment (both directions combined) or 10 additional peak hour trips at an intersection. Once County staff has this information, a determination can be made regarding which County road segments and intersections need to be studied. Upon review of the current trip distribution in the existing Traffic Impact Study (TIS), the County would, at minimum, request that the Fowler and Teague Avenue segments and the Teague/Shepherd Avenue and Teague/Armstrong Avenue intersections be analyzed. Please note that this is a preliminary determination that may be modified in the future based on our request for additional information.

Traffic Impact Study Comments

- On Page 1, 14, 16, 17 – Page 1 makes reference to the intersection of Fowler and Shepherd Avenues, however, page 2, under Impact NT-1, reference is made to Fowler and Teague Avenues, and both references are noted as operating at Level of Service (LOS) F. Further, the report states that 'The intersection of Fowler Avenue and Teague Avenue (Node 2) drops to an LOS E during the PM Peak hour'. Other portions of the report indicate that the intersection of Fowler and Teague Avenues remains as a two-way stop sign. If the intersection of Fowler and Teague Avenues operate at LOS F/E then appropriate mitigations needs to be required. Also, please confirm that the reference to Fowler and Teague Avenues are correct.

- On Page 1, the TIS states 'The Project will contribute its fair share of mitigation measures identified in the Near Term and Cumulative Year 2035 plus Project scenarios with payment of the applicable City of Clovis Street Fee that includes the outside travel lane, center travel lane, traffic signal, bridges and quadrant intersections. Any reimbursable cost of mitigation improvements constructed by the Project that are qualified under the City's fee programs shall be credited against the total fee.

  This is acceptable to the County as long as the County does not need to participate financially in upgrading the intersection of Fowler and Shepard. It is recommended that that the full width of right-of-way of Fowler Avenue along the eastern boundary of the proposed subdivision be annexed as part of the proposed project. If this does not occur, then Fowler Avenue, which is designated as an Arterial in the Fresno County General Plan, should be designed and constructed accordingly. Also, Fowler Avenue is designated as a Class II Bike lane in the Fresno County Regional Bicycle and Recreational Trails Master Plan and should be included in the widening of Fowler Avenue.

- On Page 1, the final configuration of the intersections analyzed are as follows: Fowler & Shepherd – Signalized; Fowler & Teague – Two-Way Stop; Fowler & Nees – Signalized. This is acceptable to County as long as lane configurations are acceptable to the City of Clovis and see next bullet for Page 5 below.

- On Page 5 – Table 2 Summary of Queue Lengths for all Scenarios, for Fowler & Teague Intersection in year 2035 Cumulative + Project shows Storage Length of NBL of 150' and SBL of 250'. On Page 16, it also indicates a two southbound through lanes. Is this the ultimate configuration of the intersection per City of Clovis standards? Will these improvements be constructed by the project? Depending on the funding, all improvements shown in Figure 20 may not be in place by year 2035. The report also states that 'all existing queue lengths do not exceed existing available storage.' Please confirm that this statement is applicable to this intersection?

- On Page 12, ITE code of 220 – for Apartments is used in Table 6 but Single Family Home is listed in the description and the trip generation utilized in the TIS is consistent with Single Family Homes. Please utilize the correct ITE Code.

- On Page 13, the TIS indicates that review was performed for 2 points on ingress and egress on Fowler Avenue and no deficiencies were noted. In Summary Table 2, provide the information for the analysis performed for left turn warrant analysis and/or right lane acceleration rate at these access points.

- On Page 15, Intersection Lane Configuration and Level of Service Section. The basis of analysis is unclear; was the existing layout configuration of an intersection used for 2035 analysis or was the future 'planned' configurations used? The 2035 analysis should be based on existing layout of an intersection (except Shepherd and Fowler) since there is no assurance that the funds will be available for any future improvements. The report repeatedly states that 'all existing queue lengths do not exceed existing available storage.' Inconsistencies within the report.

- Segment Analysis: No analysis was included in the TIS to determine the lane configuration of Fowler Avenue between Shepherd and/or Teague Avenue. Does the City of Clovis have ultimate lane configuration for Fowler and Teague Avenue and how will this development contribute toward it?

There appears to be some inconsistency in the TIS about whether or not the Fowler/Teague Avenue intersection is ultimately a two-way stop or four-way stop, although the mitigation only includes the developer's payment of the City's Street Impact Fees. It also appears to reference the Fowler/Teague Avenue intersection when Fowler/Shepherd Avenue is intended.

The staff report for the proposed subdivision requires the developer to widen Fowler Avenue and install curb and gutter along their Fowler Avenue frontage, so the width will be greater than the current two-lane road configuration. The TIS is unclear regarding when the road will be improved to four lanes.

The TIS does not address the two points of access to the subdivision off Fowler Avenue. Fowler Avenue is a divided road south of Nees Avenue and north of the Enterprise Trail. The conditions of approval in the staff report indicate that the developer is to increase the westerly half of the right-of-way from 30 feet to 60 feet and place curb and gutter and median islands along Fowler Avenue. However, there are two lots between the two points of access off Fowler that are not part of the subdivision, and County staff was unable to locate a reference to right-of-way acquisition across these two parcels. The engineer should provide information to show whether or not there will be two-way access to Cole Avenue located on the east side of Fowler Avenue north of Teague.

In order to completely evaluate the proposed project, the County requests that the following information be provided as follows:

1. Cross section showing improvements to be constructed along Fowler Avenue and Teague Avenue
2. Limits of road improvement work along Fowler and Teague Avenues, including proposed work across the frontages of parcels not included in the subdivision, which may or may not be included in the proposed annexation
3. Information to show whether or not there will be two-way access to Cole Avenue located on the east side of Fowler Avenue north of Teague
4. Extent of proposed transition paving, if any, beyond the limits of the subdivision along Teague and Fowler Avenues
5. A corrected Traffic Impact Study that would correct "mistaken" references to intersections proposed to be signalized

The County request that a formal TIS scoping meeting be scheduled and that the County be given an opportunity to participate and provide input into the revised TIS scope. In addition, the TIS prepared by Yamabe and Horn appears to post-date the published Mitigated Negative Declaration. Was there additional analysis performed that was not considered in the CEQA review.

AGENDA ITEM NO. 4.

CLOVIS UNIFIED SCHOOL DISTRICT

September 9, 2019

George Gonzalez
Planning and Development Services Dept.
1033 Fifth St.
Clovis, CA 93612

SUBJECT: TM 6284, GPA2019-006, R2019-007
South side of Teague Avenue between Sunnyside and Fowler Avenues
APN 563-021-03,04,37,69

Dear Mr. Gonzalez:

The purpose of this letter is to provide school district information relative to the above-referenced development and to comply with Business and Professions Code section 11010, subdivision (b)(11)(A) regarding the provision of school-related information to the developer/owner and the State Department of Real Estate.

In regards to this project with GPA2019-006 the district has concern regarding the re-designation of the approximately 34 acres of land located on the south side of Teague Avenue, between Sunnyside and Fowler Avenues. Currently this project site has a designation of Rual Residential (Min 2 AC/DU), the district does not feel confident in the ability to accommodate students associated with a re-designation to Low Density Residential (2.1 to 4.0 DU/AC). The district would like to bring this concern to the attention of the planning department and owner/sub divider.

1. Elementary School Information:

   (a) The subject land is presently within the attendance area of the elementary school (grades K-6) listed below:

   School Name: *Century Elementary*
   Address: *965 N Sunnyside Ave Clovis CA 93611-2061*
   Telephone: (559) 327-8400
   Capacity: *800*
   Enrollment: 624 (CBEDS enrollment *2018-19* school year)

   (b) Because of projected growth in the District and the District's plans for construction of new school facilities, it is possible that (1) adjustment of school attendance areas could occur in the future such that students residing in the project area may be required to attend an elementary school other than the school listed above, and (2) students residing in the project area may attend more than one elementary school within the District during their elementary school years.

1450 Herndon Avenue · Clovis, CA 93611-0599
559-327-9000 · www.cusd.com

2. Intermediate School Information:

School Name:	*Alta Sierra Intermediate*
Address:	*380 W Teague Ave Clovis CA 93619-8332*
Telephone:	(559) 327-3500
Capacity:	*1500*
Enrollment:	1376 (CBEDS enrollment *2018-19* school year)

3. High School Information:

School Name:	*Buchanan High School*
Address:	*1560 N Minnewawa Ave Clovis CA 93619-7600*
Telephone:	(559) 327-3000
Capacity:	*3000*
Enrollment:	2726 (CBEDS enrollment *2018-19* school year)

4. Bus transportation is currently provided for grades K-6 students residing further than one mile from school and for grades 7-12 students residing further than two and one-half miles from school. Transportation will be available for students attending the above-identified elementary, intermediate and high schools in accordance with District standards in effect at the time of enrollment.

5. The District currently levies a school facilities fee of $5.15 per square foot (as of July 1, 2019) for residential development. The fee is adjusted periodically in accordance with law. New development on the subject property will be subject to the fee in place at the time fee certificates are obtained.

The District hereby requests that the information in this letter be provided by the owner/subdivider to all prospective purchasers of property within the project.

Thank you for the opportunity to comment on the project. Please contact me if you have any questions regarding this letter.

Sincerely,

Michael Johnston
Associate Superintendent
Administrative Services

August 30, 2019

LU0020186
2604

George Gonzalez, Associate Planner
City of Clovis
Planning and Development Services Department
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez:

PROJECT NUMBER: **RO301, GPA2019-006, R2019-007, TM6284**

RO301, A resolution of Application for the Annexation of the Territory known as the Teague-Fowler Southwest Reorganization. **GPA2019-006**, A request to amend the General Plan to redesignate approximately 34 acres of land from County Rural Residential (RR) to Low Density Residential (R-1). **R2019-007**, A request to approve a prezone of approximately 53.4 acres of land from the County R-R Zone District to the Clovis R-R and R-1 Zone Districts. **TM6284**, A request to approve a vesting tentative tract map for a 74-lot single-family residential development for land located on the south side of Teague Avenue between Sunnyside and Fowler Avenues.

APN: 559-021-03, -04, -37 & -69 ZONING: County R-R to City of Clovis R-1
ADDRESS: South Side of Teague Avenue between Sunnyside and Fowler Avenues

Recommended Conditions of Approval:

- Construction permits for development should be subject to assurance of sewer capacity of the Regional Wastewater Treatment Facility. Concurrence should be obtained from the California Regional Water Quality Control Board (RWQCB). For more information, contact staff at (559) 445-5116.

- Construction permits for the development should be subject to assurance that the City of Clovis community water system has the capacity and quality to serve this project. Concurrence should be obtained from the State Water Resources Control Board, Division of Drinking Water-Southern Branch. For more information call (559) 447-3300.

- The proposed demolition/construction project has the potential to expose nearby residents and tenants to elevated noise levels. Consideration should be given to your City's municipal code.

- As a measure to protect ground water, all water wells and/or septic systems that exist or have been abandoned within the project area should be properly destroyed by an appropriately licensed contractor.

  Prior to destruction of agricultural wells, a sample of the upper most fluid in the water well column should be sampled for lubricating oil. The presence of oil staining around the water well may indicate the use of lubricating oil to maintain the well pump. Should lubricating oil be found in the well, the oil should be removed from

the well prior to placement of fill material for destruction. The "oily water" removed from the well must be handled in accordance with federal, state and local government requirements.

- Should any underground storage tank(s) be found during the project, the applicant shall apply for and secure an Underground Storage Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division. Contact the Certified Unified Program Agency at (559) 600-3271 for more information.

The following comments pertain to the demolition of existing structures:

- Should the structures have an active rodent or insect infestation, the infestation should be abated prior to demolition of the structures in order to prevent the spread of vectors to adjacent properties.

- In the process of demolishing the existing structures, the contractor may encounter asbestos containing construction materials and materials coated with lead based paints.

- If asbestos containing materials are encountered, contact the San Joaquin Valley Air Pollution Control District at (559) 230-6000 for more information.

- If the structures were constructed prior to 1979 or if lead-based paint is suspected to have been used in these structures, then prior to demolition and/or remodel work the contractor should contact the following agencies for current regulations and requirements:

  - California Department of Public Health, Childhood Lead Poisoning Prevention Branch, at (510) 620-5600.

  - United States Environmental Protection Agency, Region 9, at (415) 947-8000.

  - State of California, Industrial Relations Department, Division of Occupational Safety and Health, Consultation Service (CAL-OSHA) at (559) 454-5302.

- Any construction materials deemed hazardous as identified in the demolition process must be characterized and disposed of in accordance with current federal, state, and local requirements.

REVIEWED BY:

Kevin Tsuda

Kevin Tsuda, R.E.H.S.
Environmental Health Specialist II (559) 600-33271

KT

cc: Steven Rhodes- Environmental Health Division (CT. 55.22)
Matt Smith- Applicant (matts@woodsidehomes.com)

LAFCo Fresno Local Agency Formation Commission

September 17, 2019

George Gonzalez, MPA
Associate Planner
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Dear Mr. Gonzalez:

Subject: Comments regarding concurrent applications RO301, GPA2019-006, R2019-007, TM6284 for territory located on the south side of Teague Avenue between Sunnyside and Fowler Avenues.

Thank you for the opportunity to comment on this project. From the material provided to this office, my understanding of the project description is as follows:

RO301, a resolution of application for the annexation of the territory known as the Teague-Fowler SW Reorganization.

GPA2019-006 a request to amend the General Plan to redesignate approximately 34 acres of land from Rural Residential to Low Density Residential.

R2019-007, a request to approve a prezone of approximately 53.4 acers of land from the County R-R Zone District to the Clovis R-R and R-1 Zone Districts.

TM6284, a request to approve a vesting tentative tract map for a 74-lot single-family residential development for land located on the south side of Teague Avenue between Sunnyside and Fowler Avenues.

The Fresno Local Agency Formation Commission (LAFCo) regulates, through approval or denial, the boundary changes proposed by local agencies or individuals. LAFCo's objectives are to:

- Encourage orderly formation and development of agencies;
- Encourage consistency with spheres of influence and recommended reorganization of agencies;
- Encourage orderly urban development and preservation of open space patterns;
- Encourage conservation of prime agricultural lands and open space areas; and
- Identify and address disadvantaged unincorporated communities.

LAFCo should be identified in the city's environmental document as a Responsible Agency under CEQA whose role is to consider changes of organizations and spheres of influence. Commission action on the annexation request should be noted in the environmental document. As a Responsible Agency, the Commission is required to review and consider the City's environmental documents prior to taking its action. A Responsible Agency complies with CEQA by considering the environmental analysis prepared by the Lead Agency and by reaching its own conclusions on whether and how to approve the project. The Commission may then make a finding that it independently reviewed and considered the information in the environmental document and that the environmental document is sufficient to

support a determination on the proposed reorganization.

Unless a territory is at full build-out, LAFCo law and Commission policy require that territory be prezoned before it may be annexed to a city so that LAFCo may find that the proposed project is consistent with a city's general plan. Given the multiple proposed zone districts, please be sure to identify what land is prezoned to the appropriate zone district in the annexation proposal area.

Be advised that extraneous conditions of prezoning ordinance bills can impair the Commission's ability to approve projects. LAFCo staff is available to review and comment on the city's draft prezoning ordinance to ensure that it meets Commission standards.

It is important to note that LAFCo standards for annexation state a proposal for annexation is acceptable if one of the following can be providing by the City:

- There is existing substantial development provide the City confines its area requested to that area needed to include the substantial development and create logical boundaries.
- Development exists that requires urban services which can be provided by the City
- If no development exists, at least 50% of the area proposed for annexation has:
    a. Approved tentative subdivision map(s)(S.F. residential)
    b. Approved site plan (for other uses)

As we have discussed, staff and the Commission will evaluate this project in light of the Commission's adopted policies and procedures, which include minimizing "creation of peninsulas and corridors, or other distortion of boundaries." It is therefore important that Clovis' application provides sufficient context as to how this proposal contributes to "planned, well ordered, efficient development patterns and service areas, and does not encourage urban sprawl."

Thank you for the opportunity to provide comments. If you have any questions, please contact me at (559) 600-0604.

Sincerely,

Juan Lara

Juan Lara
LAFCo Analyst II

\\pacific\4370\LAFCO WORKING FILES\CEQA\Responses\City of Clovis Teague-Fowler SW Reorg JL.docx

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

SEP 1 1 2019

George Gonzalez
City of Clovis
1033 Fifth Street
Clovis, CA 93612

Project: TM6284, GPA2019-006, Reorganization RO301, R2019-02

District CEQA Reference No: 20191070

Dear Mr. Gonzalez:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above consisting of a pre-zone of approximately 53.4 acres of land from the County R-R Zone District to the Clovis R-R and R-1 Zone Districts, and a resolution for the annexation of the territory knows as the Teague-Fowler Southwest Reorganization, and to amend the General Plan to re-designate approximately 34 acres of land from Rural Residential to Low Density Residential, and a vesting tentative tract map for a 74-lot single-family residential development (Project) located on the South side of Teague Avenue between Sunnyside and Fowler Avenues, in Clovis, CA. The District offers the following comments:

1. Significance Impact for Annual Criteria Pollutants Emissions – The Project specific annual emissions of criteria pollutants are not expected to exceed any of the following District significance thresholds: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5). Therefore, the District concludes that the Project would have a less than significant impact on air quality when compared to the above-listed annual criteria pollutant emissions significance thresholds.

2. District Rule 9510 (Indirect Source Review) - District Rule 9510 is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site fees. The Project is subject to District Rule 9510 if it

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

equals or exceeds 50 residential dwelling units and has or will receive a project-level discretionary approval from a public agency. If subject to the rule, an Air Impact Assessment (AIA) application is required prior to applying for project level approval from a public agency. In this case, if not already done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

In the case the Project is subject to Rule 9510 an AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval. Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm. The AIA application form can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

3. District Rule 4002 (National Emissions Standards for Hazardous Air Pollutants) - In the event an existing building will be renovated, partially demolished or removed, the Project may be subject to District Rule 4002. This rule requires a thorough inspection for asbestos to be conducted before any regulated facility is demolished or renovated. Information on how to comply with District Rule 4002 can be found online at: http://www.valleyair.org/busind/comply/asbestosbultn.htm.

4. Regulation VIII (Fugitive PM10 Prohibitions) - The Project will be subject to Regulation VIII. The project proponent is required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in District Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*. Information on how to comply with Regulation VIII can be found online at: http://www.valleyair.org/busind/comply/PM10/compliance_PM10.htm

5. Other District Rules and Regulations – The above list of rules is neither exhaustive nor exclusive. For example, the Project may be subject to the following District rules, including: Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). To identify other District rules or regulations that apply to this Project or to obtain information on the District's permit requirements, such as an Authority to Construct (ATC), the Project proponent is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888 or e-mail SBA@valleyair.org. Current District rules can be found online at the District's website at: www.valleyair.org/rules/1ruleslist.htm.

6. Potential Air Quality Improvement Measures - The District encourages the following air quality improvement measures to further reduce Project related emissions from construction and operation. A complete list of potential air quality improvement measures can be found online at: http://www.valleyair.org/ceqaconnected/aqimeasures.aspx.

    a. Cleaner Off-Road Construction Equipment – This measure is to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier III and above engine standards.

    b. Improve Walkability Design – This measure is to improve design elements to enhance walkability and connectivity. Improved street network characteristics within a neighborhood include street accessibility, usually measured in terms of average block size, proportion of four-way intersections, or number of intersections per square mile. Design is also measured in terms of sidewalk coverage, building setbacks, street widths, pedestrian crossings, presence of street trees, and a host of other physical variables that differentiate pedestrian-oriented environments from auto-oriented environments.

    c. Improve Destination Accessibility – This measure is to locate the project in an area with high accessibility to destinations. Destination accessibility is measured in terms of the number of jobs or other attractions reachable within a given travel time, which tends to be highest at central locations and lowest at peripheral ones. The location of the project also increases the potential for pedestrians to walk and bike to these destinations and therefore reduces the (vehicle miles traveled) VMT.

    d. Increase Transit Accessibility – This measure is to locate the project with high density near transit which will facilitate the use of transit by people traveling to or from the Project site. The use of transit results in a mode shift and therefore reduced VMT. A project with a residential/commercial center designed around a rail or bus station, is called a transit-oriented development (TOD). The project description should include, at a minimum, the following design features:

        - A transit station/stop with high-quality, high-frequency bus service located within a 5-10 minute walk (or roughly ¼ mile from stop to edge of development), and/or

- A rail station located within a 20 minute walk (or roughly ½ mile from station to edge of development)
- Fast, frequent, and reliable transit service connecting to a high percentage of regional destinations
- Neighborhood designed for walking and cycling

e. Voluntary Emission Reduction Agreement - Design elements, mitigation measures, and compliance with District rules and regulations may not be sufficient to reduce project-related impacts on air quality to a less than significant level. In such situation, project proponents may enter into a Voluntary Emission Reduction Agreement (VERA) with the District to reduce the project related impact on air quality to a less than significant level. A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of air emissions increases through a process that funds and implements emission reduction projects. A VERA can be implemented to address impacts from both construction and operational phases of a project.

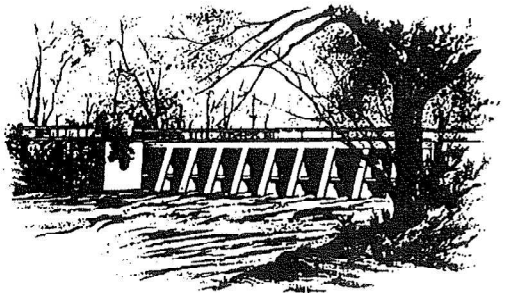
The District recommends that a copy of the District's comment letter be provided to the Project proponent. District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this Project. If you have any questions or require further information, please call Carol Flores at (559) 230-5935 or e-mail carol.flores@valleyair.org. When calling or emailing the District, please reference District CEQA number 20191070.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Brian Clements
Program Manager

AM: cf



YOUR MOST VALUABLE RESOURCE - WATER

OFFICE OF
FRESNO IRRIGATION DISTRICT

TELEPHONE (559) 233-7161
FAX (559) 233-8227
2907 S. MAPLE AVENUE
FRESNO, CALIFORNIA 93725-2208

September 17, 2019

George Gonzalez
Planning and Development Services Dept.
City of Clovis
1033 Fifth Street
Clovis, CA 93612

RE: Vesting Tentative Tract Map 6284
S/W Teague and Sunnyside avenues

Dear Mr. Gonzalez:

The Fresno Irrigation District (FID) has reviewed the Vesting Tentative Tract Map 6284 for which the applicant request approval for a 74-lot single-family residential development, APN: 559-021-03, 04, 37, & 69. This request is being processed concurrently with GPA2019-006, R2019-007, and RO301FID has the following comments:

1. FID does not own, operate or maintain any facilities located on the subject property, as shown on the attached FID exhibit map.

2. For informational purposes, FID's Enterprise No. 109 runs northwesterly, crosses Fowler Avenue approximately 2,000 feet northeast of the subject property, crosses Sunnyside Avenue approximately 2,300 feet northwest of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements along Fowler Avenue, Sunnyside Avenue, or in the vicinity of this canal, FID requires it review and approve all plans.

3. For informational purposes, Stream Groups Big Dry Creek No. 150 runs southwesterly approximately 1,900 feet northwest of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements in the vicinity of this canal, FID requires it review and approve all plans.

4. For informational purposes, FID's Little Teague No. 415 runs southwesterly approximately 1,800 feet northwest of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements in the vicinity of this pipeline, FID requires it review and approve all plans.

5. For informational purposes, FID's Helm Colonial No. 116 runs southwesterly approximately 2,100 feet northwest of the subject property, as shown on the attached FID exhibit map. Should this project include any street and/or utility improvements in the vicinity of this pipeline, FID requires it review and approve all plans.

6. For informational purposes, a privately owned pipeline known as the Nees #2 No. 541 runs westerly, crosses Teague Avenue approximately 60 feet north of the subject property, and traverses the subject property, as shown on the attached FID exhibit map. FID does not own, operate or maintain this private pipeline. FID's records indicate this pipeline is active and will need to be treated as such. FID can supply a list of known users to the City upon request.

7. The proposed development may negatively impact local groundwater supplies. The area is currently open land, with little to no water demand. Under current circumstances the project area is experiencing a modest but continuing groundwater overdraft. Should the proposed development result in an increase in the consumption of water, this deficit will increase. FID suggests the City of Clovis require the proposed development balance anticipated groundwater use with sufficient recharge of imported surface water in order to preclude increasing the area's existing groundwater overdraft.

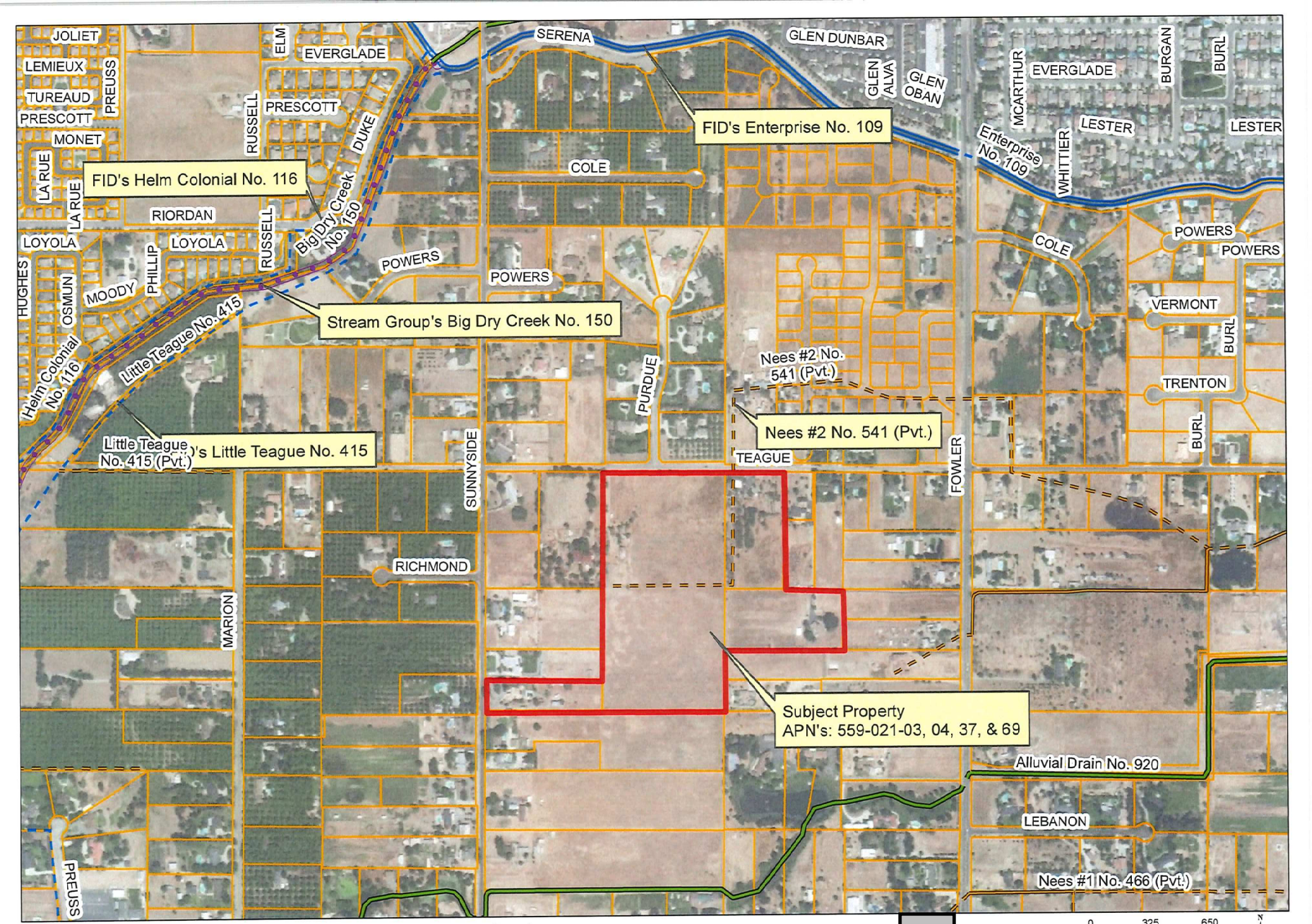
8. California enacted landmark legislation in 2014 known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. FID and the City of Clovis are members of the North Kings Groundwater Sustainability Agency which will manage the groundwater basin within the FID service area. This area is completely reliant on groundwater pumping and SGMA will impact all users of groundwater and those who rely on it. The City of Clovis should consider the impacts of the development on the City's ability to comply with requirements of SGMA.

Thank you for submitting this for our review. We appreciate the opportunity to review and comment on the subject documents for the proposed project. If you have any questions please feel free to contact Jeremy Landrith at (559) 233-7161 extension 7407 or jlandrith@fresnoirrigation.com.

Sincerely,

Laurence Kimura, P.E.
Chief Engineer

Attachment



This map was produced by the Fresno Irrigation District and is provided for reference and informational purposes only and is not intended to show map scale accuracy or all inclusive map features, nor for legal purposes. FID makes no statements regarding the accuracy of this map as the features shown are in their approximate location. Please contact the FID Engineering Dept. at (559) 233-7161 for further information on FID facilities.

Legend

- FID Canal
- Private Canal
- Abandoned Canal
- FID Pipeline
- Private Pipeline
- Abandoned Pipeline
- Stream Group
- Other-Creek\River
- Other-Pipeline
- FID Boun
- Railroad
- Streets & Hwys
- Parcel
- FMFCD Acquired Basins
- FMFCD Proposed Basins

863

0 325 650 Feet

1 inch = 650.37 feet

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FRESNO METROPOLITAN FLOOD CONTROL DISTRICT
NOTICE OF REQUIREMENTS

AGENDA ITEM NO. 4.

PUBLIC AGENCY

GEORGE GONZALEZ
PLANNING AND DEVELOPMENT SERVICES
CITY OF CLOVIS
1033 FIFTH STREET
CLOVIS, CA 936112

DEVELOPER

MATT SMITH, WOODSIDE 06N, LP
9 RIVER PARK PLACE, SUITE 430
FRESNO, CA 93720

PROJECT NO: **6284**

ADDRESS: **S/S TEAGUE BTWN SUNNYSIDE AND FOWLER**

APN: **559-021-69, 03S, 37, 559-021-04**

SENT: 10/1/19

Drainage Area(s)	Preliminary Fee(s)	Development Review Service Charge(s)	Fee(s)	
BT	$418,019.00	NOR Review	$1,619.00	To be paid prior to release of District comments to Public Agency and Developer.
		Grading Plan Review	$4,519.00	Amount to be submitted with first grading plan submittal.
		Storm Drain Plan Review	For amount of fee, refer to www.fresnofloodcontrol.org for form to fill out and submit with first storm drain plan submittal (blank copy attached).	
	Total Drainage Fee: $418,019.00		**Total Service Charge: $6,138.00**	

The proposed development will generate storm runoff which produces potentially significant environmental impacts and which must be properly discharged and mitigated pursuant to the California Environmental Quality Act and the National Environmental Policy Act. The District in cooperation with the City and County has developed and adopted the Storm Drainage and Flood Control Master Plan. Compliance with and implementation of this Master Plan by this development project will satisfy the drainage related CEQA/NEPA impact of the project mitigation requirements.

Pursuant to the District's Development Review Fee Policy, the subject project shall pay review fees for issuance of this Notice of Requirements (NOR) and any plan submittals requiring the District's reviews. The NOR fee shall be paid to the District by Developer before the Notice of Requirement will be submitted to the City. The Grading Plan fee shall be paid upon first submittal. The Storm Drain Plan fee shall be paid prior to return/pick up of first submittal.

The proposed development shall pay drainage fees pursuant to the Drainage Fee Ordinance prior to issuance of a building permit at the rates in effect at the time of such issuance. The fee indicated above is valid through 2/29/20 based on the site plan submitted to the District on 8/27/19 Contact FMFCD for a revised fee in cases where changes are made in the proposed site plan which materially alter the proposed impervious area.

Considerations which may affect the fee obligation(s) or the timing or form of fee payment:

a.) Fees related to undeveloped or phased portions of the project may be deferrable.

b.) Fees may be calculated based on the actual percentage of runoff if different than that typical for the zone district under which the development is being undertaken and if permanent provisions are made to assure that the site remains in that configuration.

c.) Master Plan storm drainage facilities may be constructed, or required to be constructed in lieu of paying fees.

d.) The actual cost incurred in constructing Master Plan drainage system facilities is credited against the drainage fee obligation.

e.) When the actual costs incurred in constructing Master Plan facilities exceeds the drainage fee obligation, reimbursement will be made for the excess costs from future fees collected by the District from other development.

f.) Any request for a drainage fee refund requires the entitlement cancellation and a written request addressed to the General Manager of the District within 60 days from payment of the fee. A non refundable $300 Administration fee or 5% of the refund whichever is less will be retained without fee credit.

CL TRACT No. 6284

5469 E. OLIVE - FRESNO, CA 93727 - (559) 456-3292 - FAX (559) 456-3194

AGENDA ITEM NO. 4.

CL TRACT No. 6284

Approval of this development shall be conditioned upon compliance with these District Requirements.

1. ___ **a.** Drainage from the site shall

   _X_ **b.** Grading and drainage patterns shall be as identified on Exhibit No. 1

   ___ **c.** The grading and drainage patterns shown on the site plan conform to the adopted Storm Drainage and Flood Control Master Plan.

2. The proposed development shall construct and/or dedicate Storm Drainage and Flood Control Master Plan facilities located within the development or necessitated by any off-site improvements required by the approving agency:

   _X_ Developer shall construct facilities as shown on Exhibit No. 1 as MASTER PLAN FACILITIES TO BE CONSTRUCTED BY DEVELOPER.

   ___ None required.

3. The following final improvement plans and information shall be submitted to the District for review prior to final development approval:

   _X_ Grading Plan

   _X_ Street Plan

   _X_ Storm Drain Plan

   _X_ Water & Sewer Plan

   _X_ Final Map

   _X_ Drainage Report (to be submitted with tentative map)

   ___ Other

   ___ None Required

4. Availability of drainage facilities:

   ___ **a.** Permanent drainage service is available provided the developer can verify to the satisfaction of the City that runoff can be safely conveyed to the Master Plan inlet(s).

   ___ **b.** The construction of facilities required by Paragraph No. 2 hereof will provide permanent drainage service.

   ___ **c.** Permanent drainage service will not be available. The District recommends temporary facilities until permanent service is available.

   _X_ **d.** See Exhibit No. 2.

5. The proposed development:

   ___ Appears to be located within a 100 year flood prone area as designated on the latest Flood Insurance Rate Maps available to the District, necessitating appropriate floodplain management action. (See attached Floodplain Policy.)

   _X_ Does not appear to be located within a flood prone area.

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CL TRACT No. 6284

6. ___ The subject site contains a portion of a canal or pipeline that is used to manage recharge, storm water, and/or flood flows. The existing capacity must be preserved as part of site development. Additionally, site development may not interfere with the ability to operate and maintain the canal or pipeline.

7. The Federal Clean Water Act and the State General Permits for Storm Water Discharges Associated with Construction and Industrial Activities (State General Permits) require developers of construction projects disturbing one or more acres, and discharges associated with industrial activity not otherwise exempt from National Pollutant Discharge Elimination System (NPDES) permitting, to implement controls to reduce pollutants, prohibit the discharge of waters other than storm water to the municipal storm drain system, and meet water quality standards. These requirements apply both to pollutants generated during construction, and to those which may be generated by operations at the development after construction.

   a. State General Permit for Storm Water Discharges Associated with Construction Activities, effective July 1, 2010, as amended. A State General Construction Permit is required for all clearing, grading, and disturbances to the ground that result in soil disturbance of at least one acre (or less than one acre) if part of a larger common plan of development or sale). Permittees are required to: submit a Notice of Intent and Permit Registration Documents to be covered and must pay a permit fee to the State Water Resources Control Board (State Board), develop and implement a storm water pollution prevention plan, eliminate non-storm water discharges, conduct routine site inspections, train employees in permit compliance, and complete an annual certification of compliance.

   b. State General Permit for Storm Water Discharges Associated with Industrial Activities, April, 2014 (available at the District Office). A State General Industrial Permit is required for specific types of industries described in the NPDES regulations or by Standard Industrial Classification (SIC) code. The following categories of industries are generally required to secure an industrial permit: manufacturing; trucking; recycling; and waste and hazardous waste management. Specific exemptions exist for manufacturing activities which occur entirely indoors. Permittees are required to: submit a Notice of Intent to be covered and must pay a permit fee to the State Water Resources Control Board, develop and implement a storm water pollution prevention plan, eliminate non-storm water discharges, conduct routine site inspections, train employees in permit compliance, sample storm water runoff and test it for pollutant indicators, and annually submit a report to the State Board.

   c. The proposed development is encouraged to select and implement storm water quality controls recommended in the Fresno-Clovis Storm Water Quality Management Construction and Post-Construction Guidelines (available at the District Office) to meet the requirements of the State General Permits, eliminate the potential for non-storm water to enter the municipal storm drain system, and where possible minimize contact with materials which may contaminate storm water runoff.

8. A requirement of the District may be appealed by filing a written notice of appeal with the Secretary of the District within ten days of the date of this Notice of Requirements.

9. The District reserves the right to modify, reduce or add to these requirements, or revise fees, as necessary to accommodate changes made in the proposed development by the developer or requirements made by other agencies.

10. _X_ See Exhibit No. 2 for additional comments, recommendations and requirements.

Peter Sanchez
District Engineer

Michael Maxwell
Project Engineer

5469 E. OLIVE - FRESNO, CA 93727 - (559) 456-3292 - FAX (559) 456-3194

AGENDA ITEM NO. 4.

CC:

YAMABE & HORN ENGINEERING, INC.

2985 N. BURL AVE., SUITE 101

FRESNO, CA 93727

CL TRACT No. 6284

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FRESNO METROPOLITAN FLOOD CONTROL DISTRICT
NOTICE OF REQUIREMENTS

AGENDA ITEM NO. 4.

Pursuant to the District's Development Review Fee Policy, the subject project shall pay review fees in the amount identified below for Storm Drain Review. The fee shall be paid to the District by Developer with first plan submittal. Checks shall be made out to Fresno Metropolitan Flood Control District.

Application No. CL TRACT 6284

Name / Business MATT SMITH, WOODSIDE 06N, LP

Project Address S/S TEAGUE BTWN SUNNYSIDE AND FOWLER

Project APN(s) 559-021-69, 03S, 37, 559-021-04

Project Acres (gross) 37.66

Please fill in the table below of proposed storm drain facilities to be constructed with this development and return completed form with first plan submittal. If you have any questions or concerns regarding the construction of facilities list, you can contact the Fresno Metropolitan Flood Control District at 559-456-3292.

Description	Qty	Unit	Price	Amount

Estimated Construction Cost _____

Fee equals lesser of

$375.00 plus 3% of the estimated construction costs _____ Total ($300.00 gross per acre) $11,298.00

Amount Due _____

Storm Drain Facilities Cost Sheet

15" Concrete Pipes $79.00 LF
18" Concrete Pipes $83.00 LF
24" Concrete Pipes $94.00 LF
30" Concrete Pipes $111.00 LF
36" Concrete Pipes $131.00 LF
42" Concrete Pipes $152.00 LF
48" Concrete Pipes $178.00 LF
54" Concrete Pipes $217.00 LF
60" Concrete Pipes $255.00 LF
66" Concrete Pipes $301.00 LF
72" Concrete Pipes $347.00 LF
84" Concrete Pipes $388.00 LF
96" Concrete Pipes $420.00 LF
15" Jacked Pipes $555.00 LF
18" Jacked Pipes $608.00 LF
24" Jacked Pipes $687.00 LF
30" Jacked Pipes $766.00 LF
36" Jacked Pipes $846.00 LF
42" Jacked Pipes $898.00 LF
48" Jacked Pipes $951.00 LF
54" Jacked Pipes $1,031.00 LF
60" Jacked Pipes $1,110.00 LF
66" Jacked Pipes $1,216.00 LF
72" Jacked Pipes $1,374.00 LF
84" Jacked Pipes $1,533.00 LF
Manholes $4,600.00 EA
Inlets & Laterals $4,450.00 EA
Outfalls $11,500.00 EA
Canal Outfalls $15,000.00 EA
Basin Excavation $0.75 CY

IMPROVEMENTS ADJACENT TO BASIN

Fence, Pad, and Gate $20.00 LF
Mowstrip $20.00 LF
Arterial Paving $82.00 LF
Local Paving $53.00 LF
Curb and Gutter $30.00 LF
Sidewalk $60.00 LF
Sewer Line $30.00 LF
Water Line $31.00 LF
Street Lights $65.00 LF
Pump Station/Intake $500,000.00 EA

CL TRACT No. 6284

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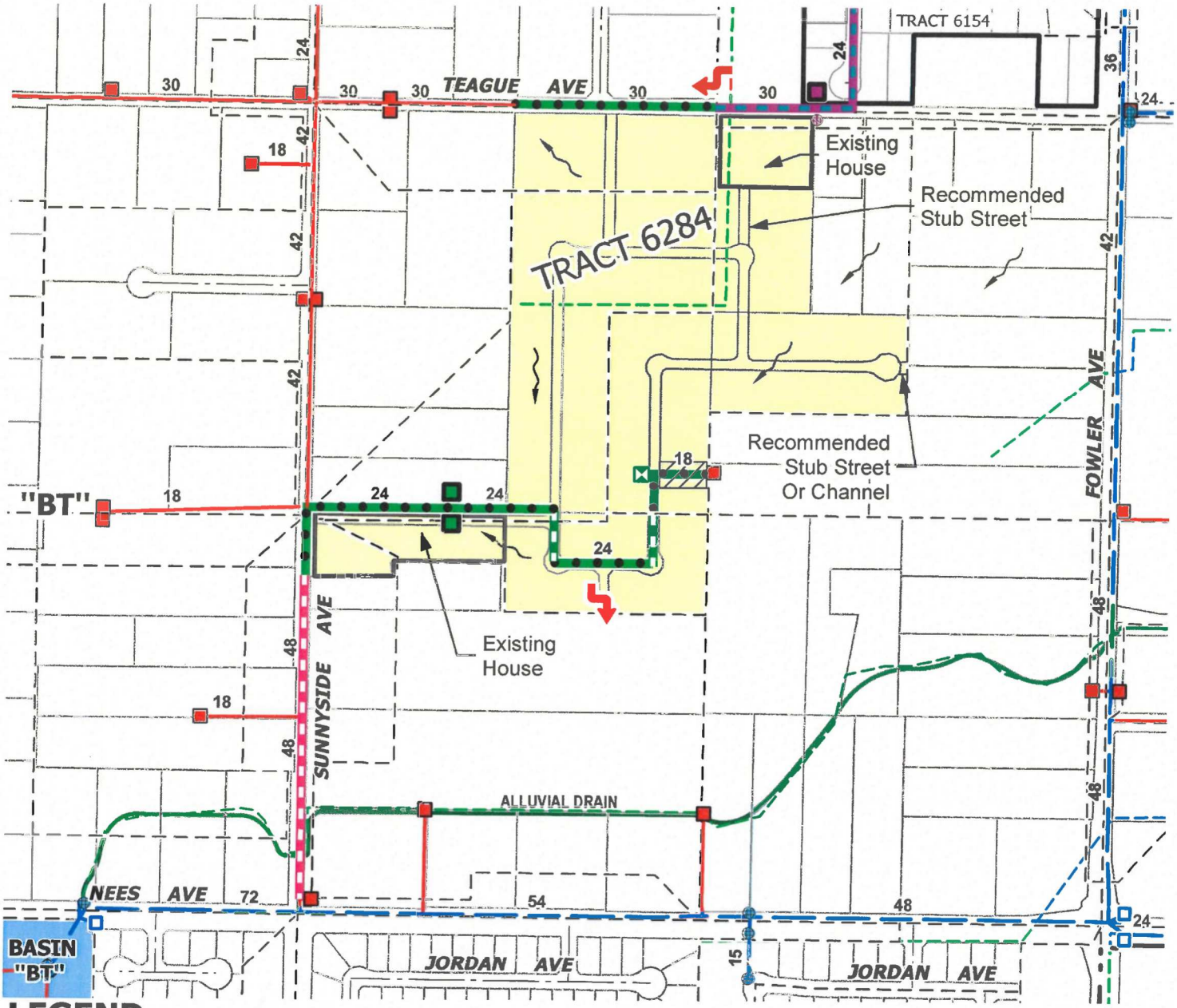
NOTE
DIST
FACI
BOUNDARIES ARE APPROXIMATE.



LEGEND

- Creditable Facilities (Master Plan Facilities To Be Constructed By Developer) - Pipeline (Size Shown) & Inlet
- Non-Master Plan Facilities To Be Constructed By Developer (Not Eligible For Fee Credit)
- Optional Master Plan Facilities To Be Constructed By Developer For Permanent Service - Pipeline (Size Shown) Eligible For Fee Credit
- Master Plan Facilities To Be Constructed By Developer Of Tract 6154
- Existing Master Plan Facilities
- Future Master Plan Facilities
- Existing FID Facilities
- Direction Of Drainage
- Inlet Boundary
- Minimum 15' Wide Storm Drain Easement To Be Dedicated To District By Developer
- Major Storm Breakover

1 " = 500 '

TRACT 6284

DRAINAGE AREA "BT"

EXHIBIT NO. 1

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Prepared by: danielg
Date: 9/26/2019
Path: K:\Autocad\DWGS\0EXHIBIT\TRACTS\6284.mxd

OTHER REQUIREMENTS
EXHIBIT NO. 2

The cost of construction of Master Plan facilities, excluding dedication of storm drainage easements, is eligible for credit against the drainage fee of the drainage area served by the facilities. A Development Agreement shall be executed with the District to effect such credit. Reimbursement provisions, in accordance with the Drainage Fee Ordinance, will be included to the extent that developer's Master Plan costs for an individual drainage area exceed the fee of said area. Should the facilities cost for such individual area total less than the fee of said area, the difference shall be paid upon demand to the City/County or District.

Drainage from the site shall be directed as shown on Exhibit No. 1. The construction of the "Optional Master Plan Facilities" as shown on Exhibit No. 1 will provide permanent drainage service to the portion of Tract 6284 directed towards Sunnyside Avenue. If these optional facilities are not constructed, the District recommends temporary facilities until permanent service is available.

Permanent drainage service will not be available to the portion of Tract 6284 directed to Teague Avenue. The District recommends temporary facilities until permanent service is available.

Tract 6284 shall not block the historical drainage patterns of existing homes located on the remainder parcels or block existing development along the east side of the tract. The developer shall verify to the satisfaction of the District that runoff from these areas has the ability to surface drain to adjacent streets. Either a stub street or channel shall be provided for those areas shown on Exhibit No.1. Additionally, the developer shall provide a drainage report addressing how the existing homes will be protected from major storm flows.

The Master Plan system has been designed such that during a two-year event flow will not exceed the height of the 6-inch curb. Should wedge curb (4.5 inches height) be used the same criteria shall apply whereby flow remains below the top of curb. Any extensions or pipe size increases due to meeting the requirement listed above shall be at the developer's expense.

A minimum fifteen-foot (15′) wide storm drain easement will be required whenever storm drain facilities are located on private property. No encroachments into the easement will be permitted including, but not limited to, foundations, roof overhangs, swimming pools, and trees.

Lot coverage must be provided to the District prior to submittal of improvement plans. The final drainage fee will be calculated commensurate with the lot coverage provided by the developer. The lot coverage calculated by the District includes the front yard walkway, sidewalk walkway and the rear yard patio equaling an additional 6% of impervious area in addition to the City's typical lot coverage calculation.

Development No. Tract 6284

February 27, 2020

VIA EMAIL ONLY to georgeg@cityofclovis.com

Mr. George Gonzalez, MPA
Associate Planner
Planning and Development Services, City of Clovis
1033 Fifth Street
Clovis, CA 93612

Re: Public Review Comments on Woodside Homes of Fresno, LP GPA2019-006, R2019-007, R2020-002, TM6284, & RO301 Initial Study and Mitigated Negative Declaration

Dear Mr. Gonzalez:

Thank you for the opportunity to review the Initial Study Mitigated Negative Declaration, dated February 2020 for the Woodside Homes of Fresno, LP project located at the southwest corner of Fowler and Teague. We want to be assured that the City properly evaluates the project's environmental impacts consistent with the legal requirements of the California Environmental Quality Act (CEQA). As outlined below, we believe there are deficiencies that need to be addressed prior to adoption of the CEQA document and project approval.

Project Description

The project description states that the project would construct 74 single-family residences on 32.19 acres and rezone a total of 50.8 acres to Clovis R-1 (Single Family Residential). Therefore, in addition to the 74 homes, the full development potential of the site includes an additional 18.61 acres that would be developed in the future as Single Family Residential.

Although the R-1 designation allows for residential uses at a density between 2.1 to 15.0 units per acre, the Dry Creek Master Plan limits the maximum density to no more than 2.3 units per acre. We understand that a Tract Map will be circulated at a later date, however, for purposes of this CEQA analysis, which includes the entire 50.8 acres of rezoning, the CEQA analysis must consider the full development potential of the project rezone. CEQA prohibits project "piecemealing" so the entire project site as outlined in Figure 1 of the Initial Study/MND must be considered in the CEQA analysis.

As described below, the CEQA analysis is inadequate because throughout the technical analysis only 74 units and 32.19 acres of the project site were evaluated. All of the technical studies, including the air quality, traffic, biological, and cultural resources are based on a 32 acre project site and 74 units. Based on the rezone of an additional 18.61 acres to R-1, under the Dry Creek Preserve Master Plan, the project has the

ATTACHMENT 11

development potential of up to 42 homes, in addition to the 74 currently proposed. Therefore, impacts are significantly underestimated.

The analysis must be revised to consider the full project development potential of the rezone, and the CEQA document must be recirculated for public review.

Traffic

The Traffic Impact Analysis attached as Appendix D prepared by Peters Engineering is inadequate to determine project impacts for the following reasons:

Outdated Traffic Counts: The City of Clovis Traffic Impact Study Guidelines requires that the existing traffic count data be less than 12 months old. The traffic data used in the analysis is from 2017 (see Appendix A of the TIA), and therefore does not account for the buildout of the Whisper Creek Development or the substantial development that has occurred to the east of the project site, which has significantly increased traffic on Fowler Avenue and Teague Avenue within the last three years since the counts were taken. The traffic study needs to be revised with current traffic count data in order to determine the impacts of the project.

Project Tip Generation*:* The project trip generation is underestimated as it only includes the traffic generated by the 74 units, and does not account for the development potential of the additional 18 acres of rezoned property. Trip generation should be revised to account for the full development potential of the project site.

Near Term Analysis: There are several approved projects, near approved, or in the pipeline within the proximity of the proposed project. This includes but is not limited to recently approved TT6263, which estimated that a “up to 200 more daily trips will likely use Sunnyside Avenue under the scenario which includes access to Shepherd Avenue” (see, e.g., page 37 of the revised Traffic Impact Study dated December 31, 2019). TT6263 has the potential to drastically change traffic on Sunnyside Avenue, which is significant to the proposed project – especially under the potential future condition of a project access road onto Sunnyside. The analysis should consider the following development projects in the near term analysis. TT6263, TT 5546, TT5550, TT5720, TT6109, TT6128, TT6134, TT6145, TT6180, TT6190, TT6200.

Mitigation Measures: The City needs to provide evidence that the necessary improvements identified in TRAF-1 will be funded. Mitigation Measure TRAF-1 would require the developer to pay a proportionate share of signalization; however, there is no evidence that the mitigation measure will be implemented prior to project opening year which would be required to mitigate the project. Under the CEQA Guidelines, there can be no assumption that impacts would be mitigated simply by paying a fee. Therefore this mitigation measure is inadequate to mitigate the project’s traffic impacts.

It should also be noted that even if funding were available to implement Mitigation Measure TRAF-1, the traffic study shows that signalization by itself is not adequate to mitigate the project. The traffic model output sheets [Traffic Impact Analysis HCM 2010 Signalized Intersection Summary for Fowler and Nees (page 97-108/110 in the TIA pdf)]

assumes a completely modified intersection is needed with additional turning lanes, including eastbound left, westbound left, northbound left, southbound left, and widening of Fowler Avenue from 2 to 4 lanes. The IS/MND erroneously excludes these improvements from the mitigation measure. These improvements need to be included in the mitigation measure and should be implemented prior to project occupancy.

Mitigation Measure TRAF-1 must be revised to reflect the full intersection geometry for each intersection evaluated in the TIA under the mitigated scenario.

The City should clarify this mitigation measure to state what the proportional fee is and the timing of payment. Additionally, based on a revised traffic analysis (one that considers the current traffic volumes, incudes all previously approved development projects, and provides an accurate project trip generation), the City should determine if mitigation is required to be implemented prior to project occupancy.

Air Quality

Again, the air quality analysis only included an emission assessment of the 74 homes. The Air Quality Impact Analysis should be revised to assess the total impacts of the full development potential.

Thank you for the opportunity to comment on this project. We look forward to reviewing the updated technical studies and recirculated initial study checklist.

Sincerely,

Corey File

City of Clovis
Planning Commission
1033 Fifth Street
Clovis, CA 93612

RE: AGENDA ITEM #4 (Commission Meeting February 27, 2020) Items associated with approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues.

Dear Council Members:

The Dry Creek Preserve Master Plan ("DCP Master Plan"), which the Council approved on June 4, 2018, discussed several circulation elements within the Dry Creek Preserve (e.g., Focus Area 7). Among them:

- Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues. (Sec. 12.0)
- Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues. (Sec. 12.0)
- Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues. (Sec. 12.0)
- In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area. (Sec. 12.1)
- Sunnyside Avenue is a designated Collector Street in the Clovis General Plan and Regional Transportation Plan. (Sec. 12.2.2)
- Sunnyside Avenue is planned to remain a rural-appearing collector street, with one twelve-foot-wide travel lane in each direction. (Sec. 12.2.2)
- Developments fronting onto Sunnyside will be required to provide along their street frontage, an 11'-wide travel lane, a 5'-wide bicycle lane, construction of asphalt curbs and competent street drainage [ ], and a four-foot-wide decomposed granite or asphalt walkway. (Sec. 12.2.2)
- Non-developed reaches of Sunnyside will have an 11-foot-wide travel lane, a five-foot-wide bile lane, and a four-foot unpaved shoulder, without drainage facilities [ ]. (Sec. 12.2.2)
- Teague Avenue between Fowler and Sunnyside is planned to have one eleven-foot-wide travel lane and a five-foot-wide bicycle lane in each direction. In developed reaches, a five -foot-wide walkway will also be required, separated from traffic by a four-foot-wide landscaped separator on the developed side, wherever development with street frontage occurs. (Sec. 12.2.3)

It should be abundantly clear that the Council's intention for the Dry Creek Preserve was to maintain and provide a unique residential element, including maintaining slower less intensive traffic on Sunnyside Avenue and Teague Avenue. Pursuant to the DCP Master Plan, Sunnyside Avenue and Teague Avenue (between Sunnyside and Fowler) were each to have the following street configuration and required right-of-way widths for segments of the roadway that are adjacent to both developed and undeveloped properties:

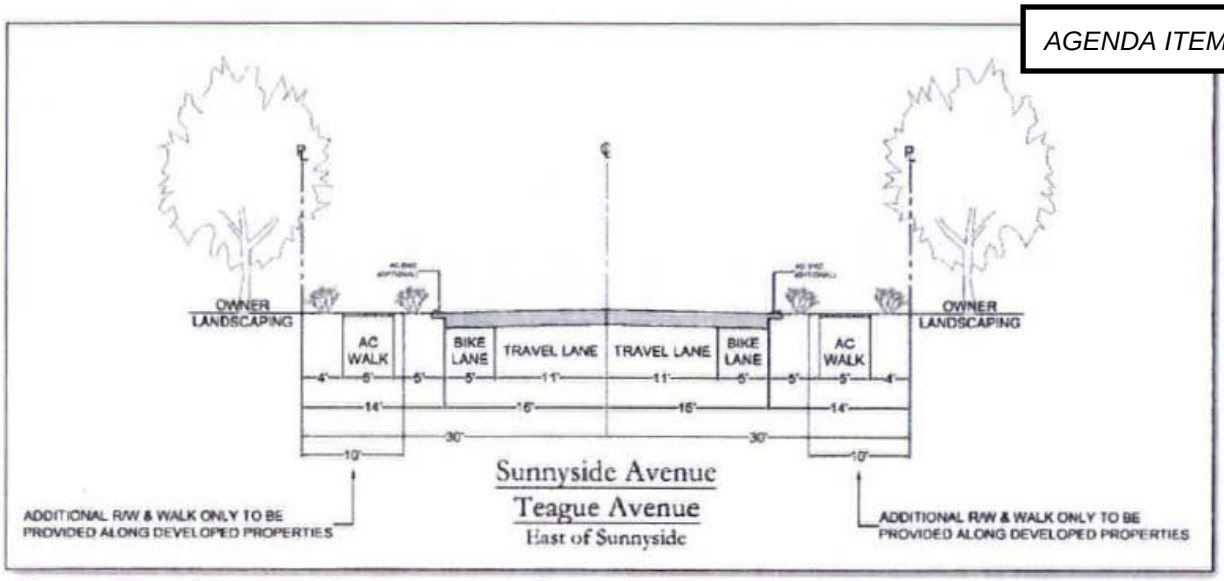


Figure B: Sunnyside Avenue and Teague Avenue East of Sunnyside

In the Traffic Impact Study for the Proposed McKenney Assemblage prepared by Peters Engineering Group on February 4, 2020 (the "TIS"), "traffic counts" and analyses are provided for the (i) Teague Avenue / Sunnyside Avenue, (ii) Teague Avenue / Fowler Avenue, (iii) Nees Avenue / Sunnyside Avenue, and (iv) Nees Avenue / Fowler Avenue intersections ("Study Intersections"), analysis are provided for (i) Fowler Avenue between Teague and Nees Avenues and (ii) Sunnyside Avenue between Teague and Nees Avenues road segments ("Study Segments"), and signal warrant analyses are provided only at Teague / Sunnyside and Teague / Fowler ("Warrant Analyses"). The TIS explicitly states that excluded from the Warrant Analyses are the intersections of Shepherd / Sunnyside, Nees / Fowler, Shepherd / Fowler, and Nees / Armstrong because those intersections are already signalized or other projects have been conditioned upon construction of signals.

The only "Near-term" projects which were considered in the relevant portions of the analysis were limited to <u>two</u>: the Applicant's Tract 6154 (NW Corner Fowler and Teague; 95 units) and Lennar Phase 1 Tract 6200 (Shepherd and Clovis; 586 units). In contrast, the recent Traffic Impact Study for TM 6263 (Lennar South of Shepherd between Clovis and Sunnyside, with the "Preuss Access" issue that this Commission just heard in January, itself not considered in the TIS for the current project), considered <u>fifteen</u> near-term projects.

<u>Observations</u>

As an initial matter, there are two significant flaws in the TIS: it uses old traffic count data and doesn't contemplate all of the "Near-term" projects in the area. Without knowing existing and likely future traffic impacts, it is impossible to perform a legally sound CEQA analysis.

The TIS rests on traffic counts from November 29, 2017 and November 30, 2017. Per the City of Clovis *Traffic Impact Study Guidelines* approved August 25, 2014, "[a]vailable existing counts can be used if they are less than twelve (12) months old **and** the traffic volumes have not been significantly changed due to more recent development in the vicinity." There is no ambiguity in the guidelines – existing counts must be less than 12 months old and within those 12 months volumes have not been

significantly changed (i.e., the guideline cannot be read in the alternative). **The TIS, 2020, rests on traffic counts well more than twelve months which cannot properly be**

The TIS further fails to consider, as above, all of the "near-term" projects. It should consider at least the following projects

Approved or Pipeline Project Name
TT 5546
TT 5550
TT 5720
TT 6109
TT 6128
TT 6134A
TT 6145
TT 6154
TT 6180
TT 6190
TT 6200
TT 6263

Importantly, TM 6263 was recently approved by the Council and includes a Shepherd Avenue access point, which per the Traffic Impact Study for that project, estimates that "up to 200 more daily trips will likely use Sunnyside Avenue under the scenario which includes access to Shepherd Avenue". **Yet the TIS fails to at all consider that project.**

The TIS, as above, selectively omits to study the impact of the Sunnyside and Shepherd intersection and the Fowler and Shepherd intersection. The omission is understandable given that these are already problematic intersections. However the TIS is misleading in stating that other than Nees and Sunnyside, "[t]he other study intersections will continue to operate at acceptable levels of service with acceptable queuing conditions". This is true only because it omits particularly problematic intersections such as Sunnyside and Shepherd (which every other TIS in the region identifies as LOS F in the near term).

As to mitigation measures, the TIS indicates that Nees and Sunnyside impact may be minimized by an eight-phase signal system, including on the southbound approach, "one left-turn lane and one through lane with a shared right turn" and that Teague's maximum ultimate lane configuration may include a TWLTL along the center. Yet it also looks only to the City of Clovis General Plan – completely omitting consideration of the circulation element of the Focus Area 7 Master Plan (i.e., the "Dry Creek Preserve Master Plan"). It is altogether troubling that the TIS procured by Woodside Homes fails to give any consideration to the circulation elements of the Dry Creek Master Plan which itself coauthored and supported less than two years ago. **As illustrated above, Sunnyside and Teague Avenues – absent an amendment to the Dry Creek Master Plan, cannot support the mitigation measures that are suggested in the TIS, namely, anything other than two lanes.**

Lastly, and albeit perfunctory to match the analysis provided, the TIS identifies that "consideration may be given to converting the emergency access to a public street." To be concise: unless this project explicitly seeks to designate the connector to Sunnyside as a public street now, and a full CEQA analysis is done on that basis, any discussion of a public street is extraneous and a full CEQA analysis would have to be done proximate in time to the proposed conversion. The CEQA analysis cannot be done in the

alternative to “reserve” the option in the future – the project as submitted to this Co City Council must be sufficiently defined to analyze. **For this reason alone, each of the agenda items pertaining to this project must be denied subject to commitment by the developer, City of Clovis, and the County of Fresno on whether the road is and will be an EVA or a public street.**

It is respectfully requested that all actions in this meeting relating to approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues be denied subject to a revised Traffic Impact Study that provides recommendations which rely on current count data, address the correct scope of “near term projects”, and are consistent with the Dry Creek Preserve Master Plan. Furthermore, denial of all actions is required until such time that definiteness be brought to the status of the EVA / public road matter so a proper CEQA analysis can be done.

Respectfully,

Marcus N. DiBuduo

NORMAN D. MORRISON IV
8195 North Sunnyside Avenue
Clovis, California 93619

February 26, 2020

VIA E-MAIL AND U.S. MAIL
Planning Commission, City of Clovis
1033 Fifth Street
Clovis, California 93612

Dear Members of the Planning Commission:

This letter is written on behalf of myself and other concerned residents and neighbors in the Dry Creek Preserve in response to the application by Woodside Homes for Agenda Item #4 on the February 27, 2020, Planning Commission Meeting, consisting of a Mitigated Negative Declaration for General Plan Amendment GPA2019-006, Prezone R2019-007, Prezone R2020-002, & Vesting Tentative Tract Map TM6284.

I. The Hearing Must Be Continued to March, 2020

As an initial matter, we request that the Commission decline to hear these items as scheduled on the February 27, 2020, calendar, and instead continue the hearing and associated dates until the March 26, 2020, hearing. Recently, Woodside Homes held the required community meeting at Dry Creek Elementary, which was attended by numerous members of the community, many of whom were learning of the proposed development for the first time and had not had an opportunity to review the documents and proposed actions relating to the project. Due to a variety of factors, including concerns regarding traffic impacts and accuracy of traffic data, Matt Smith from Woodside Homes advised those who were present that Woodside was continuing the Planning Commission hearing from February to March to address concerns and issues. Matt Smith has subsequently confirmed Woodside's intention to continue the hearing through e-mails, and has advised that the matter is on the calendar as it apparently could not be removed or withdrawn.

Accordingly, the matter must be continued as the members of the community have been specifically advised by the project proponent that the hearing would be taking place in March, and not February.

II. The Mitigated Negative Declaration and Supporting Documents are Deficient and Defective

A review of the CEQA documents submitted in support of the Proposed Project demonstrates that they are based upon outdated, erroneous materials and fail to take into account not only the actual, current traffic upon Sunnyside, but also fail to take into account the effect of

other developments and projects that are either proposed or actually underway. Accordingly, the documents cannot support the conclusions reached.

First, the traffic study used is based upon outdated and unreliable information. The City's Traffic Impact Study Guidelines require the use of traffic count data that is less than 12 months old. The traffic data used and relied upon in support of this project dates from 2017. As such, not only does this data not include the additional traffic associated with (1) the buildout and completion of Whisper Creek Development; (2) the traffic impacts associated with the Heritage Grove project to the north of Shepherd (which will result in potentially thousands of vehicle trips per day once completed); (3) the traffic impacts associated with the recently approved "right in-right out" for the Lennar Project to the South of Shepherd between Clovis and Sunnyside (which the project proponents themselves have recognized will lead to several hundred additional vehicle trips per day upon Sunnyside Avenue); (4) the pending request by Leo Wilson for the inclusion of the Cal Pecan orchard property at the northeast corner of Shepherd and Sunnyside to be brought within the City's sphere of influence for development (which again will result in significant increased vehicle trips upon Sunnyside and surrounding streets); (5) the increased traffic associated with the shopping center at the intersection of Herndon and Sunnyside (which has resulted in commercial delivery trucks, shoppers, and others using Sunnyside to access the shopping center); (6) increasing through-traffic along Sunnyside from individuals accessing Herndon and highway 168; and (7) other developments, both occurring and proposed, in the neighboring areas.

Additionally, it is noted that the figures used in this traffic study differ significantly from figures used in connection with other traffic studies of the same area. There is no explanation for such a wide disparity in numbers. Nor does the traffic study evaluate the increase in the number of motor vehicle accidents that have occurred at the intersection of Sunnyside and Nees, as many of us who live in the Dry Creek Preserve have either been involved in one or more accidents in recent years or have narrowly avoided being involved in such an accident.

Accordingly, any analysis should consider at a minimum current and proposed development projects in the analysis. This would include TT6263, TT 5546, TT5550, TT5720, TT6109, TT6128, TT6134, TT6145, TT6180, TT6190, and TT6200. It must also include an analysis of the impact of other developments in the nearby area that will affect traffic use on Sunnyside, Teague, and Fowler Avenues.

The traffic study additionally fails to provide any evidence or support for the funding of the proposed mitigation measures, some of which are highly improbable and infeasible due to the physical constraints of Sunnyside Avenue and the existing easements and utility infrastructure. For example, mitigation proposals have been made to widen Sunnyside to accommodate additional lanes, and for the signalization of the intersections at Sunnyside and Nees and Sunnyside and Shepherd. While the signalization of Sunnyside and Shepherd may be feasible, the signalization of Sunnyside and Nees will not address the physical limitations of the roadway

at that intersection which create a "choke point" for traffic. This "choke point" cannot be easily eliminated, due to the existing public utility easements and usage (including use of the property immediately adjacent to the road on both sides for flood control purposes and for electrical transmission lines), the proximity of established homes to the roadway, and other concerns.

III. City's Requirement for a Neighborhood Access Road on Sunnyside

The proposed project identifies an Emergency Vehicle Access corridor ("EVA") along the southern edge of the project, extending to Sunnyside along the northern border of the property located at 8210 North Sunnyside, and existing immediately across from my property located at 8195 North Sunnyside and my neighbor's property located at 8255 North Sunnyside Avenue. According to the project description, the EVA will consist of a developed, hard-surfaced (paved) roadway with control limited by two Opticom-controlled gates. Utilities (sewer, water, etc.) will also be run north along Sunnyside and through the EVA easement. While the project map identifies the EVA as a 60' easement, City staff has made it clear throughout repeated discussions and meetings that the City's express intent is for this EVA to eventually become a full neighborhood access roadway, which residents of the proposed development would use to access directly onto Sunnyside.

The existing CEQA documents do not contain any analysis of the impact and effect of a neighborhood public access roadway vs. an EVA. The CEQA documents do not include any analysis of the impact of a public access roadway upon the neighbors, the safety considerations, or the potential for increased traffic upon Sunnyside (and how much expected traffic could be expected), among other considerations. Nor does the CEQA document identify any considerations or mitigation measures to alleviate concerns of neighbors who reside on Sunnyside. For instance, the proposed EVA/access roadway will exist directly opposite my property, and individuals existing onto Sunnyside will look directly into my children's bedroom windows. The exit point will also be directly opposite a commercial business that has trucks, trailers and other apparatus accessing it on a regular basis throughout the day. The proposed location also consists of a narrow section of roadway, with power poles and mailboxes immediately adjacent to the roadway and across from the proposed access point. The proposed EVA/access roadway is also in a location where there are numerous driveways existing onto Sunnyside (on both sides), and where not only is vision of approaching traffic restricted, but traffic regularly accelerates along this stretch of roadway from the intersection of Sunnyside and Nees.

Further none of the existing CEQA-related traffic studies and analysis for surrounding projects considered or included a proposed public roadway/neighborhood access along Sunnyside. This includes the analysis performed for Heritage Grove and other developments to

the North, Woodside's prior development along Teague and Fowler, and the developments to the South of Nees. We have also been advised that the County will not consent to any such use of the easement.

While the neighbors understand the concerns leading to the requirement for an EVA, we believe that it would be more appropriate for any future neighborhood public access roadways to be designed to funnel traffic to Fowler, as outlined and required by the Dry Creek Master Plan. This could consist of Woodside being required to purchase an easement allowing access now, or an option to allow for the future acquisition of an easement (with appropriate funding being secured and set aside to allow for such further funding). It is understood that Woodside is seeking to utilize the EVA to allow it to minimize the expenses it would incur in connection with running the required utilities, as it would not have to underground the utilities beyond the EVA to Teague and then down Teague into the proposed development. The costs associated with such a savings could certainly be used to fund the purchase of a required regular access point onto Fowler.

Accordingly, as the City has made it clear its intent is for the EVA to become a regular public access roadway in the future, and such a plan is not identified, discussed, analyzed or considered by the CEQA documents, the plan is flawed and deficient.

IV. Other Concerns

Residents of the Dry Creek Preserve additionally have other concerns regarding the impact of the proposed development. One key concerns relate to the significant likelihood of smoke, dust, odor and similar complaints made by future residents of the proposed development. The residents of the Dry Creek Preserve in this area rely, either primarily or in part, upon using wood burning fireplaces to provide heat for their residences in the winter months. We do not have access to natural gas, and as such are exempt from the various requirements imposed by the Air District, including "Burn/No Burn days" and other similar restrictions. Due to the proximity of the proposed development to neighbors who have wood burning heaters, there exists a strong probability that these residents will lodge complaints regarding the smoke. Similar concerns exist with dust, fumes, odors and other conditions associated with a rural, agricultural lifestyle as many neighbors still have horses and other large animals and/or trees, and as a result significant amounts of dust accumulates in the area of the proposed development. These concerns have been expressed to both City staff and the Project Proponent, and they have advised they believe a Right to Farm and similar notification would provide some protection. Accordingly, any approval of the project should require such notifications, and specifically identify that the surrounding Dry Creek Preserve properties are intended third-party beneficiaries and have the right to enforce such agreements in the future.

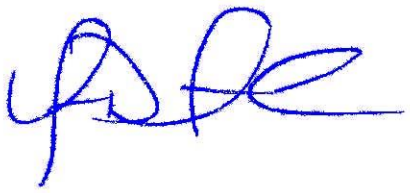
Neighbors additionally have concerns about the Air Quality and health risk impact assessment, and believe that these elements need further analysis and mitigation measures.

Other concerns are also expressed about the impact of the proposed development upon surrounding wildlife, as the project site is known to harbor a wide variety of wildlife including raccoons, skunks, foxes, possums, raptors, birds, coyotes, ground squirrels, and other animals. No adequate mitigation for the loss of habitat has been identified, and the loss of habitat. As it currently stands, many of us in the Dry Creek Preserve are experiencing an increase in rodents (including rats and ground squirrels) that has increased since surrounding development projects have commenced. It is expected that our properties will be directly and adversely affected by the loss of habitat associated with the project. As such, we would request that adequate mitigation measures be implemented.

Thank you for the opportunity to comment on Woodside's project. We look forward to the opportunity to review any updated materials, including any updated technical studies and recirculated initial study checklist/CEQA documents. We additionally reserve the right to submit additional comments due to the continuance of the hearing.

Please do not hesitate to contact me if you or any members of the City Staff have any concerns. I am planning on being present at the hearing on this matter.

Sincerely,



Norman D. Morrison IV

From: PC Public Comments <email@cityofclovis.com>
Sent: Monday, April 6, 2020 3:21 PM
To: David Merchen
Subject: [CAUTION SPOOFING] Planning Commission Public Comments

Planning Commission Meeting Date: 2020-04-09
Item Number: 6
Name: Dean Uhrig
Email: valandall@gmail.com
Comment: I have a few concerns regarding this proposal:
*I do not think the road should be widened as it puts several houses on Sunnyside Ave too close to the widened road. My house is one of the ones that is close to Sunnyside.
*Widening Sunnyside as some have suggested will encourage people to use this county road more and to increase their speed putting us residents, pedestrians and bikers more at risk than we already are.
*Additionally, the wear and tear on this county road by the now New Clovis city residents will not be the responsibility of the City of Clovis to repair or be concerned about. This puts us Sphere of Influence Residents once again taking the brunt of Clovis' expansion plans without any accountability on the city's part.

The natural deterrent of a small county road will force the new residents to use Fowler Ave. more. Which is what the developer stated was their intent to rely on traffic going towards Fowler Ave. Can the Clovis City instruct the county to reduce the speed limit on Sunnyside due to the increased traffic from this development? A 4 way stop sign at Teague and Sunnyside would help mitigate the speeding that is already occurring.

Date: April 6, 2020
Time: 3:21 pm
Remote IP: 108.199.84.186

AGENDA ITEM NO. 4.

David Merchen

From: PC Public Comments <email@cityofclovis.com>
Sent: Monday, April 6, 2020 1:11 PM
To: David Merchen
Subject: [CAUTION SPOOFING] Planning Commission Public Comments

Planning Commission Meeting Date: 2020-04-09
Item Number: 6
Name: Kathleen Powell
Email: kwpowell@sbcglobal.net
Comment: City of Clovis Planning Commission Members,
Thank you for this opportunity to have my voice be heard regarding the significant changes being proposed to the Dry Creek Preserve. I have lived at 4891 East Teague for more than 40 years with my family owning the property prior to that. We were among the families that planted many of the pecan trees found within the Dry Creek Preserve. In the 1960's as I worked beside my parents and siblings planting the trees, we had a vision of what this exceptional beautiful rural area had to offer as a home and sanctuary to the busy, quickly developing Clovis area. Unfortunately I now fear the lifestyle for not only myself, but for my neighbors within my community is about to disappear.

The proposal for the development of the 50.80 acres of land in the southwest area of Teague and Fowler will interfere and more than likely destroy what was intended for this area. The traffic will doom the countryside, as will the pollution that will result from the number of houses that Woodside Homes wants to build. No longer will we have the rural and tranquil lifestyle that was chosen by moving into this area. I've heard comments at City Council meetings regarding the problems that Dry Creek Preserve has created by the piecemeal of the land as more and more development moves in. However, what is now being proposed is truly tragic for what was thought to be the Clovis Way of Life. We did not create this piecemeal, we were here first. I feel not only has Woodside Homes misled us as we the residents of the area worked with them to save this area which we treasure, but the Clovis City Council and the City Planning Commission have also duped us as it has all come down to the bottom line of money with no consideration of those of us who live in the area and the harm that will result.

Residents in the many track developments surrounding the area of Dry Creek Preserve also benefit from keeping this area rural. I have seen and felt the temperatures rise as more and more concrete is put down north of Herndon Avenue. The orchards and open spaces within the area offer a balance to the ever crowding and developing lands near by. To think that this could be lost is something that I feel many will regret, especially since the need is greater to honor what we have and not take it away because of greed without consideration for those that may suffer from decisions such as these. Please take to heart the feeling of the current residents. Maybe imaging how each of you would feel if you had invested the labor of love many of us have within the Dry Creek Preserve, and someone was proposing taking it away from you, does that help you understand our fear and hurt?

Thank you again for your ear and the time to express myself in this important decision which will have a huge impact on the citizens of the Dry Creek Preserve who cherish what we have.

Respectfully.
Kathleen Powell

Date: April 6, 2020
Time: 1:11 pm
Remote IP: 45.25.83.204

From: Orlando Ramirez
Sent: Thursday, April 09, 2020 1:43 PM
To: Maria Spera
Subject: FW: Woodside Homes development

Letter of support

From: Charles Merrill [mailto:forcho127@sbcglobal.net]
Sent: Tuesday, April 7, 2020 7:25 PM
To: Orlando Ramirez <OrlandoR@ci.clovis.ca.us>
Subject: Woodside Homes development

Sirs:

As owners of property in consideration of development with Woodside Homes, my wife Sheree Merrill and I would like this statement to be read into the record on Thursday, April 9. 2020. We support this development. We have lived on this property for over 30 years, raised a family,and now must prepare for the future, knowing that some kind of assisted living arrangement will be needed for us eventually. We believe that Woodside's entitlements should be approved, being consistent with the approved Dry Creek Preserve Master Plan.

Sincerely,
Charles Merrill

From: Orlando Ramirez
Sent: Thursday, April 09, 2020 1:47 PM
To: Maria Spera
Subject: FW: Letter to Planning Commission - Woodside Dry Creek Preserve project.

Letter of support

From: AA AA [mailto:amaraulakh@gmail.com]
Sent: Wednesday, April 8, 2020 11:34 PM
To: Orlando Ramirez <OrlandoR@ci.clovis.ca.us>; George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Matt Smith <MattS@woodsidehomes.com>
Subject: Letter to Planning Commission - Woodside Dry Creek Preserve project.

City of Clovis Planning Commission
Attn: George Gonzalez and Orlando Ramirez,

Re: TM 6284 - April 9,2020 Hearing.

Dear Clovis Planning Commissioners,

My name is Amardeep S Aulakh and I'm the owner of property at 8325 N Fowler Ave, Clovis CA 93619. I am writing this letter to support Woodside Homes plan to develop my land in Dry Creek Preserve. As you know any access to my property is through an easement road off of Fowler ave which is about ~500ft. This is a privately paved path, and I have to pay for maintenance and repair of this easement which is extremely expensive. Also even after the annexation, due to being so far away from Fowler ave, the chances of me connecting to and obtaining access to City water and sewage are close to nill because of huge expense it would entail. Therefore best use for my land parcel would be if it can developed as part of a major development project such as the one Woodside Homes is proposing, where it can be subdivided and all residence on the property would have proper access along with benefit of city resources such as city water and sewage. Furthermore, due to Covid-19 pandemic's financial impact on my family and business, being able to sell this land will be a big help for my family's financial viability and stability.

Hence, I humbly request that, you allow me to exercise my property rights by working with Woodside to develop the land and approve Woodside's entitlements as they are consistent with the approved Dry Creek Preserve Master plan.

Thank you,

Sincerely,

Amardeep S. Aulakh

AGENDA ITEM NO. 4.

David Merchen

From: PC Public Comments <email@cityofclovis.com>
Sent: Wednesday, April 8, 2020 1:05 PM
To: David Merchen
Subject: [CAUTION SPOOFING] Planning Commission Public Comments

Planning Commission Meeting Date: 2020-04-09
Item Number: 6
Name: Catherine Ross
Email: rossercm@sbcglobal.net
Comment: I am disturbed that a building proposal of this importance in the Dry Creek Preserve (DCP) is allowed to slide through without in-person representation. The City Council has maintained that any development in the DCP be cohesive and maintain the character of the neighborhood. The General Plan (GP) is also very specific in regard to what and how development in the DCP should take place. This proposal by Woodside is totally incompatible with the GP. Woodside has already cut a chunk of the DCP out with their Fowler development. There is nothing in their proposal that is conducive to the character of the DCP. What it does do, is literally cut the heart out of the DCP. The traffic alone changes the landscape. Many people in the neighborhood have animals of various kinds. Where will they be able to safely ride their horses? There are no trails, parks, etc., within this proposal. Also, people from neighboring developments regularly come to our neighborhood to walk, ride their bikes, jog, and just get that country feeling not available in their neighborhoods.
Already, the traffic situation on Nees is impossible to navigate. If traffic studies are correct, this development will add 700 more cars to an already burgeoning situation. What else is noteworthy, is that all of the studies conducted to justify Woodside's development are guidelines used for city developments - we are not within City limits, therefore, these studies are not relevant. None of these solutions provide a thoughtful, comprehensive plan for our country neighborhood. It is unthinkable to add 74 homes in the middle of this area.
Builders see an open plot of land and use whatever means they can to turn a profit, no matter what he consequences. I urge you to stop this cancer.

Date: April 8, 2020
Time: 1:05 pm
Remote IP: 108.92.182.241

April 8, 2020

Mr. George Gonzalez, MPA
Associate Planner
Planning and Development Services, City of Clovis
1033 Fifth Street
Clovis, CA 93612

Subject: Public Review Comments on Woodside Homes of Fresno, LP GPA2019-006, R2019-007, R2020-002, TM6284, & RO301Initiatl Study and Mitigated Negative Declaration

Dear Mr. Gonzalez:

Thank you for providing the revised traffic impact study as a supplement to the Initial Study Mitigated Negative Declaration, dated February 2020 for the Woodside Homes of Fresno, LP project located at the southwest corner of Fowler and Teague. The revised traffic report addressed some of my concerns (i.e., updated traffic counts, cumulative analysis); however, as provided below, I still have several concerns with the CEQA document, specifically with the project description, technical analyses, and with the traffic mitigation that have yet to be addressed by the City.

Project Description

As provided in my previous comments to you, the project description states that the project would construct 74 single-family residences on 32.19 acres and rezone a total of 50.8 acres to Clovis R-1 (Single Family Residential). Therefore, in addition to the 74 homes, the full development potential of the site includes an additional 18.61 acres that would be developed in the future as Single Family Residential. Depending on the zoning, the R-1 designation allows for residential uses at a density between 2.1 to 15.0 units per acre. We understand that a Tract Map will be circulated at a later date, however, for purposes of this CEQA analysis, which includes the entire 50.8 acres of rezoning, the CEQA analysis must consider the full development potential of the project rezone. CEQA prohibits project “piecemealing” so the project entire project site as outlined in Figure 1 of the IS/MND must be considered in the CEQA analysis.

As described below, the CEQA analysis is inadequate because throughout the technical analysis only 74 units and 32.19 acres of the project site were evaluated. All of the technical studies, including the air quality, traffic (including the revised analysis), biological, and cultural resources are based on a 32 acre project site and 74 units. Based on the rezone of 18.61 acres to R-1, the project has the development potential of up to 279 homes, in addition to the 74 currently proposed. Therefore, impacts are significantly underestimated.

The analysis must be revised to consider the full project development potential of the rezone, and the CEQA document must be recirculated for public review.

Traffic

The Revised Traffic Impact Study (March 3, 2020) by Peters Engineering identifies Mitigation Measures that would be required that are not included in the CEQA document. The CEQA document must be updated to reflect the requirements as outlined in the traffic report.

Mitigation Measure TRAF-1 in the Initial Study only requires the signalization of the intersection of Fowler and Teague. Page 17 of the Revised Traffic Impact Study states "The intersection of Teague and Fowler Avenues would require signalization to operate at acceptable levels of service. With signalization and the following lane configurations, the intersection would operate at LOS B during the a.m. and p.m. peak hours:

- Eastbound: one left-turn lane and one through lane with shared right turn;
- Westbound: one left-turn lane and one through lane with a shared right turn;
- Northbound: one left turn-lane and two through lanes with a shared right turn;
- Southbound: one left-turn land and two through lanes with a shared right turn.

Pages 17-18 include specific mitigation measures for the project that are not included in the CEQA document. Therefore, in order for the mitigation to be legally adequate, Mitigation Measure TRAF-1 should be modified as follows:

> Mitigation Measure TRAF-1: The project proponent and/or applicant shall contribute their proportional share of traffic impact fees (street fees) for the future complete signalization of the following three (3) intersections: (1) signalization at the intersection of Teague and Fowler Avenues; (2) signalization at the intersection of Nees and Sunnyside Avenues; and (3) signalization at the intersection of Nees and Fowler Avenues. <u>The project proponent/applicant shall also contribute to the following additional improvements: widening of Fowler Avenue to two lanes from Nees Avenue to Shepard Avenue, installation of one eastbound and one westbound turn lane on Teague Avenue, installation of one northbound and one southbound left turn lane at the intersection of Teague and Fowler. The project proponent shall also contribute to the following improvements at the intersection of Nees and Sunnyside: one eastbound, westbound, northbound, and southbound turn lanes.</u>

Additionally, as requested previously, the City needs to provide evidence that the necessary improvements identified in TRAF-1 will be funded. Mitigation Measure TRAF-1 would require the developer to pay a proportionate share of signalization; however, there is no evidence that the mitigation measure will be implemented, and the timing has not also been specified, which is not consistent with the requirements of CEQA. Additionally, Under the CEQA, there can be no assumption that impacts would be mitigated simply by paying a fee. Therefore this mitigation measure is inadequate to mitigate the project's traffic impacts until such time as the programming has been identified.

Mitigation Measure TRAF-1 must be revised to reflect the full intersection geometry for each intersection evaluated in the TIS under the mitigated scenario as outlined on pages 17-18 of the Revised Traffic Impact Study.

Air Quality

As I previously commented, the air quality analysis only included an emission assessment of the 74 homes. The Air Quality Impact Analysis should be revised to assess the total impacts of the full development potential. Additionally, the assessment did not evaluate the project's health risk impact. The San Joaquin Valley Air Pollution Control District has established a significance threshold of 20 cancer cases per million for increased cancer risk. The project, in combination with the previously approved Woodside development north of Teague would emit diesel exhaust during the construction period directly effecting my residence, which has been identified as a toxic air contaminant by the California Air Resources Board. The Air Quality Impact Analysis should quantify the project cancer risk during the construction period to the surrounding residential receptors. The analysis should also consider the cumulative health risk of Woodside's concurrent development projects.

Thank you for the opportunity to comment on this project. We look forward to reviewing the updated technical studies and recirculated initial study checklist.

Sincerely

Corey File

David Merchen

AGENDA ITEM NO. 4.

From: PC Public Comments <email@cityofclovis.com>
Sent: Wednesday, April 8, 2020 1:09 PM
To: David Merchen
Subject: [CAUTION SPOOFING] Planning Commission Public Comments

Planning Commission Meeting Date: 2020-04-09
Item Number: 6
Name: Philip Ross
Email: philross99@gmail.com
Comment: I recommend that this application be rejected because it does not comply with the intent of the Dry Creek Preserve Master Plan (DCPMP). Section 1.3 of DCPMP states intent is to acknowledge/preserve DCPs open-space character and encourage future development compatible with rural neighborhood. Section 4.0 of DCPMP (Goals) emphasizes maintenance of signature rural look/feel, western way of life, predictability in development guidelines, and allowances of densities up to 2.3 SFR/acre.

Application as submitted includes typical city-type layout of subdivision with straight streets and nearly half the lots at 12,000 ft2 or less, placing 2 to 7 new homes adjacent to existing RR parcels. Average density is 2.3 SFR/acre, matching Woodside's approved 92-lot project immediately north of Teague. The DCPMP envisioned 2.3 SFR/acre as maximum for development, interspersed with less dense development such that compatibility with rural neighborhood could be maintained. Approval of this density sets precedent for nearly half of the expected developable acreage (78 of 167 acres). Neither of Woodside developments includes open space or trails or other rural access to DCP.

Mitigated Negative Declaration uses basin-wide, city-wide, and regional data for comparisons. This development is surrounded by rural County and statements regarding project compliance with City standards for glare, roads, traffic are inappropriate, given the rural nature of the DCP. Further, comparisons to groundwater impact are specious as this area is unique in that much of its recharge is dependent upon local infiltration (which will be diminished by housing developments and watering restrictions) and individual wells cannot be supplemented by basin-plan transfers as most are domestic. The assertion that this development does not divide an existing community is preposterous given the years of DCP involvement in preservation of this area. It literally splits DCP in half.

Date: April 8, 2020
Time: 1:09 pm
Remote IP: 108.92.182.241

From: Orlando Ramirez
Sent: Thursday, April 09, 2020 1:45 PM
To: Maria Spera
Subject: FW: Woodside's application for the Tentative Map, General Plan, and Re-zone

Letter of support

From: Rick Warren [mailto:rick@cambriaviewhomes.com]
Sent: Wednesday, April 8, 2020 2:14 PM
To: Orlando Ramirez <OrlandoR@ci.clovis.ca.us>; George Gonzalez <georgeg@ci.clovis.ca.us>
Cc: Matt Smith <MattS@woodsidehomes.com>; sue@cambriaviewhomes.com
Subject: Woodside's application for the Tentative Map, General Plan, and Re-zone

To the Clovis planning department and city commissioners

My wife Sue and I have owned our home with approximately 8 acres since 1991 at 8210 N Sunnyside APN # 559 021 69.

First of all we'd like to thank all the personnel in the planning department that have worked so hard on this project especially lately with the current pandemic.

We have been working with Matt and Chris from Woodside homes for almost 15 years to develop our land. We are all so fortunate that Woodside has stayed the course.

In our neighborhood we have a serious negative condition of urban blithe. The best use of our land is new homes, trees, water, and all new utility infrastructure. Please consider the following:

1) We request that Woodside's entitlements be approved as they are consistent with the approved Dry Creek Preserve Master plan.
2) We desire to exercise our property rights by working with Woodside to develop the land.
3) The sale of our land represents our life savings. We are now 66 years old and would like to retire after working all our lives with grandchildren that need help with higher education.

Please read this email it into the record.

Thank you,

Rick Warren Sue Warren
Cell: (805) 395-0668
Email: Rick@CambriaViewHomes.com

From: Renee Mathis
Sent: Thursday, April 09, 2020 3:16 PM
To: Maria Spera
Subject: FW: City Council, Planning Commission Meetings, Woodside, Dry Creek Preserve

FYI

Renee Mathis | Assistant Director
City of Clovis | Planning & Development Services p. 559.324.2351 | f. 559.324.2844
reneem@cityofclovis.com

-----Original Message-----
From: John Holt
Sent: Thursday, April 9, 2020 3:13 PM
To: Renee Mathis; David Wolfe
Cc: Orlando Ramirez
Subject: RE: City Council, Planning Commission Meetings, Woodside, Dry Creek Preserve

This should be read into the record during public comment on the Woodside project tonight.

-----Original Message-----
From: Renee Mathis
Sent: Thursday, April 9, 2020 3:07 PM
To: John Holt <johnh@ci.clovis.ca.us>; David Wolfe <dwolfe@lozanosmith.com>
Subject: FW: City Council, Planning Commission Meetings, Woodside, Dry Creek Preserve
Importance: High

FYI

Renee Mathis | Assistant Director
City of Clovis | Planning & Development Services p. 559.324.2351 | f. 559.324.2844
reneem@cityofclovis.com

-----Original Message-----
From: Jacquie Pronovost

Sent: Thursday, April 9, 2020 1:23 PM
To: Renee Mathis
Cc: Orlando Ramirez
Subject: FW: City Council, Planning Commission Meetings, Woodside, Dry Creek Preserve
Importance: High

Hi Renee,

I just received this email regarding tonight's Planning Commission meeting. Who should I forward this to?

Jacquie Pronovost
Executive Assistant to City Manager
City of Clovis
Ph: (559) 324-2063

-----Original Message-----
From: Charles Keller [mailto:exadvent@pacbell.net]
Sent: Thursday, April 09, 2020 1:19 PM
To: Jacquie Pronovost <JacquieP@ci.clovis.ca.us>
Subject: City Council, Planning Commission Meetings, Woodside, Dry Creek Preserve

Mr. Whalen, Mrs. Ashbeck, Mr. Mouanoutoua,

My family has lived on Teague Ave in the Dry Creek Preserve for 30 years. We have come and spoken at Planning Commission and Council meetings over the years especially since Woodside has invaded our space the past 3 years. We now live in the City of Clovis because of their efforts. We have come to expect the approval of every application by Woodside due to the amount of influence they appear to have with the planners and council. We have seen upwards to 80 nearby property owners speak against their projects and somehow they still seem to get approved. We spoke to you last month asking very plaintively how building more homes benefited the current residents of the City of Clovis and honestly there was not one good answer. I was a college instructor for nearly 40 years and listen very well. There are currently numerous homes and properties for sale in the north east area of Clovis. The only obvious groups that benefit are Woodside Homes and your planning staff not the vast majority of your voting residents.

There is supposed to be a Planning Commission meeting this evening and we, your constituents, cannot be there due to C19. You are offering a couple methods of participation. They do not compare with us actually being in the room and speaking our hearts and minds. You know this. An email or phone participation is not even close to the value of in person participation. This should not happen. It is undemocratic. We, your constituents are being toyed with by your developers. They and your planning staff are using the C19 event to bypass your voters; especially the ones intimately involved in these developments.

Please stop this. They are ruining our rural life and doing so by default because you are letting them. Stop this discussion until we can at least be there to face them and ask the hard questions that perhaps you will listen to and not just read.

We breathlessly await your efforts for our city's democratic participation. Thank you for reading and pondering this. We would appreciate a response. chuck and lisa keller 1717 Teague Ave Clovis 93619

City of Clovis
Planning Commission
1033 Fifth Street
Clovis, CA 93612

RE: AGENDA ITEM #6 (Commission Meeting April 9, 2020) Items associated with approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues.

Dear Commissioners:

The Dry Creek Preserve Master Plan ("DCP Master Plan"), which the Council approved on June 4, 2018, discussed several circulation elements within the Dry Creek Preserve (e.g., Focus Area 7). Among them:

- Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues. (Sec. 12.0)
- Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues. (Sec. 12.0)
- Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues. (Sec. 12.0)
- In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area. (Sec. 12.1)
- Sunnyside Avenue is a designated Collector Street in the Clovis General Plan and Regional Transportation Plan. (Sec. 12.2.2)
- Sunnyside Avenue is planned to remain a rural-appearing collector street, with one twelve-foot-wide travel lane in each direction. (Sec. 12.2.2)
- Developments fronting onto Sunnyside will be required to provide along their street frontage, an 11'-wide travel lane, a 5'-wide bicycle lane, construction of asphalt curbs and competent street drainage [ ], and a four-foot-wide decomposed granite or asphalt walkway. (Sec. 12.2.2)
- Non-developed reaches of Sunnyside will have an 11-foot-wide travel lane, a five-foot-wide bile lane, and a four-foot unpaved shoulder, without drainage facilities [ ]. (Sec. 12.2.2)
- Teague Avenue between Fowler and Sunnyside is planned to have one eleven-foot-wide travel lane and a five-foot-wide bicycle lane in each direction. In developed reaches, a five -foot-wide walkway will also be required, separated from traffic by a four-foot-wide landscaped separator on the developed side, wherever development with street frontage occurs. (Sec. 12.2.3)

It should be abundantly clear that the Council's intention for the Dry Creek Preserve was to maintain and provide a unique residential element, including maintaining slower less intensive traffic on Sunnyside Avenue and Teague Avenue. Pursuant to the DCP Master Plan, Sunnyside Avenue and Teague Avenue (between Sunnyside and Fowler) were each to have the following street configuration and required right-

of-way widths for segments of the roadway that are adjacent to both developed properties:

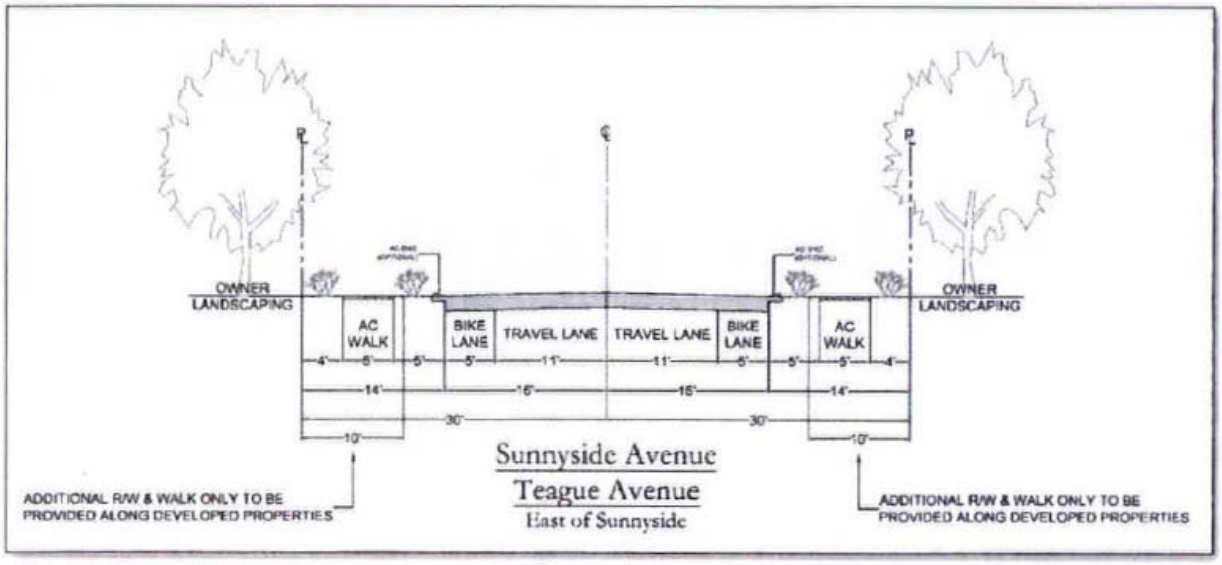


Figure B: Sunnyside Avenue and Teague Avenue East of Sunnyside

The Initial Traffic Impact Study

In the Traffic Impact Study for the Proposed McKenney Assemblage prepared by Peters Engineering Group on February 4, 2020 (the "TIS"), "traffic counts" and analyses are provided for the (i) Teague Avenue / Sunnyside Avenue, (ii) Teague Avenue / Fowler Avenue, (iii) Nees Avenue / Sunnyside Avenue, and (iv) Nees Avenue / Fowler Avenue intersections ("Study Intersections"), analysis are provided for (i) Fowler Avenue between Teague and Nees Avenues and (ii) Sunnyside Avenue between Teague and Nees Avenues road segments ("Study Segments"), and signal warrant analyses are provided only at Teague / Sunnyside and Teague / Fowler ("Warrant Analyses").

The TIS explicitly states that excluded from the Warrant Analyses are the intersections of Shepherd / Sunnyside, Nees / Fowler, Shepherd / Fowler, and Nees / Armstrong because those intersections are already signalized or other projects have been conditioned upon construction of signals.

The only "Near-term" projects which were considered in the relevant portions of the analysis were limited to two: the Applicant's Tract 6154 (NW Corner Fowler and Teague; 95 units) and Lennar Phase 1 Tract 6200 (Shepherd and Clovis; 586 units). In contrast, the recent Traffic Impact Study for TM 6263 (Lennar South of Shepherd between Clovis and Sunnyside, with the "Preuss Access" issue that this Commission just heard in January, itself not considered in the TIS for the current project), considered fifteen near-term projects.

The Revised Traffic Impact Study

The undersigned is aware of a Revised Traffic Impact Study dated March 3, 2020 and a corresponding addendum letter report (collectively the "Revised TIS"). The addendum letter report expressly states that it "supersedes a previous letter dated February 20, 2020. The previous letter dated

February 20, 2020 is neither in the meeting packet nor the CEQA documents, and f
referenced in the Notice of Intent to Adopt a Mitigated Negative Declaration dated Feb

Moreover, the Revised TIS cannot be considered either. As stated in the Staff Report, "the updated Traffic Impact Study was not performed as a result of any deficiency found in the environmental analysis, but rather, it was provided to help clarify concerns of the neighborhood… [and] does not change or add new mitigation measures in the environmental analysis." On April 2, 2020, in response to a question about whether the Revised TIS would be presented to the Commission, Mr. George Gonzalez emailed the undersigned confirming that "the Planning Commission staff report and associated CEQA documents will NOT have the updated TIS attached".

Importantly also, though the undersigned received an advance copy of the Revised TIS on March 19, 2020, it was not made publicly available on the City of Clovis' CEQA page until about April 3, 2020.

Therefore, the Revised TIS and corresponding addendum letter cannot be considered in making a decision on this project. **The Planning Commission can only consider the initial TIS.**

Observations on the TIS

As an initial matter, there are two significant flaws in the TIS: it uses old traffic count data and doesn't contemplate all of the "Near-term" projects in the area. Without knowing existing and likely future traffic impacts, it is impossible to perform a legally sound CEQA analysis.

The TIS rests on traffic counts from November 29, 2017 and November 30, 2017. Per the City of Clovis *Traffic Impact Study Guidelines* approved August 25, 2014, "[a]vailable existing counts can be used if they are less than twelve (12) months old **and** the traffic volumes have not been significantly changed due to more recent development in the vicinity." There is no ambiguity in the guidelines – existing counts must be less than 12 months old and within those 12 months volumes have not been significantly changed (i.e., the guideline cannot be read in the alternative). **The TIS, dated February 4, 2020, rests on traffic counts well more than twelve months which cannot properly be used in the study, regardless of whether there have been any changes to traffic volumes in the vicinity.**

The TIS further fails to consider, as above, all of the "near-term" projects. Page 4 of the TIS indicates that it considered only two projects: TM6154 and TM6200. It should consider at least the following projects: TT5546, TT5550, TT5720, TT6109, TT6128, TT6134A, TT6145, TT6154, TT6180, TT6190, TT6200, and TT6263.

Importantly, TM6263 was recently approved by the Council[1] and includes a Shepherd Avenue access point, which per the Traffic Impact Study for that project, estimates that "up to 200 more daily trips will likely use Sunnyside Avenue under the scenario which includes access to Shepherd Avenue". **Yet the TIS fails to at all consider TM6263 at all, and in its final configuration. Since TM6263 is an approved project at the time that the present project is being presented to the Planning Commission, the TIS must consider it.**

The TIS, as above, also selectively omits to study the impact of the Sunnyside and Shepherd intersection and the Fowler and Shepherd intersection. The omission is understandable given that these are already problematic intersections. However, the TIS is misleading in stating that other than Nees and

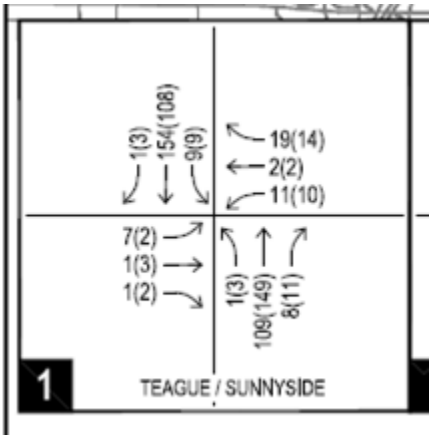
[1] On February 18, 2020… fourteen days *after* the present TIS was prepared.

Sunnyside, "[t]he other study intersections will continue to operate at acceptable lev[illegible] acceptable queuing conditions". This is true only because it omits particularly proble[illegible] such as Sunnyside and Shepherd (which every other TIS in the region identifies as LOS F in the near term).

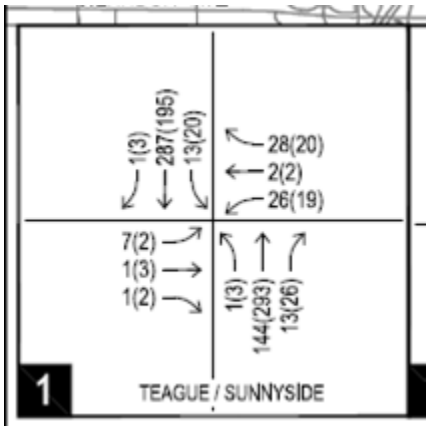
As to mitigation measures, the TIS indicates that Nees and Sunnyside impact may be minimized by an eight-phase signal system, including on the southbound approach, "one left-turn lane and one through lane with a shared right turn" and that Teague's maximum ultimate lane configuration may include a TWLTL along the center. Yet it also looks only to the City of Clovis General Plan – completely omitting consideration of the circulation element of the Focus Area 7 Master Plan (i.e., the "Dry Creek Preserve Master Plan"). It is altogether troubling that the TIS procured by Woodside Homes fails to give any consideration to the circulation elements of the Dry Creek Master Plan which itself coauthored and supported less than two years ago. **As illustrated above, Sunnyside and Teague Avenues – absent an amendment to the Dry Creek Master Plan, cannot support the mitigation measures that are suggested in the TIS, namely, anything other than two lanes.**

The Project will have a Significant Impact on Traffic

Traffic in the Dry Creek Preserve is already a problem and will be made worse by additional development, especially development without meaningful consideration of traffic mitigation measures. Assuming that the traffic analysis in the Revised TIS reflects a more accurate assessment of current and future traffic, the summary charts of the intersection of Shepherd and Teague tell the story of what the per hour traffic in the AM (and PM) peak windows look like and will look like:



Current



Near Term Plus Project

As illustrated, southbound through traffic is expected to increase from 154 to 287 vehicles per hour in the morning peak window (***an increase of 86%***) and from 108 to 195 vehicles per hour in the evening peak window (***an increase of 80%)***. Northbound through traffic is expected to increase from 109 to 144 vehicles per hour in the morning peak window (***an increase of 32%)*** and from 149 to 293 vehicles per hour in the evening peak window (***an increase of 97%)***. Sunnyside is a two-lane rural residential road with approximately 50 connecting private driveways from Nees to the Enterprise Canal (approximately 2000 feet). Peak traffic of nearly 450 vehicles per hour (one every 7.5 seconds) is a dangerous condition as residents are attempting to enter and/or exit on Sunnyside, including livestock vehicles, tractors, etc.

The County of Fresno is in the planning stages for implementing traffic calming measures along Sunnyside, which may include center concrete medians. They are also in the planning stage for

implementing some type of bike and trail system to enable safer pedestrian and bic[illegible] stands now, there is no designated walking path down Sunnyside, and thus no safe [illegible] development to the nearest elementary school, Century Elementary.

In conclusion, procedural and substantive deficiencies in the Traffic Impact Study is deficient and thus cannot be used in supporting the Adoption of a Mitigated Negative Declaration. At a minimum the TIS must be revised before proper CEQA analysis can be done.

Defects in the Conditions of Approval

The proposed Conditions of Approval have defects in several respects concerning Dedications and Street Improvements. The Applicant is required to provide the following in Section 60:

> Fowler Avenue – For nonadjacent major street requirements, between the Enterprise Canal and Teague Avenue, dedicate to provide right-of-way acquisition for 30' east centerline and 30' west of centerline, and improve with median island, median island landscaping and irrigation, 32' (16' east + 16' west) permanent paving, permanent paving and overlay as necessary to match the existing permanent pavement, 3' paved swale, and transitional paving as needed, or another City approved alternate route.
>
> Teague Avenue – Along frontage, dedicate to provide right-of-way acquisition for 30' (exist 20') north of centerline, and improve with asphalt dike or other approved drainage system, 5' asphalt sidewalk, drive approaches, curb return ramps, street lights, landscape strip, 32' (16' north + 16' south) permanent paving, and transitional paving as needed. For nonadjacent major street requirements, the applicant shall provide between Tract Map 6284's western limit and Sunnyside Avenue, 32' (16' north + 16' south) of permanent paving, asphalt dike or other approved drainage system, and all transitional paving as required, or another City approved alternate route. Street improvements shall not be reimbursable in areas where underground utilities are not installed but ultimately required.
>
> Sunnyside Avenue – Between Portland Avenue and Nees Avenue, 32' (16' west + 16' east') permanent paving, 3' paved swale, and transitional paving as needed.

As an initial matter, it is unclear why there are conditions pertaining to Fowler Avenue in the Conditions as this project is not adjacent to Fowler. With respect to Teague, the Conditions require right-of-way acquisition for 30 feet to the north of the centerline and 32 feet of total permanent paving. It is unclear how the applicant can obtain a 30 foot right of way to the north of Teague as the project is to the south of Teague. Compliance with the standards in the DCP Master Plan is required.

It appears that the applicant is being required to provide permanent paving between along Teague between the western edge of the project and Sunnyside. Between this project and the applicant's earlier approved project to the north of Teague, it is presumed that the Applicant will be paving the entirety of Teague.

With respect to Sunnyside, it is requested that the applicant be required to provide permanent paving from Nees to Teague. A midblock transition to permanent paving with differing widths from

existing widths along this stretch is likely to be problematic from a circulation perspectiv
currently exist on Teague which will thankfully be alleviated by the applicant as conditio
and the transition point would be better placed at the intersection of Teague and Sunnyside.

Concerns with the Fire Apparatus Access Road

Lastly, the proposed project includes a Fire Apparatus Access Road (FAAD) in the southwest area of TM6284 which connects to Sunnyside Avenue. The ultimate width of the FAAD is 54 feet, but as indicated in the Staff Report, the 42-foot FAAD will be provided to the City of Clovis in fee title at this time.

However, the Staff Report indicates that the FAAD will eventually become a City public street in the future, as development occurs on the north and south sides of its alignment. The TIS indicates that "consideration may be given to converting the emergency access to a public street". Apart from these perfunctory comments, the conditions upon which the FAAD will become a City public street are absent. Concerningly the Staff Report omits significant discussions that have occurred between the City, the applicant, the County of Fresno, and residents in the Dry Creek Preserve (some of which is indicated in the attached).

The TIS gives little mention to the FAAD. Although it states that "[a]n estimate of the project trips that would likely occur at the site access roads if the emergency vehicle access connecting to Sunnyside Avenue were to become a public street at some time in the future is presented in Figure 6B, Project Trips at Site Access Roads – Potential Future Condition", no Figure 6B was provided.

To underscore the importance of the FAAD on the project, the Revised TIS (which, as above, cannot be considered as part of the project) was made solely in response to the City's request for "operational analyses be performed for the future site access road connecting to Sunnyside Avenue (at the location of the proposed emergency vehicle access)."

Unless this project explicitly seeks to designate the connector to Sunnyside as a public street now, and a full CEQA analysis is done on that basis, any discussion of a public street is extraneous and a full CEQA analysis would have to be done proximate in time to the proposed conversion. The CEQA analysis cannot be done in the alternative to "reserve" the option in the future – the project as submitted to this Commission and the City Council must be sufficiently defined to analyze. **For this reason alone, each of the Agenda Items pertaining to this project must be denied since the City has indicated its intention of making the FAAD a full city road but no CEQA analysis was performed under this undefined condition. At a minimum, the TIS should be revised to address the circulation patterns of this project should the FAAD become a full city road.**

Conclusion

It is respectfully requested that all actions in this meeting relating to approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues be denied subject to a revised Traffic Impact Study that provides recommendations which rely on current count data, address the correct scope of "near term projects", and are consistent with the Dry Creek Preserve Master Plan. Furthermore, denial of all actions is required until such time that definiteness be brought to the status of the FAAD / public road matter so a proper CEQA analysis can be done.

Respectfully,

Marcus N. DiBuduo

Attachments:

(1) Email concerning traffic and the precursor TIS, as well as other matters concerning the proposed project.
(2) Email thread with the City of Clovis and the County of Fresno concerning the EVA, including an email from the County of Fresno indicating concerns with the EVA.
(3) Email thread with the City of Clovis and the County of Fresno concerning the EVA, including an email from the County of Fresno indicating concerns with the EVA.

From:	Marcus DiBuduo
To:	Mike Harrison; Mike Harrison; Matt Smith (MattS@woodsidehomes.com); White, Steven; "Susan Rutledge"; "Sheryl Boe"; "Andrew Nabors"; "Michael Johnston"; "Lussy Vang"; "Angela Perez"; Denver Stairs; Luke Serpa; John Holt; David Merchen; Orlando Ramirez; Gene Abella
Cc:	Dale Mitchell; "Tom Bell"; Norman D. Morrison; Dan Mueller; Steve
Subject:	11/26/2019 Meeting regarding traffic on Sunnyside and on Teague (and TM6284)
Date:	Tuesday, November 26, 2019 12:09:00 AM
Attachments:	image002.png

All,

Thank you in advance for the meeting tomorrow (Tuesday) afternoon to discuss traffic in the Dry Creek Preserve and the proposed Woodside project south of Teague.

Current traffic and road conditions on Teague (between Fowler and Sunnyside) and Sunnyside (between Shepherd and Nees) are, at best, bad. It is imperative that we understand the cumulative traffic impact that recently approved or proposed projects* ("Projects") will have on Teague (between Fowler and Sunnyside) and Sunnyside (between Shepherd and Nees).

As noted in the TM6284 traffic study (which did not consider TM6263 (137 lots) as a "near term" project), Sunnyside/Nees operates at a LOS D and "Near Term With Project Conditions" will reach LOS F. Though the traffic study indicates that signalization of Sunnyside/Nees would result in LOS C during A.M. traffic, the improvement it is conditioned on the southbound approach having two lanes… which is not contemplated by the finalized DCP Master Plan (one 11' lane each direction) and may not even be possible without acquisition of property on the adjacent parcels. Thus it is not clear when, if in the foreseeable future, signalization could occur to lessen the traffic impacts of the Projects.

Additionally, the TM6284 traffic study indicated that City Staff has indicated that both Sunnyside and Teague could have a maximum ultimate lane configuration including a TWLTL in the center. Such condition is not contemplated by the final DCP Mater Plan and cannot occur without development or acquisition of additional property. It is also important to note that the TM6154 (DCP Master Plan) traffic study stated that "the vast majority of the additional trips expected to occur on Fowler Avenue and on Sunnyside Avenue will be the result of regional growth primarily expected to occur north of Shepherd Avenue" and that it "will be important for proposed development projects, both within the DCP as well as those projects north of Shepherd Avenue, to mitigate their impacts to intersections and road segments adjacent to, and with, the DCP". Thus it should be clear that Sunnyside and Teague avenues will likely never meet the ultimate TWLTL configuration.

The Circulation and Traffic Objectives of the DCP Master Plan states:

- Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues.

- Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues, while recognizing the need for speed limits and other traffic controls to be consistent with side-entering private driveways, passive recreationists, and multi-modal

transportation.

- Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues.

- In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area.

We need to understand the impact not only from a circulation, but from a safety aspect – especially in relation to Century Elementary. At present there are approximately 74 parcels in the DCP which feed into Century (presumably, based on unofficial age demographics of current home owners, less than a dozen homes which actually have students which presently attend Century). With the addition of TM6454 and TM6284, approximately 169 *additional* homes will be added to the current Century boundary within the DCP (which is presumed to have a younger, family age demographic). Importantly, there are no sidewalks or walkways or streetlights along Sunnyside, Teague, or Fowler within the DCP and Century boundaries. There is simply no present "safe route" for DCP children to walk or bike to Century, especially during the winter months where it is already dusk or dark at the end of afterschool sports. Try taking a drive down Sunnyside this week after 5:00 and see how easy it is to not see potential children. Because of these safety concerns, I expect nearly all of the 169 additional homes added by TM6454 or TM6284 with school age children will have additional peak AM drop-off and PM pick-up traffic, the likely path of which will be east on Teague and then south on Sunnyside. Queuing at Sunnyside/Nees will ***dramatically*** increase and accelerate the LOS F condition with no real solution to Sunnyside/Nees being signalized or having two southbound approach lanes.

The DCP Master Plan provides an "Expected 20-Year Level of Development" as follows, which is seemingly becoming a five year plan:

The proposed TM6284 tract map paints the following picture:

As I noted to Matt Smith last week, a couple of project specific issues/questions that I have which remain unanswered are:

- There are "phantom" development lines which were apparently required by the City to show how some neighbors may be able to develop their property in the future. Some consideration was given to two 2 acre parcels east of Quincy, yet consideration wasn't given to some other 2 acre parcels (such as the SE corner of Teague and Sunnyside). The "phantom" lines should be provided for all parcels to ensure that parcels are not alienated, and that consideration was given to the greatest ability to tie-in to TM6284.

- Quincy is shown as a cul-de-sac. Frankly I (as well as many others) think that this should be an eventual route to Fowler. With one or two parcels, TM6284 could connect to Fowler and be opposite to access on Mack's property (potential developable property east of Fowler)… thus the Fowler access to TM6284 and the Mack property would be adjacent… which is what I believe the city generally desires. Moreover, every effort should be made to have TM6284 connect to Teague to alleviate traffic on Teague and on Sunnyside.

- There isn't a development plan for properties south of TM6284. In my view the southwest portion of that quadrant is the next and likely only logical development area in that quadrant. The TM6284 tract map shows an eventual connector road on the south, which infers that there is a strong likelihood that the developer has reason to believe that these parcels are very likely to develop in the near future. From an overall traffic flow, and to ensure that TM6284 is compliant with the goals of the DCP Master Plan Circulation elements, we would like to see how the remainder of the section is to be developed. Will there be a connector onto Nees, and if not, will the connector be near the intersection of Sunnyside/Nees further exacerbating the traffic issues? The concern is that, even though the Sunnyside access is designated an EVA, if development south of T6284 occurs there is a very strong likelihood that the EVA will have to be converted into a full-fledged access road.

- The proposed EVA on Sunnyside has "phantom" proposed development lines. I understand that the property owner has voiced their intentions to develop the property, and thus the "phantom" lines show how they might do so. However development along this EVA is inconsistent with an EVA.

- Relative to the alignment of the entrance off Teague, is there some reason it is not aligned with Purdue? Malalignment of Teague and Purdue, especially with the number of left turns coming out of there in the morning at school drop off, is asking for trouble.

- What are the conditions that will be placed relative to improvement efforts on Teague and on Sunnyside? What portion of those roads will be improved, and how will they be improved? Is it the intention of Clovis to allow Woodside to only improve that portion of the road adjacent to the property, or will it be required to improve Teague the entire stretch from Sunnyside to Fowler? If the latter, will walk paths start and stop at varying positions and on varying sides?

Sunnyside south of Nees is about 60' wide with two lanes in addition to sidewalks in both directions, with a posted speed limit of 45 (and having only 6 connections in a 0.5 mile stretch). Sunnyside north of Nees is about 20' wide with one lane in each direction, without sidewalks, and has a posted

speed limit of 45 (and about 25 connections in a 0.5 mile stretch). To say that Sunnyside is ill-equipped to handle, in its present condition, an additional 169 homes (the majority of which will have students feeding into Century) is an understatement.

The purpose of the meeting is not to shutdown development or place onerous conditions on any developer. It is simply to get all the relevant stakeholders together to try and figure out a circulation plan and improvement framework for at least Sunnyside (Shepherd to Nees) and Teague (Fowler to Sunnyside) to ensure that development within and adjacent to the DCP is done in a way that improves, but at least does not worsen, vehicle and pedestrian safety. I look forward to working through the issues and arriving at a solution with you.

Marcus DiBuduo

*Recently approved or proposed projects, and additional potential projects identified in DCP Master Plan:

TM6200 (NW corner Sunnyside and Shepherd) – 586 lots
TM6263 (SW corner Sunnyside and Shepherd) – 137 lots
TM6154 (NW corner Fowler and Teague) – 95 lots
TM6284 (SE corner Sunnyside and Teague) – 74 lots
SE corner Fowler and Teague – 88 homes
NE corner Sunnyside and Nees – 75 homes

From: Sean Smith
To: "Marcus DiBuduo"; Mike Harrison
Cc: White, Steven; "Matt Smith"; John Holt; Gene Abella; George Gonzalez; Orlando Ramirez; Denver Stairs
Subject: RE: Woodside EVA
Date: Wednesday, November 27, 2019 8:09:24 AM
Attachments: image001.png

Marcus,
Mike is out of town and with limited access to emails, so don't be surprised if you don't hear from him until Monday. I know you asked him to reply but I'll reiterate what I was saying just in case I wasn't clear. We are still working on finishing our conditions, but where we currently stand is that the connection to Sunnyside will be an EVA first. It will be paved so that there is reduced maintenance for the City long term when we take over the ownership and maintenance from Woodside with the completion of TM 6284, all assuming the project moves ahead to approval / construction / acceptance. If there's no project, then there's likely to be no change. At some point down the road, timing uncertain, the City will convert it to a public roadway. The timing will be affected by possible development of the properties to the north and south of it. There might be other things that would make the City decide to convert it, but development seems to be the most logical at this point. As I said at the meeting, the location north-south along Sunnyside is mostly driven by Woodside. The issues that Norman brought to light regarding proximity to his drive ways and alignment with portions of his home will be worked out in more detail, whether it remains as it or moves and then we deal with issues for a different property owner. That's all standard practice for a Developer / Engineer / City to work through during this phase and the plan development phase. And there's still the Neighborhood Meeting that Woodside is obligated to conduct prior to Planning Commission, so there are still opportunities to work on this.

Thanks to you and your neighbors for coming out and participating in this. I hope you all came away with a better understanding of the limitations that agencies face regarding project requirements, but also a better understanding of how there are other options that can be pursued to secure funding and partnerships in order to improve both pedestrian and vehicle safety in the area.

Have a Happy Thanksgiving!

Sean K. Smith PE QSD | Supervising Civil Engineer
City of Clovis | Engineering Division
Development Review
1033 Fifth Street, Clovis, CA 93612
p. 559.324.2363 | f. 559-324-2843 | m. 559-765-7505
seans@cityofclovis.com

cc: project file

From: Marcus DiBuduo [mailto:marcus.dibuduo@outlook.com]

Sent: Tuesday, November 26, 2019 11:03 PM
To: Sean Smith <SeanS@ci.clovis.ca.us>; Mike Harrison <mikeh@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: Woodside EVA

Sean,

Thanks for hosting the meeting this afternoon and putting yourself in front of the firing line. If anything I think that the meeting showed that – while there are some differences in opinions – everyone in that room wants to do the right thing for the greater community.

Mike,

I am hoping that you can give me the City's official position on the EVA. It is unclear whether the City is (i) requiring an EVA, (ii) is requiring an EVA now and reserving the option of opening it up to a full-fledged city road if necessary, or (iii) is requiring a full-fledged city road now. A 60' wide easement, along with potential development of the remainder of the property with EVA facing houses, makes me believe that it is (ii) or (iii). To me I see this as a critical decision that the City needs to commit to as it significantly affects the analysis on multiple levels. There are people on the other side of Sunnyside that are justifiably strongly opposed to an eventual City road aimed straight at their property. We also discussed at the meeting that the designation may have some bearing on potential grant monies for ATP trails. Matt also has some issues he will have to deal with regarding the language of the easement and negotiating with the grantor. Can you please clarify for us? PC is approaching in less than a month and I don't think that anyone wants to be having the discussion of the plan for that road first before the PC.

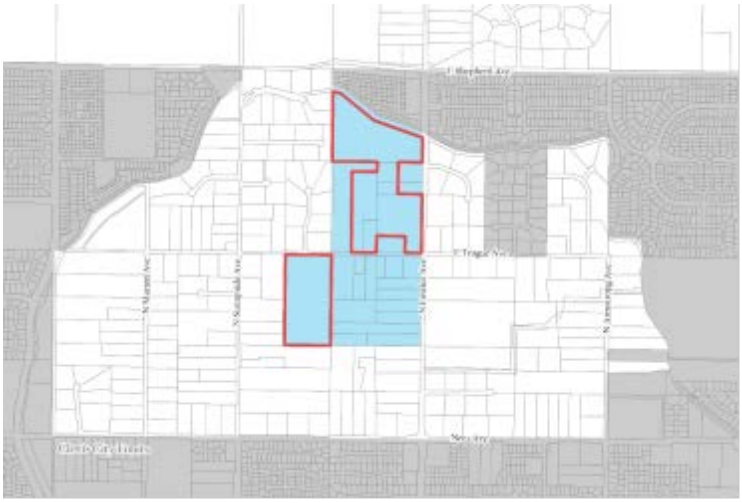
Marcus

From: Marcus DiBuduo
To: Mike Harrison
Cc: "Matt Smith"; White, Steven; Sean Smith; Magsig, Nathan; Jimenez, Bernard; Thompson, John R.
Subject: RE: Woodside EVA
Date: Saturday, December 7, 2019 12:48:00 AM
Attachments: image002.png
image004.png

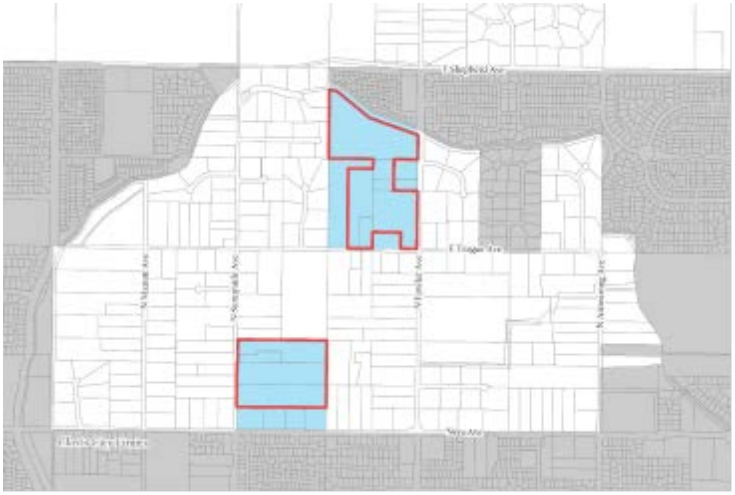
Thanks Mike.

To add an additional note beyond those which Steve makes below, you are correct that the DCP Master Plan anticipated development, and we understand that development could eventually occur which would require points of access onto Sunnyside. The Master Plan set forth certain scenarios in the section entitled "Annexation" and it was explicitly stated that "[t]he intent of the scenarios is to illustrate the challenge of development in the DCP as it relates to annexation". The point of those scenarios was to assuage the fears of global annexation, not come to an agreement on developable property or access points.

Importantly there are two scenarios that I want to draw your attention to (red development, blue annexation):



ANNEXATION SCENARIO A&B



ANNEXATION SCENARIO A&C

Essentially the current TM proposal includes development scenario B (with some additional property to the east of scenario B) and part of development scenario C above, while annexing only that which was anticipated as annexation scenario A&B. The City contemplated development of the McKinney property without connecting to Sunnyside in the Master Plan, presumably not needing two access points or having two access points on Teague.

I appreciate Woodside's desire to provide utility connections at the proposed EVA point as it is more cost effective for them. However why cant the utility connections be provided under a non-EVA easement or under an EVA that isn't designed to accommodate a normal city street? If additional development doesn't occur south of the current TM, there would be no need for the EVA to become a normal city street. If additional development does occur south of the current TM, I understand you to say that likely instead of another access point onto Sunnyside, the EVA will be opened up.

After this TM, there are three likely scenarios pertaining to the two 9.6 parcels south of the existing TM: one develops, the other develops, or both develop. Can you give us a feel for the city's circulation plan under these scenarios, understanding that the current TM has a connecting road to the north of the two parcels?

Lastly, I would be remiss if I didn't again point out that the TIS is flawed in that it contemplates intersection configurations and lane configurations along Teague and Sunnyside that, though assumingly consistent with the 2014 General Plan, are inconsistent with the later adopted DCP Master Plan (which doesn't permit TWLTL or anything more than a single lane in each direction).

Marcus

From: White, Steven <stwhite@fresnocountyca.gov>
Sent: Friday, December 06, 2019 1:12 PM
To: Mike Harrison <mikeh@ci.clovis.ca.us>; 'Marcus DiBuduo' <marcus.dibuduo@outlook.com>; Sean Smith <SeanS@ci.clovis.ca.us>; Magsig, Nathan <nmagsig@fresnocountyca.gov>; Jimenez, Bernard <BJimenez@fresnocountyca.gov>; Thompson, John R. <jothompson@fresnocountyca.gov>

Cc: 'Matt Smith' <MattS@woodsidehomes.com>; White, Steven <stwhite@fresnocountyca.gov>
Subject: Re: Woodside EVA

Mike
Making the EVA a local street is not addressed in your TIS and we do not support this road connection as it is outside of your area to be annexed . This connection will push more traffic onto Sunnyside. If you want to make this a local Street then a updated TIS will be needed and within that TIS a trip distribution will be a request from the County. As Sunnyside will remain in the County one option is for the City to annex it or take over the maintenance responsibility. I suggest at this time you keep this road an EVA. As this is a EVA noted on your TM and it is outside your annex boundary ,how are you proposing to have a City Street in the County outside the City.
We are working with the City of Fresno now transferring a Road Easement from the County to the City. It is taking a City Council and Board action.

I suggest we discuss next week to make sure the County, City ,Developer and property owners are understand what direction the City desires to move ahead with.
Thanks

Get Outlook for iOS

From: Mike Harrison <mikeh@ci.clovis.ca.us>
Sent: Thursday, December 5, 2019 3:43:22 PM
To: 'Marcus DiBuduo' <marcus.dibuduo@outlook.com>; Sean Smith <SeanS@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: RE: Woodside EVA

Marcus,

Woodside Homes has submitted a map that shows an EVA and utility corridor connecting from the southwest quadrant of the subdivision to Sunnyside Avenue. This is ostensibly a result of negotiations Woodside has had with the property owner whose property will dedicate the required easements. The City is requiring that this corridor ultimately become a street, but has discussed with the developer an option for it to be an EVA that prohibits day to day access for the public for an interim period of time to be determined. It would be the City's preference that the connecting street (Portland Avenue) be built with the subdivision improvements and opened to the public (new local DCP residents) on day one. At a minimum, full dedication of street right-of-way would be required and a permanently paved street surface provided for use by emergency personnel. In this event, the non-public access nature of the road would be in place for an interim period until further development adjacent to the road occurs or it is otherwise determined that the road should be opened. The introduction of this access point does not materially change the traffic analysis, though it would remove some trips from the Teague

As to the location of the roadway along Sunnyside, it was certainly anticipated, with the DCP master plan, that there would be points of access on Sunnyside to serve those parcels depicted in the plan as expected development. The locations of those access points can't be preplanned, they are positioned as development opportunity presents itself. In general, we would like to see roadways positioned so that they do not point directly at homes, though, even this is not always accomplished in subdivisions. In this case, the proposed street would straddle the Morrison and Stonehouse properties. While not ideal for all, it is a reasonable location for the street.

Please let me know if there are other issues you would like to discuss regarding this subdivision.

Thanks,

Mike

From: Marcus DiBuduo [mailto:marcus.dibuduo@outlook.com]
Sent: Tuesday, November 26, 2019 11:03 PM
To: Sean Smith <SeanS@ci.clovis.ca.us>; Mike Harrison <mikeh@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: Woodside EVA

Sean,

Thanks for hosting the meeting this afternoon and putting yourself in front of the firing line. If anything I think that the meeting showed that – while there are some differences in opinions – everyone in that room wants to do the right thing for the greater community.

Mike,

I am hoping that you can give me the City's official position on the EVA. It is unclear whether the City is (i) requiring an EVA, (ii) is requiring an EVA now and reserving the option of opening it up to a full-fledged city road if necessary, or (iii) is requiring a full-fledged city road now. A 60' wide easement, along with potential development of the remainder of the property with EVA facing houses, makes me believe that it is (ii) or (iii). To me I see this as a critical decision that the City needs to commit to as it significantly affects the analysis on multiple levels. There are people on the other side of Sunnyside that are justifiably strongly opposed to an eventual City road aimed straight at their property. We also discussed at the meeting that the designation may have some bearing on potential grant monies for ATP trails. Matt also has some issues he will have to deal with regarding the language of the easement and negotiating with the grantor. Can you please clarify for us? PC is approaching in less than a month and I don't think that anyone wants to be having the discussion of the plan for that road first before the PC.

Marcus

From: David Merchen
Sent: Thursday, April 09, 2020 2:59 PM
To: Maria Spera; Orlando Ramirez
Subject: Fwd: [CAUTION SPOOFING] Planning Commission Public Comments

Sent from my iPhone

Begin forwarded message:

> **From:** PC Public Comments <email@cityofclovis.com>
> **Date:** April 9, 2020 at 2:14:04 PM PDT
> **To:** davidm@cityofclovis.com
> **Subject: [CAUTION SPOOFING] Planning Commission Public Comments**
> **Reply-To:** myovich-n@kcusd.com
>
> Planning Commission Meeting Date: 2020-04-09
> Item Number: 6
> Name: Kyle & Niki Myovich
> Email: myovich-n@kcusd.com
> Comment: To whom it may concern, Our family of 5 lives on the 2 acre lot directly across the street from the proposed 74 lot project. We have major concerns regarding privacy as anyone living in or visiting the homes directly across the street could see straight into our entire backyard as well as into our home. The only entrance and exit from the proposed neighborhood is directly lined up with the windows into our kitchen and living room area, which would create a constant flashing of headlights throughout our home every night. We are also concerned with the increase in traffic on Teague and Sunnyside. It is already difficult turning onto Sunnyside and Fowler in the early morning and evening. A significant increase in traffic past our home raises the noise level and again decreases our privacy as well as the safety of our children. The thought of avoiding spending time in our yard and keeping our blinds shut as the only way we can create privacy is beyond upsetting. What can be done to address these issues?
>
> ---
>
> Date: April 9, 2020
> Time: 2:14 pm
> Remote IP: 206.162.235.221

City of Clovis
Planning Commission
1033 Fifth Street
Clovis, CA 93612

RE: AGENDA ITEM #6 (Commission Meeting April 9, 2020) Items associated with approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues.

Dear Commissioners:

The Dry Creek Preserve Master Plan ("DCP Master Plan"), which the Council approved on June 4, 2018, discussed several circulation elements within the Dry Creek Preserve (e.g., Focus Area 7). Among them:

- Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues. (Sec. 12.0)
- Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues. (Sec. 12.0)
- Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues. (Sec. 12.0)
- In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area. (Sec. 12.1)
- Sunnyside Avenue is a designated Collector Street in the Clovis General Plan and Regional Transportation Plan. (Sec. 12.2.2)
- Sunnyside Avenue is planned to remain a rural-appearing collector street, with one twelve-foot-wide travel lane in each direction. (Sec. 12.2.2)
- Developments fronting onto Sunnyside will be required to provide along their street frontage, an 11'-wide travel lane, a 5'-wide bicycle lane, construction of asphalt curbs and competent street drainage [ ], and a four-foot-wide decomposed granite or asphalt walkway. (Sec. 12.2.2)
- Non-developed reaches of Sunnyside will have an 11-foot-wide travel lane, a five-foot-wide bile lane, and a four-foot unpaved shoulder, without drainage facilities [ ]. (Sec. 12.2.2)
- Teague Avenue between Fowler and Sunnyside is planned to have one eleven-foot-wide travel lane and a five-foot-wide bicycle lane in each direction. In developed reaches, a five -foot-wide walkway will also be required, separated from traffic by a four-foot-wide landscaped separator on the developed side, wherever development with street frontage occurs. (Sec. 12.2.3)

It should be abundantly clear that the Council's intention for the Dry Creek Preserve was to maintain and provide a unique residential element, including maintaining slower less intensive traffic on Sunnyside Avenue and Teague Avenue. Pursuant to the DCP Master Plan, Sunnyside Avenue and Teague Avenue (between Sunnyside and Fowler) were each to have the following street configuration and required right-

of-way widths for segments of the roadway that are adjacent to both developed properties:

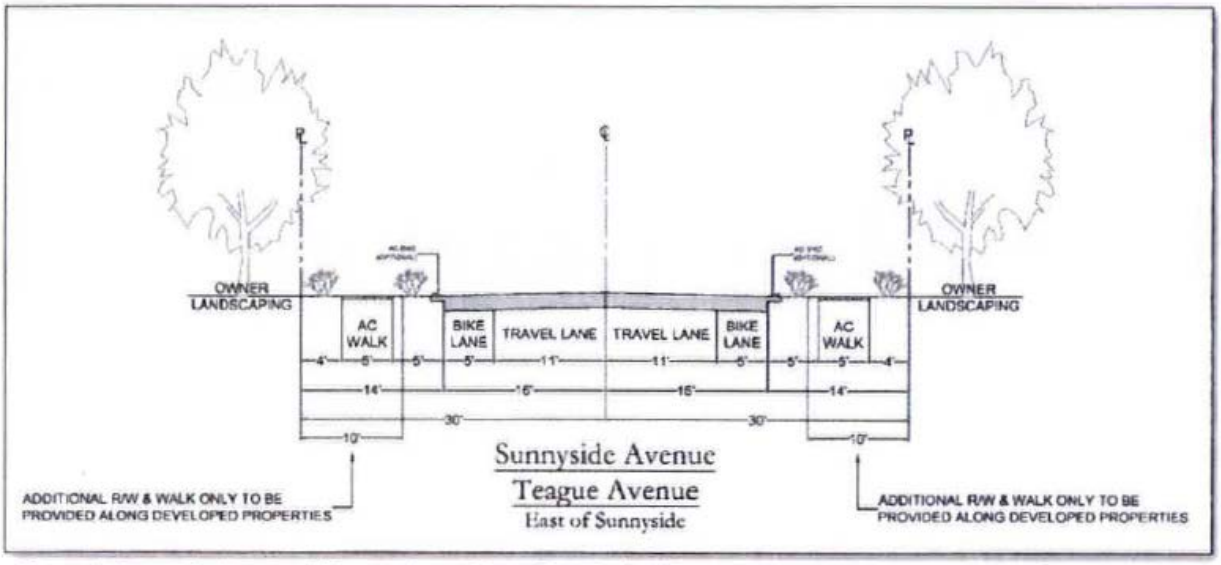


Figure B: Sunnyside Avenue and Teague Avenue East of Sunnyside

The Initial Traffic Impact Study

In the Traffic Impact Study for the Proposed McKenney Assemblage prepared by Peters Engineering Group on February 4, 2020 (the "TIS"), "traffic counts" and analyses are provided for the (i) Teague Avenue / Sunnyside Avenue, (ii) Teague Avenue / Fowler Avenue, (iii) Nees Avenue / Sunnyside Avenue, and (iv) Nees Avenue / Fowler Avenue intersections ("Study Intersections"), analysis are provided for (i) Fowler Avenue between Teague and Nees Avenues and (ii) Sunnyside Avenue between Teague and Nees Avenues road segments ("Study Segments"), and signal warrant analyses are provided only at Teague / Sunnyside and Teague / Fowler ("Warrant Analyses").

The TIS explicitly states that excluded from the Warrant Analyses are the intersections of Shepherd / Sunnyside, Nees / Fowler, Shepherd / Fowler, and Nees / Armstrong because those intersections are already signalized or other projects have been conditioned upon construction of signals.

The only "Near-term" projects which were considered in the relevant portions of the analysis were limited to two: the Applicant's Tract 6154 (NW Corner Fowler and Teague; 95 units) and Lennar Phase 1 Tract 6200 (Shepherd and Clovis; 586 units). In contrast, the recent Traffic Impact Study for TM 6263 (Lennar South of Shepherd between Clovis and Sunnyside, with the "Preuss Access" issue that this Commission just heard in January, itself not considered in the TIS for the current project), considered fifteen near-term projects.

The Revised Traffic Impact Study

The undersigned is aware of a Revised Traffic Impact Study dated March 3, 2020 and a corresponding addendum letter report (collectively the "Revised TIS"). The addendum letter report expressly states that it "supersedes a previous letter dated February 20, 2020. The previous letter dated

February 20, 2020 is neither in the meeting packet nor the CEQA documents, and f
referenced in the Notice of Intent to Adopt a Mitigated Negative Declaration dated Feb

Moreover, the Revised TIS cannot be considered either. As stated in the Staff Report, "the updated Traffic Impact Study was not performed as a result of any deficiency found in the environmental analysis, but rather, it was provided to help clarify concerns of the neighborhood… [and] does not change or add new mitigation measures in the environmental analysis." On April 2, 2020, in response to a question about whether the Revised TIS would be presented to the Commission, Mr. George Gonzalez emailed the undersigned confirming that "the Planning Commission staff report and associated CEQA documents will NOT have the updated TIS attached".

Importantly also, though the undersigned received an advance copy of the Revised TIS on March 19, 2020, it was not made publicly available on the City of Clovis' CEQA page until about April 3, 2020.

Therefore, the Revised TIS and corresponding addendum letter cannot be considered in making a decision on this project. **The Planning Commission can only consider the initial TIS.**

Observations on the TIS

As an initial matter, there are two significant flaws in the TIS: it uses old traffic count data and doesn't contemplate all of the "Near-term" projects in the area. Without knowing existing and likely future traffic impacts, it is impossible to perform a legally sound CEQA analysis.

The TIS rests on traffic counts from November 29, 2017 and November 30, 2017. Per the City of Clovis *Traffic Impact Study Guidelines* approved August 25, 2014, "[a]vailable existing counts can be used if they are less than twelve (12) months old **and** the traffic volumes have not been significantly changed due to more recent development in the vicinity." There is no ambiguity in the guidelines – existing counts must be less than 12 months old and within those 12 months volumes have not been significantly changed (i.e., the guideline cannot be read in the alternative). **The TIS, dated February 4, 2020, rests on traffic counts well more than twelve months which cannot properly be used in the study, regardless of whether there have been any changes to traffic volumes in the vicinity.**

The TIS further fails to consider, as above, all of the "near-term" projects. Page 4 of the TIS indicates that it considered only two projects: TM6154 and TM6200. It should consider at least the following projects: TT5546, TT5550, TT5720, TT6109, TT6128, TT6134A, TT6145, TT6154, TT6180, TT6190, TT6200, and TT6263.

Importantly, TM6263 was recently approved by the Council[1] and includes a Shepherd Avenue access point, which per the Traffic Impact Study for that project, estimates that "up to 200 more daily trips will likely use Sunnyside Avenue under the scenario which includes access to Shepherd Avenue". **Yet the TIS fails to at all consider TM6263 at all, and in its final configuration. Since TM6263 is an approved project at the time that the present project is being presented to the Planning Commission, the TIS must consider it.**

The TIS, as above, also selectively omits to study the impact of the Sunnyside and Shepherd intersection and the Fowler and Shepherd intersection. The omission is understandable given that these are already problematic intersections. However, the TIS is misleading in stating that other than Nees and

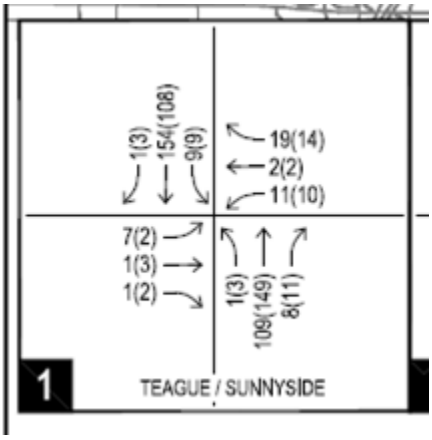
[1] On February 18, 2020… fourteen days *after* the present TIS was prepared.

Sunnyside, "[t]he other study intersections will continue to operate at acceptable lev[illegible] acceptable queuing conditions". This is true only because it omits particularly proble[illegible] such as Sunnyside and Shepherd (which every other TIS in the region identifies as LOS F in the near term).

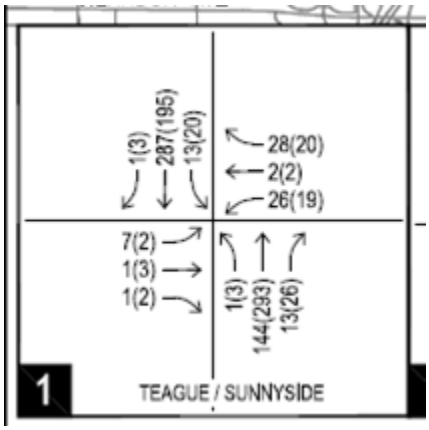
As to mitigation measures, the TIS indicates that Nees and Sunnyside impact may be minimized by an eight-phase signal system, including on the southbound approach, "one left-turn lane and one through lane with a shared right turn" and that Teague's maximum ultimate lane configuration may include a TWLTL along the center. Yet it also looks only to the City of Clovis General Plan – completely omitting consideration of the circulation element of the Focus Area 7 Master Plan (i.e., the "Dry Creek Preserve Master Plan"). It is altogether troubling that the TIS procured by Woodside Homes fails to give any consideration to the circulation elements of the Dry Creek Master Plan which itself coauthored and supported less than two years ago. **As illustrated above, Sunnyside and Teague Avenues – absent an amendment to the Dry Creek Master Plan, cannot support the mitigation measures that are suggested in the TIS, namely, anything other than two lanes.**

The Project will have a Significant Impact on Traffic

Traffic in the Dry Creek Preserve is already a problem and will be made worse by additional development, especially development without meaningful consideration of traffic mitigation measures. Assuming that the traffic analysis in the Revised TIS reflects a more accurate assessment of current and future traffic, the summary charts of the intersection of Shepherd and Teague tell the story of what the per hour traffic in the AM (and PM) peak windows look like and will look like:



Current



Near Term Plus Project

As illustrated, southbound through traffic is expected to increase from 154 to 287 vehicles per hour in the morning peak window (***an increase of 86%***) and from 108 to 195 vehicles per hour in the evening peak window (***an increase of 80%)***. Northbound through traffic is expected to increase from 109 to 144 vehicles per hour in the morning peak window (***an increase of 32%)*** and from 149 to 293 vehicles per hour in the evening peak window (***an increase of 97%)***. Sunnyside is a two-lane rural residential road with approximately 50 connecting private driveways from Nees to the Enterprise Canal (approximately 2000 feet). Peak traffic of nearly 450 vehicles per hour (one every 7.5 seconds) is a dangerous condition as residents are attempting to enter and/or exit on Sunnyside, including livestock vehicles, tractors, etc.

The County of Fresno is in the planning stages for implementing traffic calming measures along Sunnyside, which may include center concrete medians. They are also in the planning stage for

implementing some type of bike and trail system to enable safer pedestrian and bic[illegible] stands now, there is no designated walking path down Sunnyside, and thus no safe [illegible] development to the nearest elementary school, Century Elementary.

In conclusion, procedural and substantive deficiencies in the Traffic Impact Study is deficient and thus cannot be used in supporting the Adoption of a Mitigated Negative Declaration. At a minimum the TIS must be revised before proper CEQA analysis can be done.

Defects in the Conditions of Approval

The proposed Conditions of Approval have defects in several respects concerning Dedications and Street Improvements. The Applicant is required to provide the following in Section 60:

> Fowler Avenue – For nonadjacent major street requirements, between the Enterprise Canal and Teague Avenue, dedicate to provide right-of-way acquisition for 30' east centerline and 30' west of centerline, and improve with median island, median island landscaping and irrigation, 32' (16' east + 16' west) permanent paving, permanent paving and overlay as necessary to match the existing permanent pavement, 3' paved swale, and transitional paving as needed, or another City approved alternate route.
>
> Teague Avenue – Along frontage, dedicate to provide right-of-way acquisition for 30' (exist 20') north of centerline, and improve with asphalt dike or other approved drainage system, 5' asphalt sidewalk, drive approaches, curb return ramps, street lights, landscape strip, 32' (16' north + 16' south) permanent paving, and transitional paving as needed. For nonadjacent major street requirements, the applicant shall provide between Tract Map 6284's western limit and Sunnyside Avenue, 32' (16' north + 16' south) of permanent paving, asphalt dike or other approved drainage system, and all transitional paving as required, or another City approved alternate route. Street improvements shall not be reimbursable in areas where underground utilities are not installed but ultimately required.
>
> Sunnyside Avenue – Between Portland Avenue and Nees Avenue, 32' (16' west + 16' east') permanent paving, 3' paved swale, and transitional paving as needed.

As an initial matter, it is unclear why there are conditions pertaining to Fowler Avenue in the Conditions as this project is not adjacent to Fowler. With respect to Teague, the Conditions require right-of-way acquisition for 30 feet to the north of the centerline and 32 feet of total permanent paving. It is unclear how the applicant can obtain a 30 foot right of way to the north of Teague as the project is to the south of Teague. Compliance with the standards in the DCP Master Plan is required.

It appears that the applicant is being required to provide permanent paving between along Teague between the western edge of the project and Sunnyside. Between this project and the applicant's earlier approved project to the north of Teague, it is presumed that the Applicant will be paving the entirety of Teague.

With respect to Sunnyside, it is requested that the applicant be required to provide permanent paving from Nees to Teague. A midblock transition to permanent paving with differing widths from

existing widths along this stretch is likely to be problematic from a circulation perspectiv
currently exist on Teague which will thankfully be alleviated by the applicant as conditio
and the transition point would be better placed at the intersection of Teague and Sunnyside.

Concerns with the Fire Apparatus Access Road

Lastly, the proposed project includes a Fire Apparatus Access Road (FAAD) in the southwest area of TM6284 which connects to Sunnyside Avenue. The ultimate width of the FAAD is 54 feet, but as indicated in the Staff Report, the 42-foot FAAD will be provided to the City of Clovis in fee title at this time.

However, the Staff Report indicates that the FAAD will eventually become a City public street in the future, as development occurs on the north and south sides of its alignment. The TIS indicates that "consideration may be given to converting the emergency access to a public street". Apart from these perfunctory comments, the conditions upon which the FAAD will become a City public street are absent. Concerningly the Staff Report omits significant discussions that have occurred between the City, the applicant, the County of Fresno, and residents in the Dry Creek Preserve (some of which is indicated in the attached).

The TIS gives little mention to the FAAD. Although it states that "[a]n estimate of the project trips that would likely occur at the site access roads if the emergency vehicle access connecting to Sunnyside Avenue were to become a public street at some time in the future is presented in Figure 6B, Project Trips at Site Access Roads – Potential Future Condition", no Figure 6B was provided.

To underscore the importance of the FAAD on the project, the Revised TIS (which, as above, cannot be considered as part of the project) was made solely in response to the City's request for "operational analyses be performed for the future site access road connecting to Sunnyside Avenue (at the location of the proposed emergency vehicle access)."

Unless this project explicitly seeks to designate the connector to Sunnyside as a public street now, and a full CEQA analysis is done on that basis, any discussion of a public street is extraneous and a full CEQA analysis would have to be done proximate in time to the proposed conversion. The CEQA analysis cannot be done in the alternative to "reserve" the option in the future – the project as submitted to this Commission and the City Council must be sufficiently defined to analyze. **For this reason alone, each of the Agenda Items pertaining to this project must be denied since the City has indicated its intention of making the FAAD a full city road but no CEQA analysis was performed under this undefined condition. At a minimum, the TIS should be revised to address the circulation patterns of this project should the FAAD become a full city road.**

Conclusion

It is respectfully requested that all actions in this meeting relating to approximately 50.80 acres of land located in the southwest area of Teague and N. Fowler Avenues be denied subject to a revised Traffic Impact Study that provides recommendations which rely on current count data, address the correct scope of "near term projects", and are consistent with the Dry Creek Preserve Master Plan. Furthermore, denial of all actions is required until such time that definiteness be brought to the status of the FAAD / public road matter so a proper CEQA analysis can be done.

Respectfully,

Marcus N. DiBuduo

Attachments:

(1) Email concerning traffic and the precursor TIS, as well as other matters concerning the proposed project.
(2) Email thread with the City of Clovis and the County of Fresno concerning the EVA, including an email from the County of Fresno indicating concerns with the EVA.
(3) Email thread with the City of Clovis and the County of Fresno concerning the EVA, including an email from the County of Fresno indicating concerns with the EVA.

From:	Marcus DiBuduo
To:	Mike Harrison; Mike Harrison; Matt Smith (MattS@woodsidehomes.com); White, Steven; "Susan Rutledge"; "Sheryl Boe"; "Andrew Nabors"; "Michael Johnston"; "Lussy Vang"; "Angela Perez"; Denver Stairs; Luke Serpa; John Holt; David Merchen; Orlando Ramirez; Gene Abella
Cc:	Dale Mitchell; "Tom Bell"; Norman D. Morrison; Dan Mueller; Steve
Subject:	11/26/2019 Meeting regarding traffic on Sunnyside and on Teague (and TM6284)
Date:	Tuesday, November 26, 2019 12:09:00 AM
Attachments:	image002.png

All,

Thank you in advance for the meeting tomorrow (Tuesday) afternoon to discuss traffic in the Dry Creek Preserve and the proposed Woodside project south of Teague.

Current traffic and road conditions on Teague (between Fowler and Sunnyside) and Sunnyside (between Shepherd and Nees) are, at best, bad. It is imperative that we understand the cumulative traffic impact that recently approved or proposed projects* ("Projects") will have on Teague (between Fowler and Sunnyside) and Sunnyside (between Shepherd and Nees).

As noted in the TM6284 traffic study (which did not consider TM6263 (137 lots) as a "near term" project), Sunnyside/Nees operates at a LOS D and "Near Term With Project Conditions" will reach LOS F. Though the traffic study indicates that signalization of Sunnyside/Nees would result in LOS C during A.M. traffic, the improvement it is conditioned on the southbound approach having two lanes… which is not contemplated by the finalized DCP Master Plan (one 11' lane each direction) and may not even be possible without acquisition of property on the adjacent parcels. Thus it is not clear when, if in the foreseeable future, signalization could occur to lessen the traffic impacts of the Projects.

Additionally, the TM6284 traffic study indicated that City Staff has indicated that both Sunnyside and Teague could have a maximum ultimate lane configuration including a TWLTL in the center. Such condition is not contemplated by the final DCP Mater Plan and cannot occur without development or acquisition of additional property. It is also important to note that the TM6154 (DCP Master Plan) traffic study stated that "the vast majority of the additional trips expected to occur on Fowler Avenue and on Sunnyside Avenue will be the result of regional growth primarily expected to occur north of Shepherd Avenue" and that it "will be important for proposed development projects, both within the DCP as well as those projects north of Shepherd Avenue, to mitigate their impacts to intersections and road segments adjacent to, and with, the DCP". Thus it should be clear that Sunnyside and Teague avenues will likely never meet the ultimate TWLTL configuration.

The Circulation and Traffic Objectives of the DCP Master Plan states:

- Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues.

- Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues, while recognizing the need for speed limits and other traffic controls to be consistent with side-entering private driveways, passive recreationists, and multi-modal

transportation.

- Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues.

- In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area.

We need to understand the impact not only from a circulation, but from a safety aspect – especially in relation to Century Elementary. At present there are approximately 74 parcels in the DCP which feed into Century (presumably, based on unofficial age demographics of current home owners, less than a dozen homes which actually have students which presently attend Century). With the addition of TM6454 and TM6284, approximately 169 *additional* homes will be added to the current Century boundary within the DCP (which is presumed to have a younger, family age demographic). Importantly, there are no sidewalks or walkways or streetlights along Sunnyside, Teague, or Fowler within the DCP and Century boundaries. There is simply no present "safe route" for DCP children to walk or bike to Century, especially during the winter months where it is already dusk or dark at the end of afterschool sports. Try taking a drive down Sunnyside this week after 5:00 and see how easy it is to not see potential children. Because of these safety concerns, I expect nearly all of the 169 additional homes added by TM6454 or TM6284 with school age children will have additional peak AM drop-off and PM pick-up traffic, the likely path of which will be east on Teague and then south on Sunnyside. Queuing at Sunnyside/Nees will ***dramatically*** increase and accelerate the LOS F condition with no real solution to Sunnyside/Nees being signalized or having two southbound approach lanes.

The DCP Master Plan provides an "Expected 20-Year Level of Development" as follows, which is seemingly becoming a five year plan:

The proposed TM6284 tract map paints the following picture:

As I noted to Matt Smith last week, a couple of project specific issues/questions that I have which remain unanswered are:

- There are "phantom" development lines which were apparently required by the City to show how some neighbors may be able to develop their property in the future. Some consideration was given to two 2 acre parcels east of Quincy, yet consideration wasn't given to some other 2 acre parcels (such as the SE corner of Teague and Sunnyside). The "phantom" lines should be provided for all parcels to ensure that parcels are not alienated, and that consideration was given to the greatest ability to tie-in to TM6284.

- Quincy is shown as a cul-de-sac. Frankly I (as well as many others) think that this should be an eventual route to Fowler. With one or two parcels, TM6284 could connect to Fowler and be opposite to access on Mack's property (potential developable property east of Fowler)… thus the Fowler access to TM6284 and the Mack property would be adjacent… which is what I believe the city generally desires. Moreover, every effort should be made to have TM6284 connect to Teague to alleviate traffic on Teague and on Sunnyside.

- There isn't a development plan for properties south of TM6284. In my view the southwest portion of that quadrant is the next and likely only logical development area in that quadrant. The TM6284 tract map shows an eventual connector road on the south, which infers that there is a strong likelihood that the developer has reason to believe that these parcels are very likely to develop in the near future. From an overall traffic flow, and to ensure that TM6284 is compliant with the goals of the DCP Master Plan Circulation elements, we would like to see how the remainder of the section is to be developed. Will there be a connector onto Nees, and if not, will the connector be near the intersection of Sunnyside/Nees further exacerbating the traffic issues? The concern is that, even though the Sunnyside access is designated an EVA, if development south of T6284 occurs there is a very strong likelihood that the EVA will have to be converted into a full-fledged access road.

- The proposed EVA on Sunnyside has "phantom" proposed development lines. I understand that the property owner has voiced their intentions to develop the property, and thus the "phantom" lines show how they might do so. However development along this EVA is inconsistent with an EVA.

- Relative to the alignment of the entrance off Teague, is there some reason it is not aligned with Purdue? Malalignment of Teague and Purdue, especially with the number of left turns coming out of there in the morning at school drop off, is asking for trouble.

- What are the conditions that will be placed relative to improvement efforts on Teague and on Sunnyside? What portion of those roads will be improved, and how will they be improved? Is it the intention of Clovis to allow Woodside to only improve that portion of the road adjacent to the property, or will it be required to improve Teague the entire stretch from Sunnyside to Fowler? If the latter, will walk paths start and stop at varying positions and on varying sides?

Sunnyside south of Nees is about 60' wide with two lanes in addition to sidewalks in both directions, with a posted speed limit of 45 (and having only 6 connections in a 0.5 mile stretch). Sunnyside north of Nees is about 20' wide with one lane in each direction, without sidewalks, and has a posted

speed limit of 45 (and about 25 connections in a 0.5 mile stretch). To say that Sunnyside is ill-equipped to handle, in its present condition, an additional 169 homes (the majority of which will have students feeding into Century) is an understatement.

The purpose of the meeting is not to shutdown development or place onerous conditions on any developer. It is simply to get all the relevant stakeholders together to try and figure out a circulation plan and improvement framework for at least Sunnyside (Shepherd to Nees) and Teague (Fowler to Sunnyside) to ensure that development within and adjacent to the DCP is done in a way that improves, but at least does not worsen, vehicle and pedestrian safety. I look forward to working through the issues and arriving at a solution with you.

Marcus DiBuduo

*Recently approved or proposed projects, and additional potential projects identified in DCP Master Plan:

TM6200 (NW corner Sunnyside and Shepherd) – 586 lots
TM6263 (SW corner Sunnyside and Shepherd) – 137 lots
TM6154 (NW corner Fowler and Teague) – 95 lots
TM6284 (SE corner Sunnyside and Teague) – 74 lots
SE corner Fowler and Teague – 88 homes
NE corner Sunnyside and Nees – 75 homes

From: Sean Smith
To: "Marcus DiBuduo"; Mike Harrison
Cc: White, Steven; "Matt Smith"; John Holt; Gene Abella; George Gonzalez; Orlando Ramirez; Denver Stairs
Subject: RE: Woodside EVA
Date: Wednesday, November 27, 2019 8:09:24 AM
Attachments: image001.png

Marcus,
Mike is out of town and with limited access to emails, so don't be surprised if you don't hear from him until Monday. I know you asked him to reply but I'll reiterate what I was saying just in case I wasn't clear. We are still working on finishing our conditions, but where we currently stand is that the connection to Sunnyside will be an EVA first. It will be paved so that there is reduced maintenance for the City long term when we take over the ownership and maintenance from Woodside with the completion of TM 6284, all assuming the project moves ahead to approval / construction / acceptance. If there's no project, then there's likely to be no change. At some point down the road, timing uncertain, the City will convert it to a public roadway. The timing will be affected by possible development of the properties to the north and south of it. There might be other things that would make the City decide to convert it, but development seems to be the most logical at this point. As I said at the meeting, the location north-south along Sunnyside is mostly driven by Woodside. The issues that Norman brought to light regarding proximity to his drive ways and alignment with portions of his home will be worked out in more detail, whether it remains as it or moves and then we deal with issues for a different property owner. That's all standard practice for a Developer / Engineer / City to work through during this phase and the plan development phase. And there's still the Neighborhood Meeting that Woodside is obligated to conduct prior to Planning Commission, so there are still opportunities to work on this.

Thanks to you and your neighbors for coming out and participating in this. I hope you all came away with a better understanding of the limitations that agencies face regarding project requirements, but also a better understanding of how there are other options that can be pursued to secure funding and partnerships in order to improve both pedestrian and vehicle safety in the area.

Have a Happy Thanksgiving!

Sean K. Smith PE QSD | Supervising Civil Engineer
City of Clovis | Engineering Division
Development Review
1033 Fifth Street, Clovis, CA 93612
p. 559.324.2363 | f. 559-324-2843 | m. 559-765-7505
seans@cityofclovis.com

cc: project file

From: Marcus DiBuduo [mailto:marcus.dibuduo@outlook.com]

Sent: Tuesday, November 26, 2019 11:03 PM
To: Sean Smith <SeanS@ci.clovis.ca.us>; Mike Harrison <mikeh@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: Woodside EVA

Sean,

Thanks for hosting the meeting this afternoon and putting yourself in front of the firing line. If anything I think that the meeting showed that – while there are some differences in opinions – everyone in that room wants to do the right thing for the greater community.

Mike,

I am hoping that you can give me the City's official position on the EVA. It is unclear whether the City is (i) requiring an EVA, (ii) is requiring an EVA now and reserving the option of opening it up to a full-fledged city road if necessary, or (iii) is requiring a full-fledged city road now. A 60' wide easement, along with potential development of the remainder of the property with EVA facing houses, makes me believe that it is (ii) or (iii). To me I see this as a critical decision that the City needs to commit to as it significantly affects the analysis on multiple levels. There are people on the other side of Sunnyside that are justifiably strongly opposed to an eventual City road aimed straight at their property. We also discussed at the meeting that the designation may have some bearing on potential grant monies for ATP trails. Matt also has some issues he will have to deal with regarding the language of the easement and negotiating with the grantor. Can you please clarify for us? PC is approaching in less than a month and I don't think that anyone wants to be having the discussion of the plan for that road first before the PC.

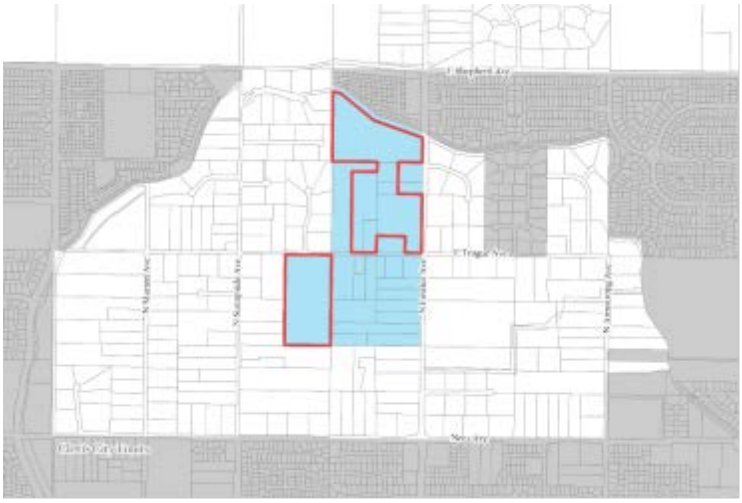
Marcus

From: Marcus DiBuduo
To: Mike Harrison
Cc: "Matt Smith"; White, Steven; Sean Smith; Magsig, Nathan; Jimenez, Bernard; Thompson, John R.
Subject: RE: Woodside EVA
Date: Saturday, December 7, 2019 12:48:00 AM
Attachments: image002.png
image004.png

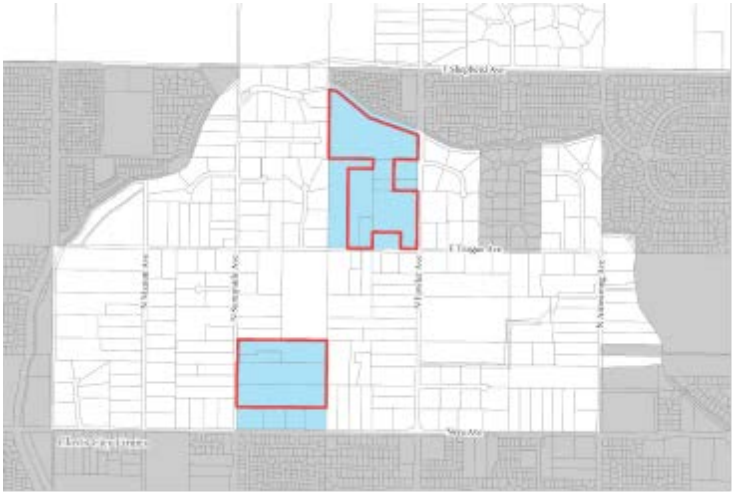
Thanks Mike.

To add an additional note beyond those which Steve makes below, you are correct that the DCP Master Plan anticipated development, and we understand that development could eventually occur which would require points of access onto Sunnyside. The Master Plan set forth certain scenarios in the section entitled "Annexation" and it was explicitly stated that "[t]he intent of the scenarios is to illustrate the challenge of development in the DCP as it relates to annexation". The point of those scenarios was to assuage the fears of global annexation, not come to an agreement on developable property or access points.

Importantly there are two scenarios that I want to draw your attention to (red development, blue annexation):



ANNEXATION SCENARIO A&B



ANNEXATION SCENARIO A&C

Essentially the current TM proposal includes development scenario B (with some additional property to the east of scenario B) and part of development scenario C above, while annexing only that which was anticipated as annexation scenario A&B. The City contemplated development of the McKinney property without connecting to Sunnyside in the Master Plan, presumably not needing two access points or having two access points on Teague.

I appreciate Woodside's desire to provide utility connections at the proposed EVA point as it is more cost effective for them. However why cant the utility connections be provided under a non-EVA easement or under an EVA that isn't designed to accommodate a normal city street? If additional development doesn't occur south of the current TM, there would be no need for the EVA to become a normal city street. If additional development does occur south of the current TM, I understand you to say that likely instead of another access point onto Sunnyside, the EVA will be opened up.

After this TM, there are three likely scenarios pertaining to the two 9.6 parcels south of the existing TM: one develops, the other develops, or both develop. Can you give us a feel for the city's circulation plan under these scenarios, understanding that the current TM has a connecting road to the north of the two parcels?

Lastly, I would be remiss if I didn't again point out that the TIS is flawed in that it contemplates intersection configurations and lane configurations along Teague and Sunnyside that, though assumingly consistent with the 2014 General Plan, are inconsistent with the later adopted DCP Master Plan (which doesn't permit TWLTL or anything more than a single lane in each direction).

Marcus

From: White, Steven <stwhite@fresnocountyca.gov>
Sent: Friday, December 06, 2019 1:12 PM
To: Mike Harrison <mikeh@ci.clovis.ca.us>; 'Marcus DiBuduo' <marcus.dibuduo@outlook.com>; Sean Smith <SeanS@ci.clovis.ca.us>; Magsig, Nathan <nmagsig@fresnocountyca.gov>; Jimenez, Bernard <BJimenez@fresnocountyca.gov>; Thompson, John R. <jothompson@fresnocountyca.gov>

Cc: 'Matt Smith' <MattS@woodsidehomes.com>; White, Steven <stwhite@fresnocountyca.gov>
Subject: Re: Woodside EVA

Mike
Making the EVA a local street is not addressed in your TIS and we do not support this road connection as it is outside of your area to be annexed . This connection will push more traffic onto Sunnyside. If you want to make this a local Street then a updated TIS will be needed and within that TIS a trip distribution will be a request from the County. As Sunnyside will remain in the County one option is for the City to annex it or take over the maintenance responsibility. I suggest at this time you keep this road an EVA. As this is a EVA noted on your TM and it is outside your annex boundary ,how are you proposing to have a City Street in the County outside the City.
We are working with the City of Fresno now transferring a Road Easement from the County to the City. It is taking a City Council and Board action.

I suggest we discuss next week to make sure the County, City ,Developer and property owners are understand what direction the City desires to move ahead with.
Thanks

Get Outlook for iOS

From: Mike Harrison <mikeh@ci.clovis.ca.us>
Sent: Thursday, December 5, 2019 3:43:22 PM
To: 'Marcus DiBuduo' <marcus.dibuduo@outlook.com>; Sean Smith <SeanS@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: RE: Woodside EVA

Marcus,

Woodside Homes has submitted a map that shows an EVA and utility corridor connecting from the southwest quadrant of the subdivision to Sunnyside Avenue. This is ostensibly a result of negotiations Woodside has had with the property owner whose property will dedicate the required easements. The City is requiring that this corridor ultimately become a street, but has discussed with the developer an option for it to be an EVA that prohibits day to day access for the public for an interim period of time to be determined. It would be the City's preference that the connecting street (Portland Avenue) be built with the subdivision improvements and opened to the public (new local DCP residents) on day one. At a minimum, full dedication of street right-of-way would be required and a permanently paved street surface provided for use by emergency personnel. In this event, the non-public access nature of the road would be in place for an interim period until further development adjacent to the road occurs or it is otherwise determined that the road should be opened. The introduction of this access point does not materially change the traffic analysis, though it would remove some trips from the Teague

As to the location of the roadway along Sunnyside, it was certainly anticipated, with the DCP master plan, that there would be points of access on Sunnyside to serve those parcels depicted in the plan as expected development. The locations of those access points can't be preplanned, they are positioned as development opportunity presents itself. In general, we would like to see roadways positioned so that they do not point directly at homes, though, even this is not always accomplished in subdivisions. In this case, the proposed street would straddle the Morrison and Stonehouse properties. While not ideal for all, it is a reasonable location for the street.

Please let me know if there are other issues you would like to discuss regarding this subdivision.

Thanks,

Mike

From: Marcus DiBuduo [mailto:marcus.dibuduo@outlook.com]
Sent: Tuesday, November 26, 2019 11:03 PM
To: Sean Smith <SeanS@ci.clovis.ca.us>; Mike Harrison <mikeh@ci.clovis.ca.us>
Cc: White, Steven <stwhite@fresnocountyca.gov>; 'Matt Smith' <MattS@woodsidehomes.com>
Subject: Woodside EVA

Sean,

Thanks for hosting the meeting this afternoon and putting yourself in front of the firing line. If anything I think that the meeting showed that – while there are some differences in opinions – everyone in that room wants to do the right thing for the greater community.

Mike,

I am hoping that you can give me the City's official position on the EVA. It is unclear whether the City is (i) requiring an EVA, (ii) is requiring an EVA now and reserving the option of opening it up to a full-fledged city road if necessary, or (iii) is requiring a full-fledged city road now. A 60' wide easement, along with potential development of the remainder of the property with EVA facing houses, makes me believe that it is (ii) or (iii). To me I see this as a critical decision that the City needs to commit to as it significantly affects the analysis on multiple levels. There are people on the other side of Sunnyside that are justifiably strongly opposed to an eventual City road aimed straight at their property. We also discussed at the meeting that the designation may have some bearing on potential grant monies for ATP trails. Matt also has some issues he will have to deal with regarding the language of the easement and negotiating with the grantor. Can you please clarify for us? PC is approaching in less than a month and I don't think that anyone wants to be having the discussion of the plan for that road first before the PC.

Marcus

NORMAN D. MORRISON IV
8195 North Sunnyside Avenue
Clovis, California 93619

April 9, 2020

VIA E-MAIL MAIL
Planning Commission, City of Clovis
1033 Fifth Street
Clovis, California 93612

Re: Public Review Comments on Woodside Homes' GPA2019-006, R2019-007, R2020-002, TM6284, & RO301Application, Initial Study and Mitigated Negative Declaration

Dear Members of the Planning Commission:

This letter is written as a supplement to my earlier correspondence, dated February 26, 2020, and is submitted on behalf of myself and other concerned residents, neighbors and landowners located within the "Dry Creek Preserve." This includes neighbors and landowners living along Sunnyside Avenue.

The current CEQA analysis continues to demonstrate inconsistencies, deficiencies and defects that render the opinions unusable and misleading. This is especially true as to the Emergency Vehicle Access that is planned to exit onto Sunnyside Avenue which, as the City's analysis notes, will become a regular city street at some future point depending upon when some vague, undefined development occurs to the North and South of the property. The current analysis and plan also fail to address or correct the defects and deficiencies noted in my prior correspondence, as well as the correspondence submitted by others.

First, the City's CEQA documents contain no meaningful or realistic analysis of the effect of the EVA as either an EVA or as a regular street. As the EVA is a required component of the current proposed development and is recognized as becoming a future regular street access, CEQA requires that the CEQA analysis include the use of the road as a full access street, and its impacts upon not only the traffic but also the surrounding properties. The current analysis fails to do this.

Moreover, it is significant to note the current application and supporting documents fail to contain any input by the County of Fresno. This is especially concerning as City Staff has been present during several meetings with stakeholders, including the County of Fresno and landowners, during which the County has repeatedly stated the County will not approve of the EVA being transformed into a regular access point. (Documentation of the County's position has been forwarded as a part of other comments.) Not only does the City's current CEQA

analysis ignore the County's historical position, but instead serves to wholly ignore and contradict the County's position to reach its conclusion. The City's staff is on notice and aware of the County's position, but offers no explanation for the critical discrepancy.

Element 17 of the CEQA analysis also erroneously states that the proposed EVA/regular access point will not substantially increase hazards, including conflicts with farm equipment. Many of the residents along Sunnyside, and within the Dry Creek Preserve, own and operate tractors and other farm equipment along Sunnyside. Additionally, a large animal veterinary clinic is located immediately north of the proposed EVA. As a result, there are frequently large vehicles, including livestock trailers, heavy equipment trailers, and similar equipment entering and departing Sunnyside. Encouraging additional vehicles to enter and access Sunnyside at this point will lead to conflicts with slow moving vehicles and livestock. It will also result in an increase in the number of vehicles interacting with slow-moving farm implements, which is recognized by the CHP, CalTrans, and other agencies as creating clear danger to operators of the farm equipment and a hazardous situation overall. Accordingly, the proposed project will result in an increase in proposed hazards, yet there are no mitigation measures proposed.

As anyone who lives in the Dry Creek Preserve can attest to, over recent years there has already been a clear and noticeable increase in the amount of traffic on Sunnyside and other roads. A majority of this traffic is non-DCP residents. Increasingly, those using Sunnyside refuse to obey either the posted speed limits or the double-yellow markings. Many of us, myself included, have been illegally passed by vehicles travelling well over the legal speed limit, and I have almost been involved in multiple traffic accidents involving people attempting to pass me, over the double-yellow lines, as I am turning left into my driveway. Vehicles also consistently attempt to pass commercial vehicles on Sunnyside by going into opposing traffic lanes in this same area. This is critically significant, as my residence is exactly where the Applicant is proposing to place the EVA/future access road. Once again, despite these issues and safety hazards, no mitigation measures are considered, proposed, or required.

The proposed conditions and the CEQA analysis are also inherently contradictory. Proposed Condition No. 42 requires two points of access to the development to be available during all phases of the construction. As proposed, there is only one regular point of development (off of Teague). As the EVA is identified as being gated and available only to emergency vehicles, it cannot serve as the required second point of access.

The March, 2020, traffic studies are not included in the materials presented in support of the Application, and therefore cannot be considered for purposes of the Application. Accordingly, the CEQA analysis and Application are dependent upon the traffic counts from 2017, which do not reflect current conditions in the area and fail to account for or consider development projects that have been approved in the surrounding areas which will also utilize Sunnyside. This includes the development (Tract 6263) along the south side of Shepherd

between Sunnyside and Clovis (which the City's own documents establish will result in several hundred additional vehicle trips per day), the Heritage Grove development (which will also result in increased Sunnyside usage, due to the "right-in/right-out" on Shepherd and the access point along Sunnyside).

Critically significant, the City's own standards and procedure prohibit the use of the prior traffic study to support any aspect of the current application. The City's own *Traffic Impact Study Guidelines* (2014) requires that available existing traffic studies, and their vehicle counts, "can be used if the they are less than twelve (12) months old **and** the traffic volumes have not been significantly changed due to more recent development in the vicinity." The traffic studies utilized in support of this application are approximately two and one-half years old (2.5). As noted, they do not account for the increased traffic associated with numerous other projects proposed and/or approved in the area. The traffic study relied upon also does not consider the impact of traffic upon neighboring intersections. For all of these reasons, the traffic study is incomplete and fails to meet the City's own requirements.

Moreover, the Applicant fails to provide any basis for how it concluded that the future conversion of the EVA would result in only 12 vehicle trips per hour in the morning and 6 vehicle trips in the afternoon utilizing the 2040 buildout calculations. Such figure is wholly inconsistent with the projected vehicle trip load associated with this development, and is also inconsistent and contradictory to human nature and rational behavior. Existing traffic patterns and flow demonstrates such a figure ignores the traffic count and load that will be associated with residents of the proposed development taking their children to any of the applicable schools (Century, Alta Sierra or Buchanan), much less the normal morning and afternoon traffic associated with accessing Nees and Herndon.

Finally, the revised analysis and conditions still does not address the concerns expressed in my prior correspondence, nor does it propose or require any mitigation measures. For example, it fails to consider the impact, or include any proposed mitigation measure to address the impact, that a road will have upon the immediately neighboring properties. The EVA will exit immediately opposite my residence, located at 8195 North Sunnyside, and my neighbor's property. This will not only introduce glare, light, and noise from vehicle traffic into our residences, but will also result in the ability to safely enter our property and enjoy the usage of our property due to conflicting traffic. This is especially important as my neighbor operates a business requiring trailers and other commercial vehicles to both enter Sunnyside and back into his property from Sunnyside. Trailers and other larger vehicles also frequently access my property and my southern neighbor's property. The proposed access road will impair and create a dangerous situation by introducing additional cross-traffic. Further, introduction of the vehicle access point will also create a dangerous situation as residents along Sunnyside utilize personal street mailboxes, and the access road will result in drivers focusing not upon pedestrians,

bicyclists and residents obtaining mail from street boxes as they are in the process of turning onto the new access street.

We would also request that, regardless of the EVA and traffic issues, should this project or any other project be approved, that the City include as an additional requirement that purchasers of the new homes be advised that neighboring homes rely upon wood burning fireplaces for their heating needs, and are exempt from the Air Pollution Control District requirements. This will minimize future disagreements and conflicts, as new homeowners will be apt to complain about the smells and particulate matter associated with wood burning heating sources.

We would also request that the Planning Commission include a requirement that prior to the EVA ever being considered for conversion to a regular access road, that the Project Applicant make good faith, demonstrable efforts to obtain substitute access to either Nees or Fowler. The project map demonstrates the Project includes consideration of such extension, and the project is designed to accommodate such access. Access to either Fowler or Sunnyside would additionally be in full compliance with, and further the purposes of, the applicable traffic circulation plans and maps, as well as the Dry Creek Preserve Master Plan.

Thank you for your consideration. I also join in the comments and issues raised by others.

Sincerely,

Norman D. Morrison IV

TROY McKENNEY

5777 E. Teague Ave, Clovis, CA 93619

(559) 432.6200 (office)
(559) 447.6277 (direct)
(559) 432.2938 (fax)

AGENDA ITEM NO. 4.

City of Clovis Planning Department
Attn: George Gonzalez – georgeg@ci.clovis.ca.us
Orlando Ramirez – orlandor@ci.clovis.ca.us
Cc: Matt Smith – Woodside Hoes – Matts@woodsidehomes.com

Re: TM6284 – April 9, 2020 meeting

Mr. Gonzalez, Mr. Ramirez, Clovis Planning Commission Members,

My name is Troy McKenney. My family and I live at 5777 E. Teague which is part of the Dry Creek Preserve. We also own the 20 acres at 5137 E. Teague which is the largest parcel within the proposed development.

I want to give you a little history of our property. We purchased this property in 2005. The property was and still is in the county and is zoned Rural Residential (RR), which allows for a development of 2 acre parcels in the county. Upon purchasing the property, I hired an engineer and submitted a development map to the County of Fresno that was consistent with the zoning. I was informed by the County that they had a Memorandum of Understanding (MOU) with the City of Clovis and they would NOT approve the proposed development without the consent of the City of Clovis. My engineer talked to the City Planning Department and was told to submit the map to the City's Development Review Committee (DRC), which we did. In that meeting the City officials present told us they would NOT give consent to develop the property in the County. They went on to say it could be developed once annexed into the City but there was no Master Plan for the area and they did not know when a Master Plan for the area would be done as the City of Clovis was not doing anything to develop a Master Plan and did not have any plans to develop a Master Plan for the area at that time.

So, for over a decade there was nothing done to develop a Master Plan for the area, and I was prohibited from developing the property. About 4 years ago, Matt Smith, from Woodside Homes approached several property owners in the area about purchasing their property for development. Matt began talks with and had many meetings with many property owners throughout Dry Creek Preserves. After approximately 3 years and countless meetings both public and private, a Master Plan was developed that the majority of the residents in the Dry Creek Preserve approved. This was no small feat. It went from the Council Chambers being filled with concerned residents to almost everyone being satisfied with the final Master Plan. I believe the residents were very involved and in the end understood some wanted no development ever and others wanted to develop their property with typical City sized lots. Everyone compromised and the current Master Plan was approved with very little objections from the residents. I do not recall anyone speaking in opposition to the Master Plan at the City Council meeting when it was approved.

It has been a significant burden not to be allowed to develop this property for the last 15 years. The Dry Creek Preserve Master Plan has provided a way of finally being allowed to develop this property. This Master Plan stipulates the lowest density of homes of any area in the City of Clovis. This density is a fraction of what is allowed in other developments in the City of Clovis and has had significant negative impact on the value of our property.

The proposed development Woodside Homes has submitted is consistent
Master Plan. I am respectfully requesting you to please approve the proposed plan at the April 9, 2020 Planning Commission Meeting with no further delays as we have been attempting to develop this property for15 years.

It is my sincere hope that this proposed development will be approved by the City of Clovis. Again I will state the proposed development is consistent with the Master Plan. While I understand there are a few individuals who may object to this or any development due to some personal issue, or desire to see no development at all, the Master Plan was approved by a very strong majority of the residents of the Dry Creek Preserve, after countless hours of work and compromise. Considering all of this, it seems unreasonable to delay this project based on a few individuals.

In closing I have been advised to go on record with this. After not being allowed by the City of Clovis to develop the property in the County, if the City of Clovis does not approve development of the property as per the approved Master Plan, it will be clear that the City of Clovis has taken away my right to develop the property. I will have no choice but to seek compensation from the City of Clovis. This is not what I prefer, so again I respectfully request you to approve the proposed development.

Sincerely,

Troy McKenney

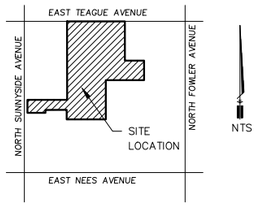
AGENDA ITEM NO. 4.

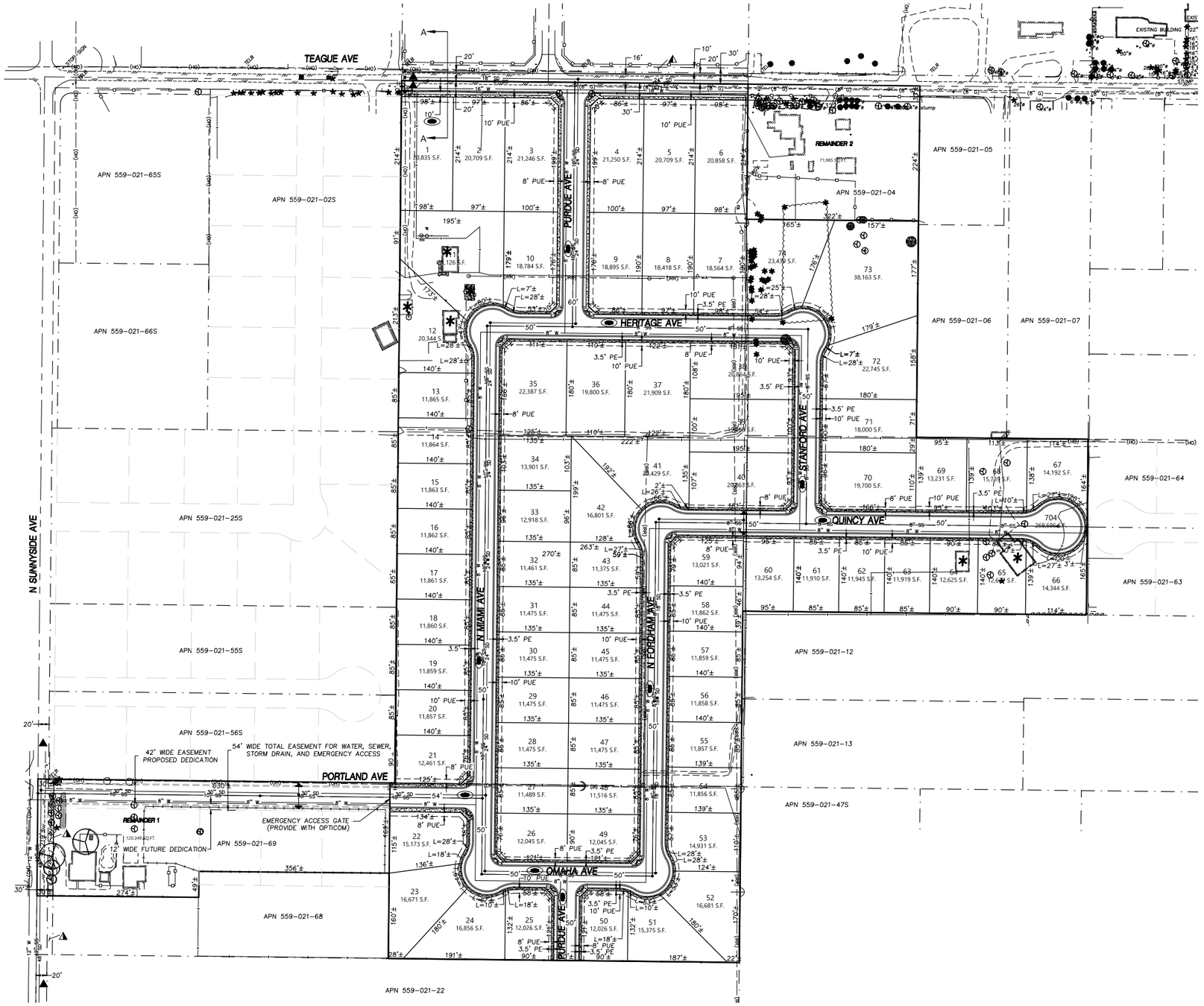
VESTING TENTATIVE SUBDIVIS

TRACT NO. 6284

A RESIDENTIAL DEVELOPMENT
IN THE CITY OF CLOVIS
FRESNO COUNTY, CALIFORNIA

VICINITY MAP:





SCALE: 1" = 100
0 50 100 200

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED 6' WOOD FENCE W/PARALLEL 6' CHAIN LINE FENCE
- PROPOSED 6' CMU FENCE
- EXISTING SECTION LINE
- EXISTING EASEMENT LINE
- EXISTING RIGHT-OF-WAY LINE
- EXISTING CENTERLINE
- FUTURE RIGHT-OF-WAY LINE
- (IRR) EXISTING IRRIGATION LINE
- (16" W) EXISTING WATER LINE (SIZE AS NOTED)
- (SS) EXISTING SEWER LINE (SIZE AS NOTED)
- ▲ PREVIOUSLY DEDICATED FOR PUBLIC STREET PURPOSES PER MAP OF NEES COLONY RECORDED IN BOOK 2 OF RECORD OF SURVEYS AT PAGE 57, F.C.R.
- ◭ PREVIOUSLY DEDICATED FOR PUBLIC STREET PURPOSES PER PARCEL MAP NUMBER 2903 RECORDED IN BOOK 19 OF PARCEL MAPS AT PAGE 33, F.C.R.
- ◭ PREVIOUSLY DEDICATED FOR PUBLIC STREET PURPOSES PER DOC. NO. 96111002 O.R.F.C.
- ⬭ PUBLIC STREET EASEMENT NOW OFFERED FOR DEDICATION FOR PUBLIC USE.
- ✱ EXISTING BUILDING TO BE REMOVED

SITE INFORMATION

EXISTING TREES
TO BE REMOVED

EXISTING BUILDINGS
ONE (1) EXISTING HOME TO BE REMOVED

EXISTING USE
SINGLE FAMILY RESIDENTIAL

PROPOSED USE
SINGLE FAMILY RESIDENTIAL

PROPOSED ZONING
R-1

EXISTING ZONING
AE-20

SOURCE OF WATER
CITY OF CLOVIS

SOURCE OF SEWAGE DISPOSAL
CITY OF CLOVIS

SOURCE OF ELECTRICITY
PG&E

SOURCE OF GAS
PG&E

SOURCE OF CABLE T.V.
COMCAST

SOURCE OF TELEPHONE
AT&T

ASSESSOR'S PARCEL NUMBER
559-021-03S, 04, 37, & 69

SITE AREA
37.27± AC. GROSS
36.45± AC. NET

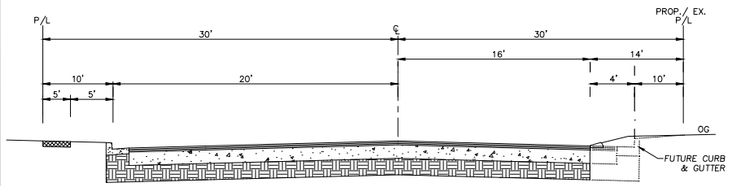
PHASING
MULTIPLE FINAL MAPS MAY BE RECORDED FROM THIS VESTING TENTATIVE TRACT MAP.

MINIMUM LOT SIZE
11,375 SQ.FT.

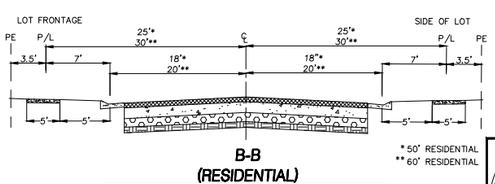
MAXIMUM LOT SIZE
38,163 SQ.FT.

AVERAGE LOT SIZE
15,611 SQ.FT.

DU/AC - GROSS ACREAGE
2.30 DU/AC (FOR 74 TRACT LOTS)
32.19± AC. GROSS TRACT LOTTING



A-A
TEAGUE AVE.
NOT TO SCALE



B-B
(RESIDENTIAL)
NOT TO SCALE

PREPARED BY:

YAMABE & HORN ENGINEERING, INC.
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OWNER:

APN: 559-021-03 TROY A. MCKENNEY AND DEBRA A. MCKENNEY
APN: 559-021-04 CHARLES MERRILL AND SHEREE LEE MERRILL
APN: 559-021-37 AMARDEEP S. AULAKH
APN: 559-021-69 RICK J. WARREN AND SUSAN M. WARREN

BASIS OF BEARINGS

THE GEODETIC OBSERVATION OF THE NORTH LINE OF THE SOUTHWEST 1/4 OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 21 EAST, MOUNT DIABLO BASE AND MERIDIAN. TAKEN TO BE NORTH 89°24'18" WEST.

BASIS OF ELEVATIONS

BM NO. 124 – BRASS CAP MONUMENT ON TOP OF CURB, 20'± WEST OF WEST RETURN, SOUTHWEST CORNER OF NEES AND FOWLER AVENUES WITH AN ELEVATION OF 353.302 FEET, AS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988. IS THE BENCHMARK FOR THIS SURVEY.

NAVD88 = NGVD29 +2.53'

REGISTERED PROFESSIONAL ENGINEER ADAM B. LEE No. 69104

Yamabe & Horn Engineering, Inc.
CIVIL ENGINEERS • LAND SURVEYORS
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APPROVALS	APPROVED (INITIALS)
CONSTRUCTION MANAGEMENT	
TRAFFIC	
DEVELOPMENT REVIEW	
STREETS	
PARKS	
SOLID WASTE	
UTILITIES	

REVISIONS	DATE	APPROVED
△		
△		
△		
△		
△		

CITY OF CLOVIS

PROJECT TITLE: TRACT NO. 6284

SHEET DESCRIPTION: VESTING TENTATIVE TRACT MAP

PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

Y&H No. 19-191
Dr. By: AL
Ch. By: CK
Date: 08/19/2019

Project No:

Sheet No. 1 of 1 Sheets

F:\2019\19-191\dwg\Maps\Tentative Map\FINAL_TTM 6284_3-12-2020\19-191_TTM 6284 74 lots.dwg

ATTACHMENT 15

DRY CREEK PRESERVE

MASTER PLAN

CITY of CLOVIS

PLANNING & DEVELOPMENT

[redacted]

Draft Document Updated 05/25/2018

ATTACHMENT 16

Dry Creek Preserve Master Plan
Acknowledgements

City Council

Bob Whalen, Mayor
Drew Bessinger, Mayor Pro Tem
Lynne Ashbeck
Jose Flores
Vong Mouanoutoua

Planning Commission

Paul Hinkle, Chairperson
Amy Hatcher, Chair Pro Tem
Alma Antuna
Mike Cunningham
William Terrence

County of Fresno

Steven White, Public Works Director
Bernard Jimenez, Assistant Public Works Director

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Luke Serpa, City Manager
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Bryan Araki, City Planner
Mike Harrison, City Engineer
Scott Redelfs, Public Utilities Director
Stephanie Andersen, GIS Specialist
David Wolfe, City Attorney

Special Thanks

Dry Creek Preserve Property Owners
Dry Creek Preserve Neighborhood Committee Participants

1.0 Introduction

1.1 Foreword

This document contains the Master Plan for the area referred to as the Dry Creek Preserve (DCP). Understanding the roots of the DCP and the last half century of its history, which have produced this unique area of the Clovis Community, is essential in the planning and visioning for the area. The DCP includes approximately 795-acres which was originally part of the 50,000 acres farmed for dryland wheat by Clovis Cole. Since that time, the land has been mostly levelled, irrigated, and divided into more than 235 different private ownership parcels. However, much of the original agricultural and open space character and appearance of the land still exists today.

By the late 1960s, considerable land division was occurring. To protect the remaining area farmland, Fresno County designated the area as AE-20 (Exclusive Agriculture -20-acre minimum), in their County General Plan. In 1974, the DCP was included within the Clovis Sphere of Influence. The City then began to plan for the area, pursuant to the City-County Memorandum of Understanding (MOU). Under the Agreement, the County continued its jurisdiction over land use decisions, permitting and enforcement, but the County would confer with the City in making those decision.

In 1988, the area was included in the City's Herndon Shepherd Specific Plan. In that planning action, the entire area was designated as R-R (Rural Residential), with a minimum parcel size of two acres. That designation reflected very strong preferences, as expressed at the time by a large majority of DCP landowners who desired to keep the area's rural lifestyle. Under the two-acre minimum parcel designation, many of the larger parcel owners submitted proposed Parcel Maps to the County, asking to divide their 20-acre properties into various configurations of two-acre or larger rural-residential parcels. The area was developing into a decidedly rural-residential community.

The R-R designation attracted buyers who desired larger land parcels for a variety of reasons. Many wanted small farming operations or just space for larger homes and yards. Many others desired to keep horses or other livestock. Still others needed larger properties for storing equipment or materials or as a larger base for their home-based businesses, then allowed under the County's designation. Varied as it is, the R-R lifestyle has become a very important part of DCP residents' lives, based on the expectations created by the two-acre provisions of the Herndon-Shepherd Specific Plan.

The residents have repeatedly defended their preference to remain under County jurisdiction (avoid being annexed into the City of Clovis) and keep their existing Rural-Residential zoning and lifestyle. There are however, some landowners who desire to further develop their DCP properties into more intensive uses. Consequently, several studies have been conducted with the intent to document the desires of DCP owners. The earliest was a Master's Degree Thesis by Deborah Morley, in 1988, which pertained to the entire Herndon-Shepherd Specific Plan area. In her mail-based survey, only 13 percent of small (2-5 acre) parcel owners desired to be annexed into Clovis. Of larger Parcel owners, 43 percent responded affirmatively. Another survey was conducted in 2009 by the DCP Neighborhood Committee. In that survey, with only about 25 percent of owners responding, over 90 percent of respondents desired for the DCP to keep its rural character. Only 8 percent expressed desire to further divide or develop their property. The most recent survey was an in-depth effort carried out by the DCP Neighborhood Committee and closely coordinated with the City of Clovis, in 2014. In that mail survey effort, 94 of the ±231 contacted landowners responded. 86 percent of respondents (79 percent of the land area) expressed desire to retain the DCP's rural open space character and existing R-R designation. 13 percent (21 percent of land area) desired more development. Of the 12 respondents who desired to develop, four owned less than three acres, and nine were absentee owners.

That is the background that was faced in trying to identify a future vision for the area. A very large fraction of owners desire no major changes. Others desired or needed to develop their property. It was the intent to consider the interests of both groups in prescribing development guidelines. In addition, the City of Clovis and Fresno County also have particular needs with regard to area infrastructure, services and associated costs that also need to be a part of the discussion. It quickly became apparent that no one would receive everything they desire or need under this Master Plan. It would have to be a compromise process, with a goal to meet as many people's needs as possible. Substantial effort and communication, as described herein, has occurred to understand the array of different needs, and to address those needs where possible. The discussions were lengthy and the compromises reached were often difficult. The process itself has created expectations that the compromises reached will be real and reliable, and will not be freely upset over time. A major goal of this Master Plan was to achieve certainty and predictability for the area residents and interested parties.

The outcomes, as detailed in this Master Plan, are: 1) most DCP land area will continue to be designated as R-R, and there will be few major changes made to properties whose owners desire to maintain that status and 2) larger properties will be able to reasonably develop, subject to General Plan Amendment applications, but there will be constraints upon that development, including limits on the types and design of allowed development, the maximum allowed density of residential tracts, and a minimum 10.0 – acre project size required for residential tract development. These standards and guidelines are intended to provide reasonable development opportunity, while assuring the maintenance of the existing quiet rural neighborhood, with less intensive traffic, and few urban features, as preferred by area residents.

The area is intended to provide a unique residential element, characterized by variety, in which families desiring to live in residential developments, but on larger land parcels to support their outdoor lifestyles, larger families, larger custom homes, or other spatial needs will be able to find what they are seeking. Likewise, families who desire to keep livestock, or practice small scale farming will also be able to do so on Rural Residential properties of 2 acres or larger, which will remain available. Owners of properties in excess of 4 acres, who desire to divide off portions of their property for sale will be able to submit Parcel Map requests to the County or City, per the City-County MOU, depending on jurisdiction. Residences will continue to be a mix of owner-residents and rental properties.

The vision also includes the eventual orderly annexation of the DCP into the Clovis City Limits. To accomplish that would likely have been a challenge, given the vast majority of owners' general aversion to being annexed, largely due to differences between City and County permissible land uses, and the City's cost considerations in contemplating annexation and provision of services to a thinly populated area. Considerable time and effort has gone into the development of an Annexation Agreement to establish landowner protections preparatory to eventual future annexations. It is expected that the Annexation Agreement will dispel most landowner concerns and enable them to comfortably support the jurisdictional changes needed by the City and County for delivering efficient services.

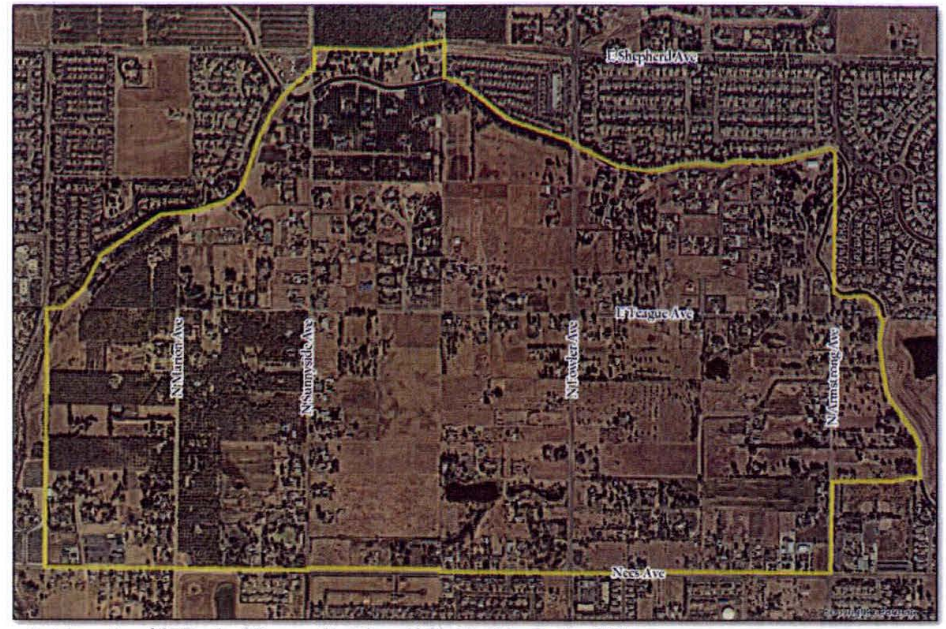
The DCP area will continue to have a wide variety of land parcel sizes and land uses. That variability and individuality is desirable. It is a part of the DCP's historical and present day character, which is so desired by area residents. Maintaining the wide diversity of uses, architectural appearances and land use intensities should therefore be fundamental principle as future DCP land use changes are contemplated.

1.2 Dry Creek Preserve Master Plan Introduction

This Master Plan defines the future direction of a unique area of Clovis, the 795-acre Dry Creek Preserve. It is intended to satisfy the major goals for the area: 1) to guide future preservation of the much desired rural character, appearance, land uses, and diverse wildlife of this neighborhood, while 2) prescribing general design parameters and standards to allow rural-compatible development to proceed.

In accord with the City of Clovis General Plan and Herndon-Shepherd Specific Plan. It seeks to provide:

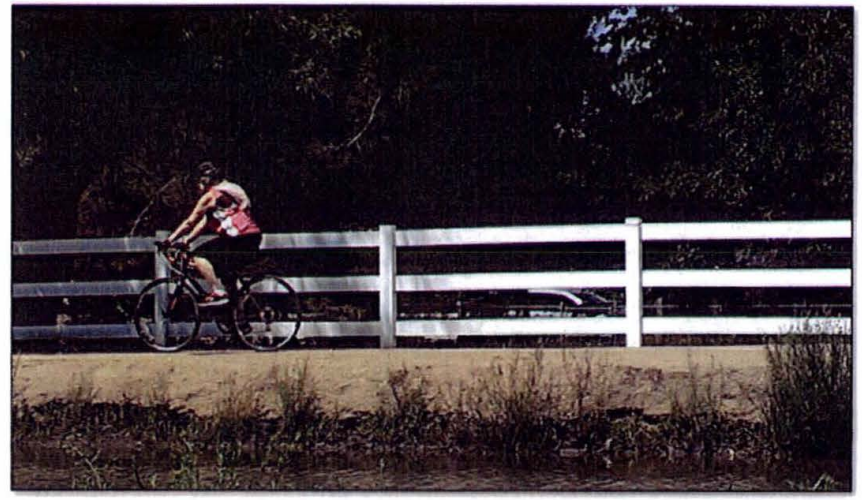
- Continued support for large residential and/or agricultural parcels and protection of the owner property rights and land uses needed to manage those larger properties.
- Development lot minimum sizes to assure compatibility and logical transitions between future developments and the area's preferred farm-like character
- A distinctly rural neighborhood character and appearance, characterized by less intense traffic, rural appearing streets, absence of urban appearing concrete sidewalks, and in areas that are not intensively developed, absence of curbs, gutters, block walls, or urban landscaping features that are replaced by individual owner designed yard fencing, and landscaping
- A clear neighborhood identity or "Brand" for the area, that helps to define and set future expectations about what the area is and is not; utilizing monuments, rural appearing materials, and features such as street furniture, stylish lighting, and landscaping -- or the absence of such features in cases where the area's rural character may be better served.



Aerial overview of the Dry Creek Preserve (Aerial provided by NearMap, October 2017)

1.3 Purpose and Intent

The purpose of this Master Plan is to acknowledge and preserve the 795-acre Dry Creek Preserve (DCP) area's desirable open space character and provide standards and design guidelines to encourage future development which is compatible with that rural neighborhood. It memorializes a set of land use and general development design guidelines which will allow for landowners within the DCP to reasonably use and develop their properties, while respecting and maintaining the area's character. It will enable efficient annexation of lands within the area into the City of Clovis. In conjunction with the City of Clovis General Plan and Herndon Shepherd Specific Plan, it is intended to provide a guide for policymakers, landowners, and developers, in maintaining a unique part of Clovis which, similarly to the Central Clovis Specific Plan, blends thoughtful future development with the City's history and agricultural heritage.



The Dry Creek Trail and Trailhead offer easy access to the DCP for bicycling or walking

Open, softer-appearing streets without hardened edges help create a restful neighborhood character

Marion Avenue

1.4 Site Description

The DCP is located in the City of Clovis' Sphere of Influence; bounded by Nees Avenue on the South, and the Enterprise and Dry Creek Canals on the North, East, and West. The area lies atop a broad alluvium and has fertile loamy soils suitable for agriculture. About one half of the DCP area is managed as orchards, pastureland or other agricultural uses. A wide variety of livestock are also kept on various size parcels throughout the area. The remaining area is principally developed into single family residences on Rural Residential sized lots.

Area housing and demographics are widely varied, with many different values and styles of homes situated on parcels which range from one acre to about 20 acres in size. (There is a scattering of older, legally non-conforming parcels of less than two acres, which were formed prior to the Rural Residential designation by Fresno County.) There are 251 separate privately owned parcels, totaling 747 acres, with more than 235 permanent residences throughout the area. Most residences are owner occupied; however, a number of rental properties are also present. The area currently has a high degree of individuality in home architecture and lot appearance. That variety is a key part of the area's bucolic character which the majority of DCP residents indicate that they prefer.

The existing parcels are designated Rural Residential, in accordance with the Herndon-Shepherd Specific Plan's Land Use Designations. One 31-acre area, the Whisper Creek Development, is annexed to the City of Clovis and has been subdivided into approximate three-quarter acre home sites, pursuant to a 2010 General Plan Amendment.

2.0 Background

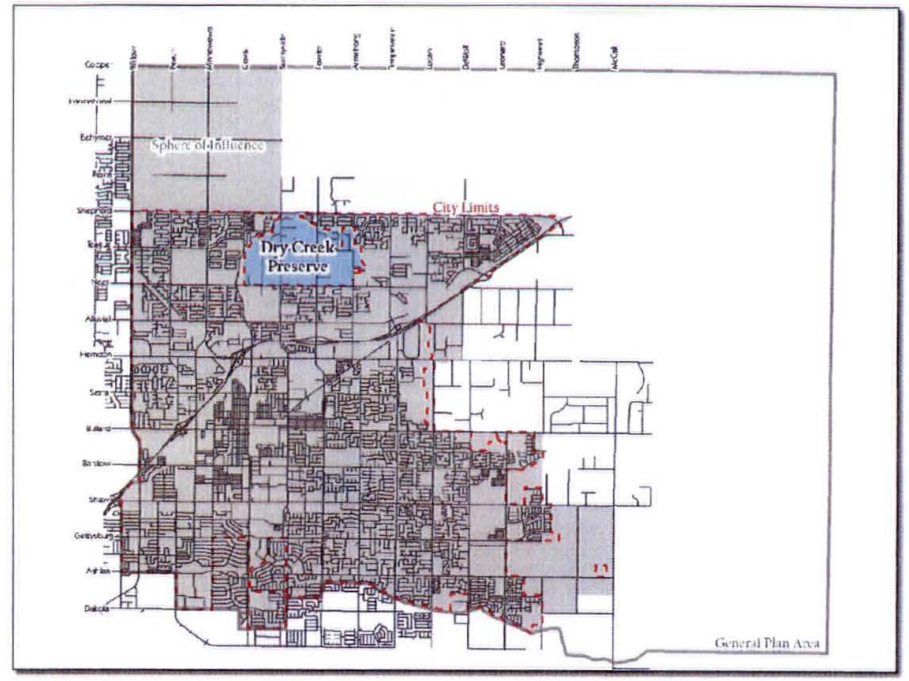
2.1 Clovis City Sphere of Influence

In 1972, Local Agency Formation Commissions (LAFCOs) throughout the State of California were granted authority to determine spheres of influence for cities. A Sphere of Influence (SOI) is a planning boundary outside of the City limit that designates the City's probable future boundary and service area. It is updated on a regular basis as the City grows and future growth plans become better defined. Projects proposed within the SOI are usually referred to the City for planning and consideration.

In May 1974, the first version of the City of Clovis' SOI was adopted. In addition to the many other areas of future growth, the DCP was included. To date, the area has not been annexed to the City of Clovis, except for the 31-acre Whisper Creek Development, located north of Teague Avenue, which was annexed in 2010. This Master Plan attempts to plan for the annexation of the area, while carefully considering and balancing the needs, operations and desires of the current landowners.

2.2 Planning Background

The Herndon-Shepherd Specific Plan was adopted in 1988. It designated the entire DCP area as Rural Residential, with a 2-acre minimum parcel size. That designation persists today. The City's 2014 General Plan Update reiterated the R-R designation, and identified the area as Focus Area #7, for which the General Plan requires completion of a Master Plan, prior to approvals of General Plan Amendments (GPAs) seeking denser development. By requiring a Master Plan for development to proceed, the City has acknowledged the complexity of the area and the need for a holistic approach in moving forward. This Master Plan is designed to meet that General Plan requirement.



Relationship between Dry Creek Preserve and the Clovis Sphere of Influence

2.3 Growth North of Herndon Avenue

Since the adoption of the Herndon Shepherd Specific plan in 1988, the City of Clovis has experienced significant development north of Herndon. The DCP, however, has remained outside of the City boundaries largely because: 1) most of the landowners in the Plan area have expressed a preference to keep the area's current R-R land use designation, and 2) the two-acre minimum designation has made it unprofitable for builders to pursue development projects, and to annex the area into the City. As such, this area remains undeveloped. Only one area of the DCP is within the current City boundary, the 31-acre Whisper Creek Development. This subdivision was annexed prior to adoption of the Master Plan requirement within the 2014 General Plan. The Whisper Creek development has 31 approximate three-quarter-acre lots.

In recent years, County Peninsulas and Islands have been under significant scrutiny for the inefficiencies they create. The State of California, recognizing the inherent problems with County Islands, has passed legislation (Government Code 56375.3) streamlining the annexation of lands. This Master Plan will assist the eventual annexation of the DCP area by inclusion of a Master Annexation Agreement which will enable owners to protect their preexisting property rights and uses after annexation of their properties. LAFCO, the City of Clovis, and the County of Fresno will play pivotal roles in determining the annexation boundaries as development proceeds.

2.4 Dry Creek Preserve Neighborhood Self-Planning Initiatives

A decade ago, a group of residents within the DCP began meeting regularly to discuss land use planning for the area. The group was open to any owner within the DCP who wished to participate in the planning effort, and periodic outreach efforts were made to include new participants. This group recognized the importance of proactively planning for the area, rather than reacting to sequential General Plan Amendment applications that inevitably would be considered for approval by the City. Accordingly, the group has regularly coordinated with City Staff with the goal of developing a Specific Plan for the DCP area. The group named itself the Dry Creek Preserve Neighborhood Committee, and as the area's name suggests, one of their main goals was preservation of the DCP's less intensive land use plan and lifestyle. Most residents within the DCP have expressed a desire for the area to remain rural. In fact, it was largely in response to requests by many of these landowners that the General Plan designation of this area remained Rural Residential in the 2014 General Plan Update and in previous planning efforts, dating back to 1988.

Significant time and energy was invested into these early planning efforts, including more than a hundred Committee meetings and production of sequential drafts of a Specific Plan, which were forwarded to the City Staff, requesting feedback. When the 2014 General Plan Update was adopted, it included a requirement that a Master Plan, rather than a Specific Plan, be developed for the DCP area, prior to any further development within the area. That provision presented the opportunity for a neighborhood goal-focused land use planning endeavor to advance. Considerable cooperation and compromise occurred between participating developers and the neighborhood during development of this Plan, which incorporates the input and many of the previous products from the Neighborhood Committee. The concepts expressed in this Master Plan thus represent give and take by all parties. They advance a workable compromise between area residents and property owners (with varied opinions and interests), the City of Clovis and Fresno County.

One of many Dry Creek Preserve Neighborhood Committee meetings

Neighborhood Committee

2.5 Relationship to the General Plan

One of the goals of this Master Plan is to remain consistent with the goals and policies of the City's General Plan. The 2014 Clovis General Plan referred to the Dry Creek Preserve Area as Focus Area No. 7. The General Plan provided direction for this are, which included the requirement for a Master Plan to be prepared for the entire area prior to any further development, with the over-arching intent to preserve the rural residential character of the area. The purpose and intent of this Master Plan is to fulfill the area-wide policy requirement.

Below are the pertinent goals and policies from the 2014 General Plan update and summaries of how this Master Plan fulfills these goals and policies.

Goal 5: A city with housing, employment, and lifestyle opportunities for all ages and incomes of residents.

While we don't normally think of above average income housing as a place of need, the movement toward higher density over the years had led to smaller lot sizes and fewer options for higher income or larger families, or families who prefer an outdoor lifestyle. By allowing for larger lots, this Plan will allow builders to offer unique house plans and designs which will address the needs of Clovis families and residents that are currently being ignored. Our initial research has shown many Clovis families want more home and yard than they currently have but they want to stay within the City of Clovis so that they can enjoy City services and Clovis Unified Schools. This Master Plan targets an underserved population in Clovis; buyers with larger families and, in some cases, higher incomes that are not being met by other parts of the new home market in Clovis.

Policy 5.1: Housing variety in developments. *The Clovis General Plan has been planned to provide a variety of housing product types suitable to each stage of a person's life. Each development should contribute to a diversity of housing sizes and types within the standards appropriate to the land use designation. This policy does not apply to projects smaller than five acres.*

This Master Plan puts a ceiling on residential development densities at .5 units per acre unless the proposed development parcel is 10.0 net acres in size or greater, in which case, the density of development applications may reach as high as 2.3 units per acre. These large lot sizes are relatively unique for the City of Clovis and approximately three times the median lot size currently being developed in the City. These larger lots also achieve the New Housing Goal of the Fresno Multi-Jurisdictional Housing Element recently adopted in April 2016 to "facilitate and encourage the provision of a range of housing types to meet the diverse needs of residents."

Policy 5.3: Innovative housing. *Encourage innovative housing product types, including multigenerational, cooperative, and variations on live-work housing.*

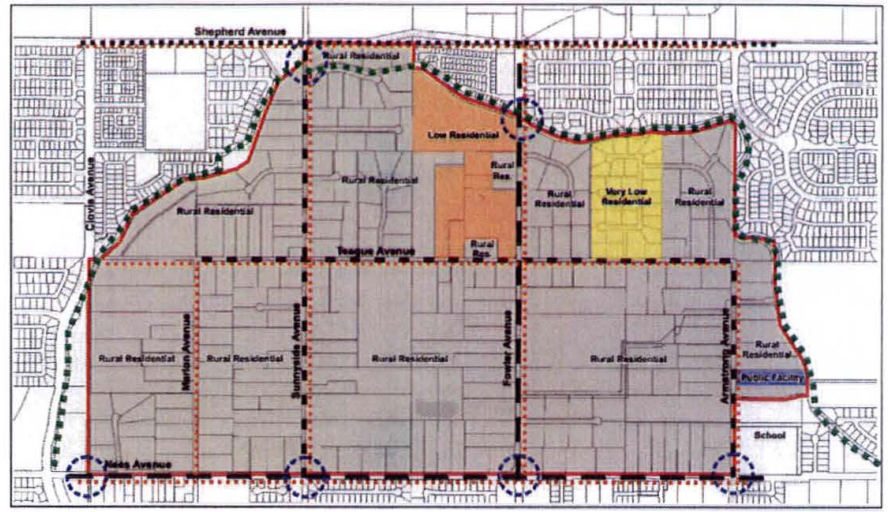
By allowing lot sizes not typically found in the City of Clovis, the Master Plan will offer housing product types that are not easily found elsewhere in Clovis. For example, the plan will allow the construction of large single-story homes that could provide a large usable backyard. With the recent move to density, many residents have expressed both a desire to build wider single story homes with three-bay garages. There is a large group of home buyers who are concerned about the almost entirely indoor lifestyle of their children, and who are seeking space to learn and enjoy outdoor activities. In other cases, aging individuals are seeking single-story housing for safety reasons, but they still are in need of larger size homes to house belongings or visiting relatives, or to provide living space for live-in caretakers or relatives, as need arises. Second homes within a parcel are also allowed, up to 640 square feet for family members or care givers subject to City requirements.

Policy 5.5: Jobs for residents. *Encourage development that provides job opportunities in industries and occupations currently underserved in Clovis.*

By addressing an underserved but higher income market, the Plan aims at creating larger lots and custom home capability, with the aim of attracting professionals and executive level individuals who may be looking at Clovis as a place to site new businesses or locate professional practices.

Policy 5.6: Workforce housing. *Encourage the development of workforce housing that serves the needs of those working in Clovis.*

The movement in recent years towards higher density has left a void at the upper-end of the market. There are fewer and fewer opportunities for families who desire more than an urban style home on an urban size lot in a typical subdivision in Clovis. Many of them live in homes that worked when their children were younger or their families were smaller, but now they need more house and more yard. Rather than have them leave for the County or other cities, this Master Plan provides a unique offering which will help keep Clovis workers in Clovis and may also serve to attract workers from neighboring cities as well.



General Plan Focus Area 7

3.0 Community Outreach and Feedback

The Plan area encompasses over 795 acres and more than 235 parcels. Parcel owners have a wide variety of opinions about development in the area; particularly concerning future annexations. It is difficult to find middle-ground between those different interests. In spite of the differences, several common themes have emerged from the various meetings held to discuss this Master Plan and future development in the area. Listed below are the most common themes raised in the Community Meeting.

Common Theme 1: Maintaining and Protecting the Rural Lifestyle. The DCP has long been associated with a slower pace of life inherent in rural residential living. Street lights don't exist in the area allowing the stars to be seen at night. The two-acre minimum lot size, rights to have domestic and farm animals, and less restrictive regulations and standards, helped provide, for many, a very desirable lifestyle. All of the Rural Residential properties rely upon individual wells for domestic water supply and upon individual in-ground septic disposal facilities. Some residents also have small agriculture operations on their properties which are dependent upon surface water rights and deliveries from Fresno Irrigation District. For this broad array of uses, lower housing densities, and the area's uniqueness, to be preserved, the City recognizes that some area-specific changes and variances to existing City Ordinances and Regulations may be needed and forthcoming, in the event properties within the area becomes annexed to the City. As an over-arching principle, the City intends to continue to allow all Rural Residential property uses that were legally conforming to the County requirements at the time when the property is annexed to Clovis.

Common Theme 2: Concerns Regarding Annexation to the City of Clovis.
Given their strong desire to maintain their current lifestyle, many owners have expressed concerns about the possibility of losing their existing Rural Residential land uses and associated rights if or when their property becomes annexed into the City Limits. At one of the neighborhood meetings this topic, landowner rights, was the main topic of conversation. Following this meeting in late 2016, certain neighbors took these concerns to the City Council. The Council then encouraged City Staff to work on an Annexation Agreement for the area. The resultant Annexation Agreement is incorporated into this Master Plan, as Appendix A.

Common Theme 3: Desire to Sell or Develop Property. There are also a dozen or more owners of larger parcels who desire to either sell their property to developers or to develop themselves. These owners have been frustrated by the General Plan Land Use Designation of Rural Residential, as it has limited their ability to sell or develop their land. Developers have expressed concerns regarding the profitably of building at the 0.5 unit per acre density. Some landowners believe the current General Plan Designation has put a ceiling on their property values and restricted their ability to liquidate their property.

Common Theme 4: Importance of Surface Water Rights to the Continuation of Agriculture.
A significant number of residents in the area currently have small agricultural operations which are completely dependent upon surface water assignments from Fresno Irrigation District (FID). A major purpose of this Master Plan is to preserve the historical small-scale agriculture to the extent the owners desire it to continue. Water assignments associated with these parcels are extremely important to the owners. The purchase prices of the parcels were originally much higher because of the inclusion of the FID water assignments and facility access. In most cases the water entitlement and facilities access is a recorded feature of the property deeds, and the owners have intended to recover that extra cost if and when the property is ever sold. Normally, at the time an owner requests to be connected to City residential water supply, the FID water allocation to the property would be transferred to the City and it thus offsets City costs in acquiring additional water sources to supply the requested domestic water. In the case of the Dry Creek Preserve, the City has agreed to allow property owners who sign Annexation Agreements to keep their individual water allocations, subject to a one-time "water acquisition fee" intended to enable the City to otherwise acquire the water needed to supply the requested domestic water. This process is detailed in the Annexation Agreement (Appendix A). It will facilitate the continued agricultural use of properties in the area. Area-specific exceptions to existing City ordinances and regulations may need to be made to accommodate the terms of the Annexation Agreements.

Common Theme 5: Need for Predictability. Many area residents have expressed a desire to have a Master Plan in place so that the neighborhood will not be surprised by future development applications with higher levels of density or development being proposed in unexpected areas of the Plan area. This Plan is intended to provide predictability to area development (or lack of development).

Common Theme 6: Desire for a Unique Area Visual Signature. It is intended that the Dry Creek Preserve should have its own unique visual appearance and "signature" which defines the area as a unique "softer" appearing area of Clovis, reflecting the area's valuable open space attributes and its agricultural roots in history.

Landowner Issue Resolution Each of the above Common themes is addressed in the various sections of this Master Plan. In most, but not all cases, issues have been successfully negotiated with resulting landowner consensus.

4.0 Master Plan Goals

- Maintain the DCP's Rural Character and Appearance. Establish area-unique design standards to maintain the preferred semi-rural look and feel of the area.

- Protect the Ability of Current Landowners to Maintain Their Current Lifestyle. This is accomplished through thoughtful standards for future development, provision for owners to execute individual Annexation Agreements with the City of Clovis, required recordation of "Right to Farm" covenants on developing lands, and the grandfathering of all preexisting permissible land uses which have existed within the Rural Residential zoning of Fresno County.

- Provide a Framework for Future Development. Identify desirable development guidelines which promote lower housing densities to allow compatible development, but encourage a rural look and feel for the Plan area.

- DCP Wildlife are plentiful. They are enjoyed by area residents and visitors and are an important part of preserving the area's character and identity.

Young Grey Foxes explore a DCP residential garden

A male Wood Duck rests in a DCP pecan orchard

A pair of young raccoons await their mother's return

- Build Identity. Create a "signature look" for the plan area, to set it apart as a unique and special place, which is semi-rural in character and thus preserves the Historic Clovis Western Way of Life.

- Establish Predictability in Land Use Changes. Respect the guidance and direction provided in the development guidelines that were collaboratively developed.

This Master Plan does not alter the General Plan designation for any of the Plan area. Upon adoption of this Master Plan, the RR designation will remain in effect over the Plan area, with allowances for denser development applications up to 2.3 SFR units per acre to be considered in the future on qualifying larger parcels, subject to General Plan Amendment approvals. One of the purposes of this document is to clarify understandings regarding allowable future General Plan Amendments in the Plan area. Such future GPAs will amend the land use designations for specific development areas and parcels, and must be consistent with the density and other standards advanced within this Master Plan.

5.0 Plan Application and Implementation

This Master Plan is intended to serve as guidance for community groups/individuals, the City, Fresno County, and prospective developers within the area.

1) All landowners in the Dry Creek Preserve will be able to sign an annexation agreement with the City of Clovis, protecting their rural lifestyle rights. This agreement will be available for owners to sign for a specified period of time after approval of this Master Plan or at the time an annexation is proposed for their property. This agreement protects the rights of each landowner in the case of annexation.

2) Those who wish to develop their land to the County standard of .5 residential units per acre can apply in the County, while their property remains in the County, per the terms and conditions of the City-County Memorandum of Understanding.

3) If a property is annexed into the City, the landowner can file a development application to the City per the then-current zoning code. Under the current General Plan Designation of Rural Residential, the City would allow development of up to .5 residential units per acre.

4) If a General Plan Amendment is sought from the City, this Master Plan is intended to guide landowners, applicants, and policy makers to limit approvals to 1) densities of no greater than .5 units per acre for projects smaller than 10.0 net acres, and 2) no more than 2.3 units per acre for projects of 10 net acres or greater (See Section 9.1 for specific requirements).

   New residential development will be held to maintaining a semi-rural look and feel through compliance with development standards. (See Section 9.2.1 for specific requirements).

5) Projects requiring a public hearing are subject to legal notification per the Development Code, which requires a mailed notice to all property owners within a specific radius of the project boundaries. Additionally, a mailed notice shall be sent to all property owners within the boundaries of the Dry Creek Preserve.

6) Minor modifications to the Master Plan. A minor modification requested or agreed to by the property owner shall be intended to accomplish one or more of the following:

   Any change or modification which does not change the basic intent of the Master Plan such as modifying plant materials, allowable uses as a result of Code changes, and amendments due to State or Federal regulations. A minor Modification may be approved by the Director of Planning and Development Services through a Minor Modification process.

   An appeal of the Director's determination regarding the minor modification shall be processed in compliance with Chapter 90 of the Clovis Development Code.

7) Major modifications to the Master Plan. A major modification includes any modification which does not qualify as a minor modification including but not limited to changes to circulation patterns, density, rural residential rights policies, and annexations. A major modification shall be processed and reviewed by the Commission and approved by the Council in compliance with the Development.

5.1 Plan Significance

This Master Plan will allow the City to continue to prepare for the annexation of this county peninsula, into its boundaries, which will increase efficiencies in the delivery of services to the area. At the same time it will protect the area's agricultural roots and lifestyle.

The Dry Creek Preserve will continue to be a pastoral-appearing, less intensively developed neighborhood, with evident viable agriculture, equestrian and other livestock use, long views, and other rural attributes. It will continue to have a Rural Residential designation over most of its area, which allows single-family residences to be placed on very large parcels, where desired. It will thus provide a residential housing option wherein people who desire to have larger yards or other connected land area; either for agriculture, gardening, privacy, play areas for children, workshops, livestock, other kinds of outbuildings or just open space surroundings can enjoy those lifestyles, and not be found in violation of City ordinances or regulations, following annexation.

For landowners, this plan will provide predictability when considering the future of the area. The Annexation Agreement will also protect their current allowable rights. For some landowners, this Master Plan will also allow them to consider developing their land, or selling their property for development. For all parties involved, this Master Plan further identifies how Fowler Avenue will be improved over time, as development comes to the area.

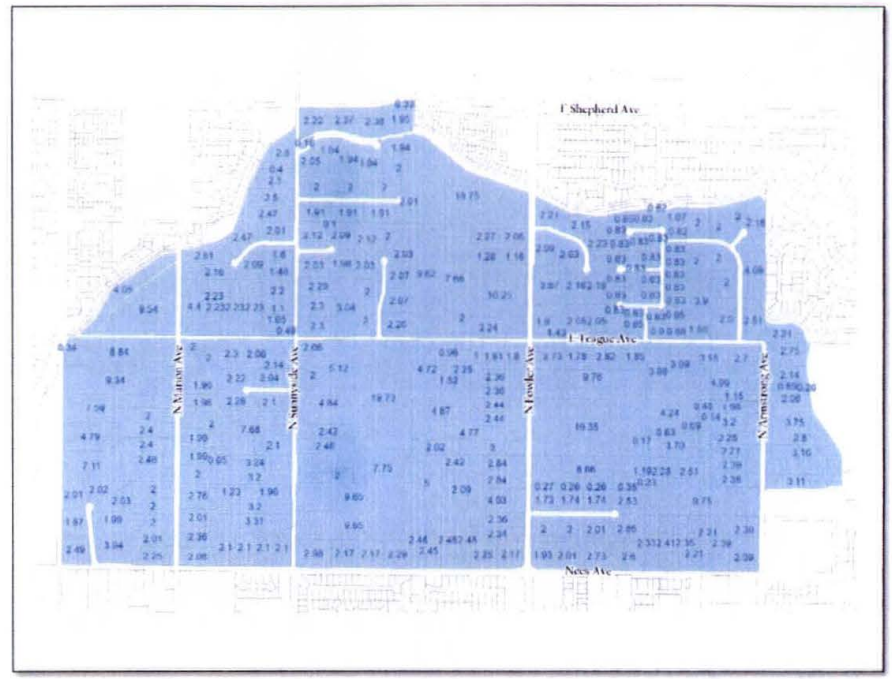
New development of large parcels is likely to occur. The 10.0 net acre minimum project size (per this Master Plan) will cause much of the Plan area to remain largely rural, as it is today. Potentially, up to 145-165 of the 747 privately owned acres of the Plan area could be built-out with new, more intensive development. Under this scenario, about 20-22% of the Master Plan area may eventually consist of new development with up to 2.3 SFR units per acre, and 78-80% would remain in its current Rural Residential status. Very importantly, the Plan will provide the community more assurance regarding the type of developments that may be coming to the Plan area, and where those developments could be located.

6.0 Land Use and Future Development

1) Future residential development greater than 0.5 SFR units per acre within the Dry Creek Preserve requires a General Plan Amendment, per the Herndon-Shepherd Specific Plan. The Large Lot Residential designation (maximum 2.3 units per acre) reinforces the "Community Brand/Identity" of the DCP, serves to reduce peak traffic loading, and reduces development impacts upon the rural character of the area.

2) Future residential development of projects smaller than 10.0 net acres (excluding required street rights of way) will be limited to a minimum Rural Residential lot size of 2 acres nominal, unless they are landlocked, or adjacent to a previously developed subdivision, pursuant to section 9.1d.

3) New residential development that is approved would conform to the DCP Master Plan with respect to density, community aesthetics, materials, and street furniture as later described in the Dry Creek Preserve Design Guidelines.



Dry Creek Preserve parcels

6.1 Annexations

Purpose. The purpose of this Policy is twofold. First, to identify an annexation program describing the probable properties that the City of Clovis, County of Fresno or the Fresno Local Agency Formation Commission ("LAFCo") will request be annexed concurrently with development project property ("Non-Development Annexed Properties"). Second, to identify protections that will be made available to the Non-Development Annexed Properties. It is the overall intent that the owners of these properties be allowed to continue with their rural residential lifestyle as permitted under the Ordinance Code of Fresno County in effect at the time of annexation.

6.1.1 Annexation Program

Development of land at a higher density than .5 units per acre within the DCP will require the Project to be annexed to the City of Clovis. Depending upon the location of the Project, the annexation boundary could encompass several surrounding properties. Currently, the City of Clovis and County of Fresno are party to a Tax Sharing Agreement which includes policies regarding annexation boundaries. Additionally, the Fresno Local Agency Formation Commission (LAFCo), has policies and Codes which further address annexation boundaries. This Master Plan includes an exhibit which illustrates scenarios which may or may not follow strict Codes and Polices for annexation boundaries. The intent of the scenarios is to illustrate the challenge of development in the DCP as it relates to annexation.

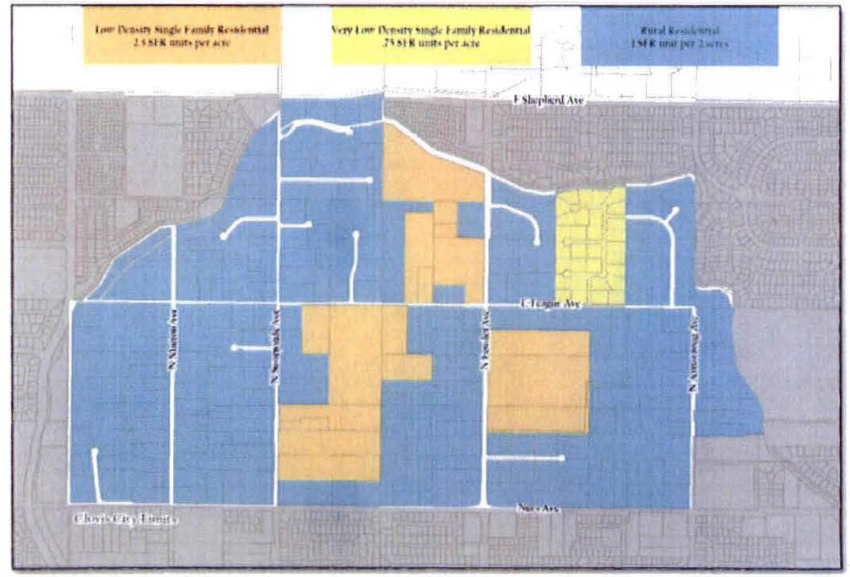
6.1.2 Annexation Agreements

Owners of Non-Development Annexed Properties will be offered an opportunity to enter into an annexation agreement ("Annexation Agreement") with the City which spells out how the owners will be allowed to continue with their rural residential lifestyle. A form of the Annexation Agreement is included in Appendix A. Owners of Non-Development Annexed Properties shall have two opportunities to enter into the Annexation Agreement as follows:

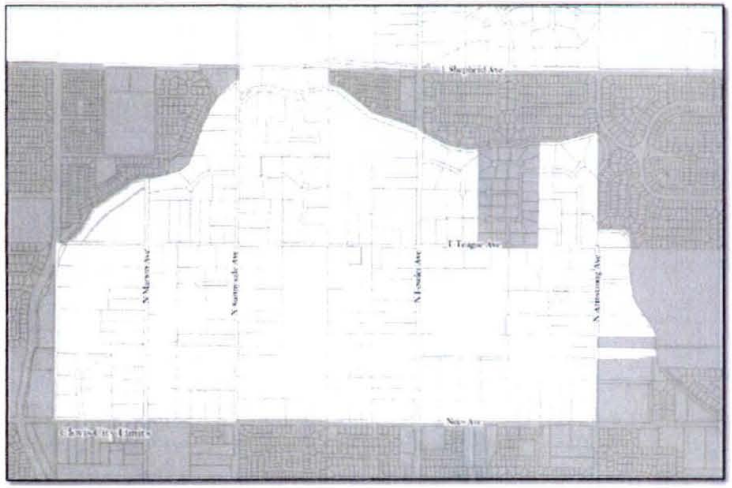
(1) For a period of one hundred twenty (120) days after approval of the Master Plan ("Initial Execution Period"); or

(2) At the time of being asked to annex their property.

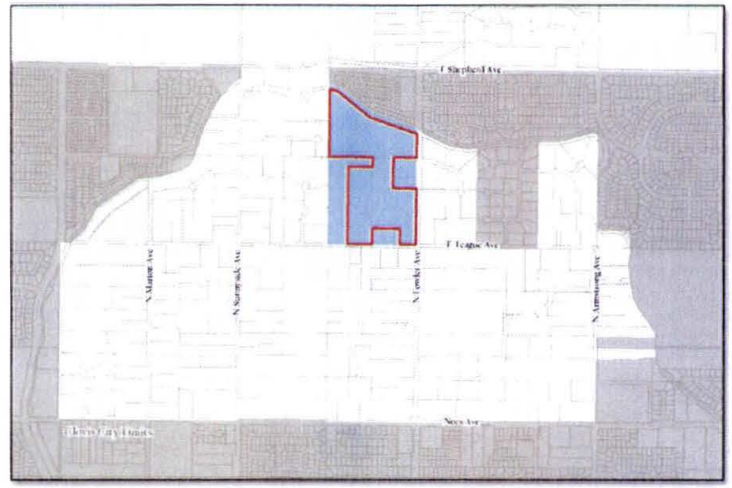
During the Initial Execution Period, the City Clerk may arrange for specified dates and times to have the agreements signed, notarized, and recorded.



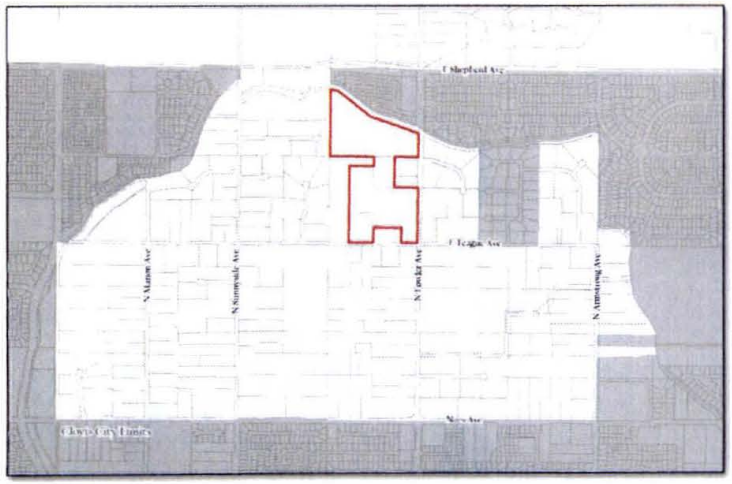
Expected 20-Year Level of Development



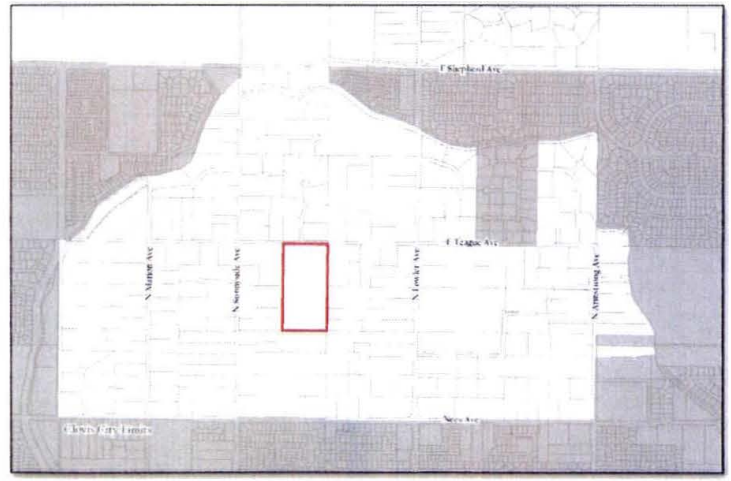
Annexation Program Scenarios



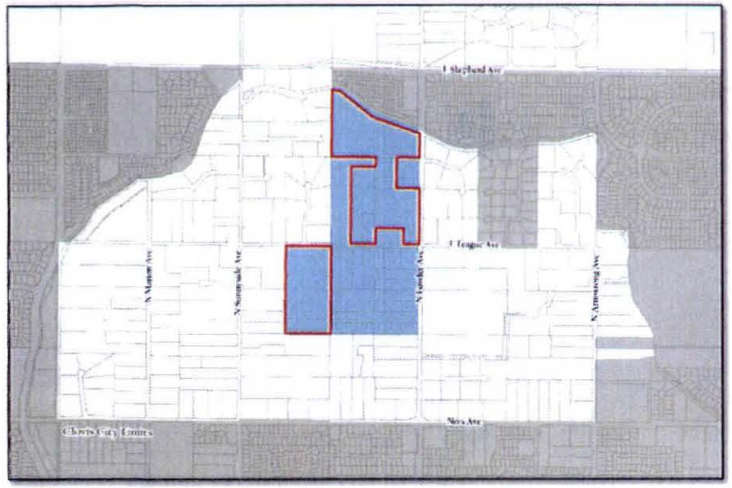
Annexation Scenario A



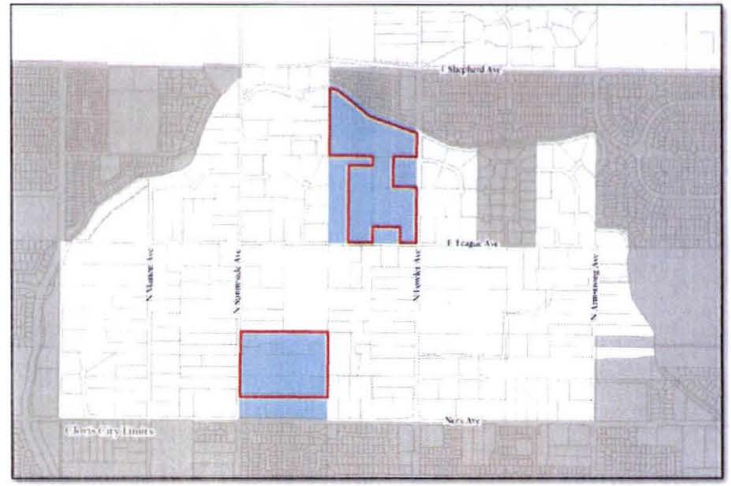
Tract 6154 Development



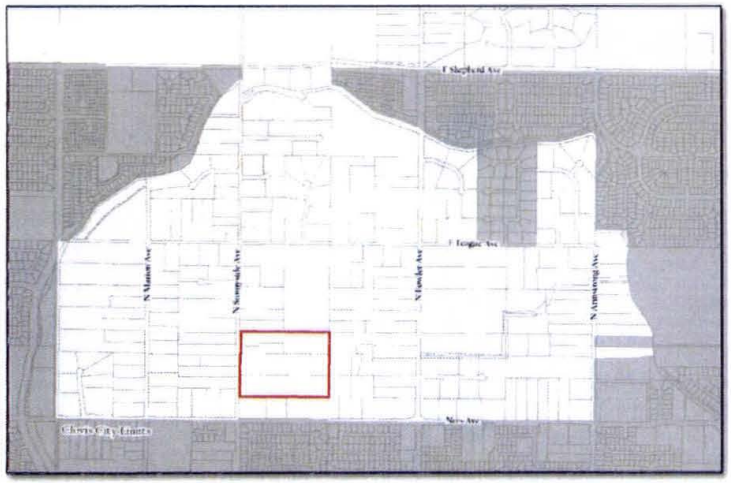
Potential Development B



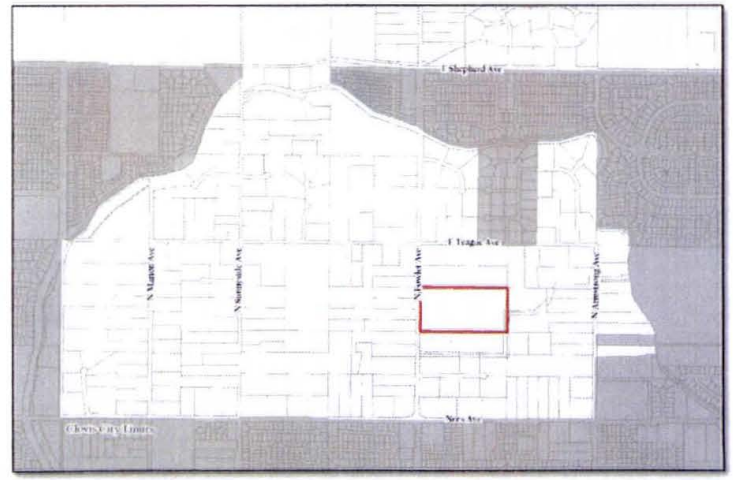
Annexation Scenario A & B



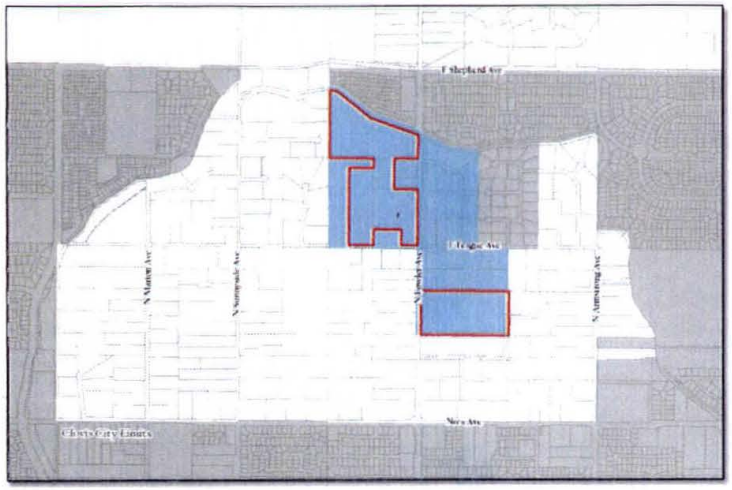
Annexation Scenario A & C



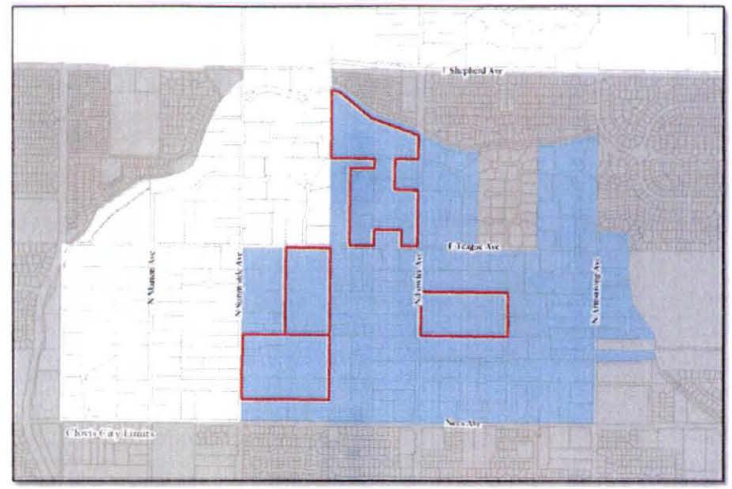
Potential Development C



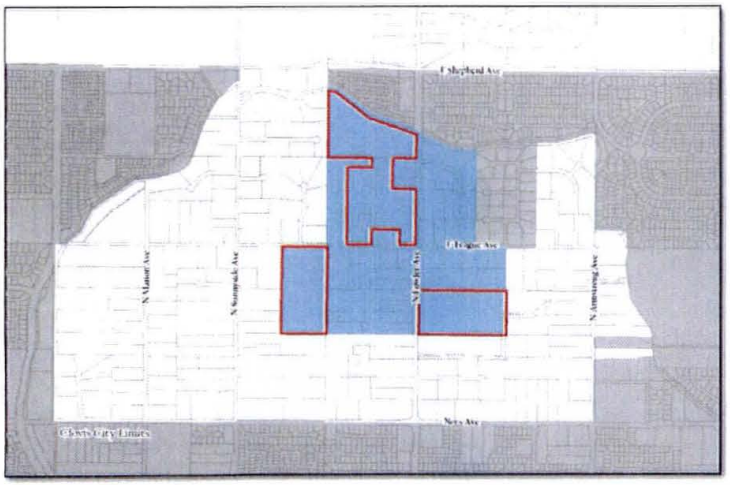
Potential Development D



Annexation Scenario A & D



Annexation Scenario A, B, C, & D



Annexation Scenario A, B, & D

7.0 Agriculture

Protecting Agricultural Operations

Protection and continuation of DCP agriculture is a key element of this Master Plan. It will be facilitated as follows:

- Agricultural uses will continue to be allowed and encouraged within the DCP, as long as owners wish to maintain them. This will help maintain the DCP's open space values and keep alive Clovis' historical agricultural heritage.
- An Annexation Agreement (Appendix A) is provided herein as the primary basis for protection of many aspects of individual parcel agricultural operations.
- Where public landscaping is utilized along roads, trails and parks, only non-toxic (to livestock) plant materials will be utilized.
- Because free-roaming or feral dogs represent a threat to livestock, wildlife, and humans, the Plan Area shall be subject to strictly enforced licensing, leash laws, and animal control laws and ordinances. The use of chain-link or other livestock protective fencing will be allowed, provided it meets structural requirements per City and County regulations.
- Agricultural irrigation using FID surface water is encouraged and will continue to be allowed. Agricultural water entitlements will remain with parcels per the Annexation Agreement.
- Agricultural operations will be protected by Right to Farm covenants, to be recorded by the developers of any property within the DCP.

7.1 Protecting Agricultural Uses

Agriculture has long been a principal use exercised by Plan Area residents. These agricultural uses have collectively helped to foster and maintain, over time, the historical rural appearance and the open space character of the Dry Creek Preserve Area. There continue to be small, profitable operations. Most are family operations, conducted by resident-owners. A relatively small variety of harvested crops is grown, including pecans, grapes, walnuts, almonds, stone fruit, and occasional small-scale row crops. Some are marketed on a commercial scale, others are marketed through "farm gate" or Famers Market sales.

Numerous DCP landowners keep large or small animals or poultry as a part of their lifestyle. The animals include horses, cows, mules, donkeys, burros, llamas, alpacas, goats, sheep, various poultry or ornamental birds, and others. Most often these animals are kept as pets, for personal riding enjoyment or for vegetation control. However; some owners do occasionally breed horses, dogs, or other animals with intent to sell the progeny. Others raise cattle or other animals for food. The diversity of large and small animals present across the Area is one of the principal attractions to recreationists, who commonly bicycle or walk with their children, pausing to view and interact with horses or other animals. This interaction is desirable, since it helps "soften" the urban lifestyle and serves to reconnect Clovis with its historical "Western Way of Life".

For Area agriculture to persist and continue to provide aesthetic and commercial value, it will be necessary to protect existing or new farming operations from conflicts with other uses, including residential uses. This Plan is intended to create an explicit right to farm policy. It contains the following standards to assure that neighbor conflicts over otherwise legal noise, dust, spraying, harvesting, permitted burning, or other activities will not eventually preclude and/or displace the agricultural uses from these fertile lands.

The following specific agricultural use protections are identified as specific policies, within the Dry Creek Master Plan area.

7.1.1 Standards for Protection of Farming Operations

1) Agricultural uses will continue to be allowed and encouraged within the DCP, as long as owners wish to maintain them. This will help maintain the DCP's open space values and keep alive Clovis' historical agricultural heritage.

2) An Annexation Agreement (Appendix A) is provided herein as the primary basis for protection of many aspects of individual parcel agricultural operations.

3) Where public landscaping is utilized along roads, trails and parks, only non-toxic (to livestock) plant materials will be utilized.

4) Agricultural operations will be protected by Right to Farm covenants, to be recorded by the developers of any property within the DCP.

5) Agricultural irrigation using FID surface water is encouraged and will continue to be allowed. For Rural Residential zoned properties, existing access to and use of surface irrigation water, through Fresno Irrigation District facilities, and/or to groundwater through private wells will continue to be allowed, subject to an Annexation Agreement, in the event lands are annexed.

6) Operators making modifications to lands or developing or maintaining public works projects will be required to provide for downstream water users to have uninterrupted use and access to preexisting conveyance capacity of irrigation water, including structures, valves, pipelines, ditches, canals and other features, to enable them to normally irrigate agricultural crops or pastures, or provide water for livestock, pursuant to the Fresno Irrigation District rules. Developers and builders will have the right to realign and/or improve existing irrigation lines, structures, valves, pipelines, etc. that traverse developer owned property.

7) Agricultural pumping will continue to be allowed throughout the Plan Area. Pumping from existing wells for agricultural uses will not be subject to local requirements for new (i.e., not required on or prior to January 1, 2014) permits, fees, testing or other regulation, except as may be required under laws of the State of California.

8) Noise traditionally associated with agricultural operations (e.g., from normal operations such as harvesting, wind machines, bird control, pruning, discing, ripping, leveling, hauling, processing or other agriculture related activities) shall not be construed as a "nuisance" or other basis for legal restriction in neighbor disputes affecting City or County permitting. All such agricultural noise shall be restricted between the hours of 7:00 A.M and 10:00 P.M.

9) Dust arising from agricultural operations shall be in compliance with State law and with regulations of the San Joaquin Valley Regional Air Pollution Control District. No other restriction of dust from agricultural operations are intended to be imposed.

9) Legally compliant agricultural chemical spraying or other pest control is a permissible activity within the Dry Creek Area and will not be restricted.

10) No other agricultural use shall be restricted or curtailed due to concerns expressed by neighbors, unless the operations are found not to be legally compliant.

11) Agricultural property owners within the Area shall continue to have authority to protect livestock from injury or harassment by free-roaming domestic dogs.

12) Livestock protective fencing up to 7 feet in height will continue to be allowed.

13) Because free-roaming or feral dogs represent a threat to livestock, wildlife, and humans, the Plan Area shall be subject to strictly enforced licensing, leash laws, and animal control laws and ordinances. The use of chain-link or other livestock protective fencing will be allowed, provided it meets structural requirements per City and County regulations.

7.2 Right to Farm Covenants

The City's existing "right to farm" covenant, as spelled out in Clovis Municipal Code § 9.40.180, will be made applicable to all development projects within the Dry Creek Preserve. The right to farm covenant contains a subdivider's and owner's disclosure statement which acknowledges the subdivider's and owner's understanding of the presence of nearby commercial agricultural use and the City's policy regarding its right to continue.

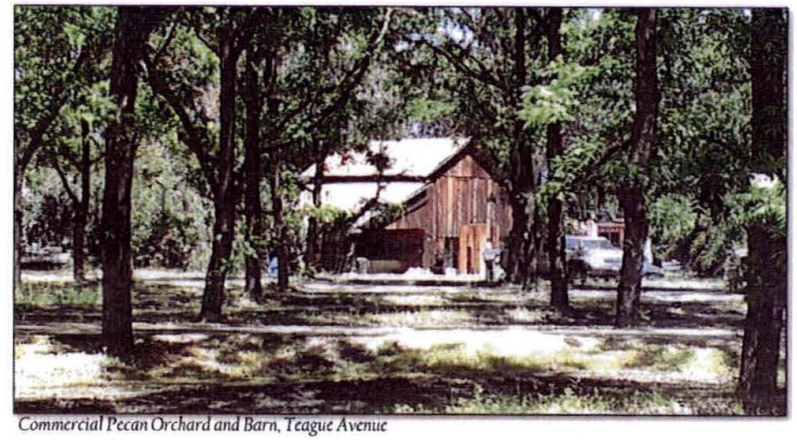
- The commercial covenant reads as follows:

  The undersigned in consideration of recordation of said subdivision by the City of Clovis, do hereby covenant and agree with the declared policy of the City of Clovis (Right-to-Farm Ordinance) to preserve, protect, and encourage development of its agricultural land consistent with the California Civil Code Section 3482.5 which provides that no agricultural activity, operation, or facility, or appurtenances thereof, as defined in the code, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in operation for more than three years if it was not a nuisance at the time it began; that the described property is in or near agricultural districts and that the residents of the property should be prepared to accept the inconveniences and discomfort associated with normal farm activities. This covenant shall run with the land and be binding upon all future owners, heirs, successors, and assigns to the property.

In addition, a further covenant will be required as a condition of approval recognizing the presence of adjacent rural residential properties that may conduct small scale non-commercial farming operations.

- The rural residential covenant reads as follows:

The undersigned in consideration of recordation of said subdivision by the City of Clovis, do hereby covenant and agree that rural residential properties, as defined under the Ordinance Code of Fresno County or the City of Clovis Municipal Code, lie adjacent and nearby to the property and that the residents of the property should be prepared to accept the inconveniences and discomfort associated with normal farm activities occurring on rural residential properties, provided those activities are conducted in a lawful manner and incompliance with the applicable Ordinance Code of Fresno County or the City of Clovis Municipal Code. This covenant shall run with the land and be binding upon all future owners, heirs, successors, and assigns to the property.



Commercial Pecan Orchard and Barn, Teague Avenue

8.0 Land Use Guidelines

These land use guidelines operate by providing standards to apply to any development which might occur at any location within the Plan area. Currently, the entire Plan Area is in County of Fresno jurisdiction, and is designated Rural Residential, Single Family, two-acre minimum.

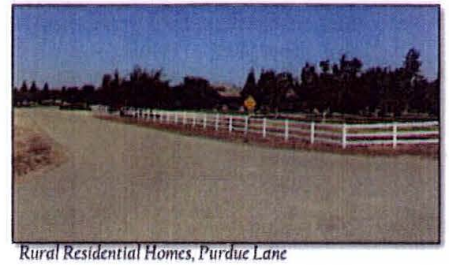
8.1 Rural Residential Use

The Herndon Shepherd Specific Plan designated the entire Plan Area for Rural Residential use. This was one of four general housing types advanced in that 1988 Plan. Today, all the other areas designated within the Herndon-Shepherd Plan are built-out, and at a much higher density than the current Rural Residential (two-acre minimum) standard in the Plan area. This Master Plan proposes to retain the RR designation throughout the Plan Area, except as proposed for development through the General Plan Amendment process on developments of at least 10.0 acres in size.

The RR lifestyle is desirable to many people who choose not to live in denser communities, or where elements of their lifestyle involve activities or uses that either require space or are not well tolerated by close neighbors. Some owners also have home-based aspects to their businesses, (e.g., nurseries, veterinary clinics, equipment overnight storage, arts, crafts, etc.) which were the reason they selected RR lands with suitable space and with County-approved permissible uses. Those preexisting conforming uses will continue to be allowed under this Master Plan.

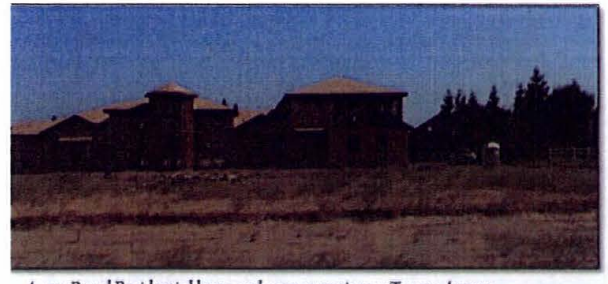
Rural residential housing within the Area occupies a wide range of home values and sizes, including rentals, small older homes, new custom homes and very large estate-size developments. These housing types are mixed across the landscape in various clusters, typically containing more than one type of home.

Rural Residential land use can be typified only by its variety and individualism. Few properties are alike, reflecting the owners' diverse lifestyles and land management practices.



Rural Residential Homes, Purdue Lane

Horse pasture, Teague Avenue



A new Rural Residential home under construction on Teague Avenue

8.1.1 Rural Residential Permissible Uses

All property uses and features that are legally allowed or permitted by Fresno County at the time when properties are annexed into the City of Clovis shall continue to be allowed after annexation occurs, without restriction, unless necessary to comply with State laws or regulations.

Subject to their conformance with Fresno County standards at the time of annexation, or with City of Clovis Rural Residential standards, the allowable uses on Rural Residential parcels shall specifically include, but not be limited to the following.

1) Large or small farming or ranching operations, including growing, harvesting, processing, shipping of produced commodities (except commercial poultry growing, confined livestock operations --i.e., feed lots, dairies, etc.-- or other operations with associated objectionable odors or potential for groundwater contamination) and disposal of agricultural waste, including by permitted burning or shredding. All above actions continue to be subject to USDA, CDFA, CARB and San Joaquin Valley Air Pollution Control District regulations.

2) Maintenance shops to construct or maintain resident-owned equipment.

3) Construction of facilities, barns, sheds, solar facilities, etc., connected to farming, livestock, or other resident-owner activities. Keeping of large animals, including livestock, horses, donkeys, llamas, alpacas, goats, sheep, or other mammals, property fencing as needed to protect those animals will also continue to be allowed.

4) Keeping of birds or poultry as pets or for personal use.

5) Drilling, maintenance and/or repair of new or existing agricultural or residential water wells upon Rural Residential parcels will be allowed pursuant to an Annexation Agreement.

6) Surface irrigation of crops, pastures or other features, as allowed by Fresno Irrigation District and if the parcel has FID water rights. (Properties which are annexed to Clovis and are supplied with City domestic water must have and be in compliance with an Annexation Agreement in order to continue to use FID-supplied agricultural irrigation water.)

7) Continued individual access to operate and maintain irrigation supply facilities, such as FID or community ditches, control structures, valves, stand-pipes or pipelines, pursuant to preexisting easements and to an Annexation Agreement.

8) Gardening or landscaping associated with residential uses.

9) Cottage industries: (Artwork, crafts, etc.).

10) Individual parcel fencing of any type is permitted upon Rural Residential parcels up to a maximum height of seven (7) feet. Above 7 feet requires separate permitting by the City of Clovis or Fresno County, as applicable.

11) Visible storage and use of parcel owner's equipment and materials, including: 1) any farm implements, 2) recreational equipment, 3) yard or residential maintenance equipment, 4) up to one commercial truck and trailer, 5) up to two (2) shipping containers, or 6) other stored materials. Storage of equipment in excess of the above standards is allowed, but must be in a concealed area of parcels, not visible to the roadways or to neighboring properties.

12) Non-commercial construction/fabrication of equipment, welding, wood working, or other light industrial activities.

New Low Density Residential construction on ¾ acre lots at 31-acre Whisper Creek

9.0 New Housing Development

The following policy objectives will guide development, in order to avoid adverse impacts of development upon the core rural area values, area residents, uses and resources of the DCP. As such, the following objectives shall be implemented in all decisions regarding DCP area rezoning, permitting, or other land use decisions.

9.1 Residential Density

Maximum residential densities for the DCP area shall be 2.3 single family Units/Acre. This density is consistent with the maximum residential density standards used in the General Plan and sewer and water master plans (2.5 Units/Acre) for planning available sewer and water supply capacity to the area. In addition, 10.0 net acres or more is required for development at these densities, with limited exceptions as set forth below. The following standards shall be applied:

A. The maximum residential density shall be 2.3 Units/Acre. This density is based upon gross acreage, which is defined as follows: The total area within the lot lines of a parcel before public streets, easements, or other areas to be dedicated or reserved for public use are deducted from the parcel.

B. Densities at greater than 0.5 Units/Acre, up to the maximum density of 2.3 Units/Acre shall be limited to 10.0 net acres or more. Net acres is defined as follows: The total area within the lot lines after deducting existing public street rights-of-way.

C. Notwithstanding the foregoing, developments up to the maximum density of 2.3 Units/Acre may occur on less than 10.0 net acres under the following circumstances:

(1) On landlocked parcels. Landlocked parcels shall mean those parcels which are contiguously surrounded on all sides by either (a) preexisting City approved subdivisions, or (b) one or more major through streets (Marion, Sunnyside, Fowler, Armstrong, Nees, Teague, and Shepherd Avenues, or other major public facilities (Dry Creek Elementary, Dry Creek alignment, Enterprise Canal, or Fresno Metropolitan Flood Control District facilities).

(2) On single parcels of 9.5 net acres or larger, but less than 10.0 net acres, if the parcel is contiguous to a previously developed City residential tract within the DCP area. Contiguous shall mean: sharing a common boundary, not separated by: (a) a dedicated public road or street, (b) Dry Creek, (c) Enterprise Canal, (d) any FMFCD maintained surface drainage canal, or (e) any other public trail or right of way. Previously developed City residential tract shall mean a fully permitted subdivision project under a single subdivision map application, which is either completed or actively under construction.

D. Properties of less than 10.0 net acres may be developed as rural residential parcels at 0.5 Units/Acre, or combined with other adjacent parcels to form 10.0 plus net acres, thereby allowing densities up to 2.3 Units/Acre.

In adopting these standards, the Council finds that they are necessary to preserve the rural residential character of the DCP area and that any development inconsistent with these standards interferes with this fundamental goal.

The Council additionally finds that allowing landlocked and contiguous parcels to develop at the higher densities pursuant to the exceptions in C(1) and C(2) above, protects property owners that may otherwise not have any opportunity to utilize their property due to prior development patterns, while still preserving the essential goals of the Master Plan.

9.2 Development Standards

9.2.1 Development Design Standards

- All development shall comply with the City of Clovis' building and development codes. No architectural design template is imposed for new development within the Plan area, however variety in residence size, cost, style, and appearance/design should be provided.

- Residences located adjacent to existing homes that carry the Rural Residential City or County designation (Existing Home), may be either single or two-story homes unless the proposed home will lie within 100 feet of an Existing Home. If the proposed home is within 100 feet of an Existing Rural Residential Home, the proposed home shall be limited to one story. The Developer may request an Administrative Use Permit to consider a two-story home upon an agreement with the owner of the adjacent Existing Home, and mitigating measures (the planting of trees between the homes, etc.).

- Developers of all new housing projects shall record a "Right to Farm" covenant over each of the subdivided parcels. This covenant shall disclose that living near farming operations may cause inconveniences to new home buyers. This document gives the farming operations standing to continue their practices as they were in place before the new development was proposed.

- Construction of residential subdivisions or units, or construction of any other feature pursuant to this Plan must not obstruct, reduce, interfere with, or in any way prevent the free use of surface irrigation facilities and/or water for agricultural purposes. Developers of new projects may reroute or replace old irrigation lines, but will coordinate this with adjacent landowners and in all cases, must provide for the flow of water through their developed property to adjacent and downstream parcels. The developer will not however, be required to fix broken irrigation systems on property that is not a part of their development, unless they participated in the breakage.

- To preserve the undeveloped character of the Plan area, on Arterial and Collector Roads concrete sidewalks will not be installed adjacent to development projects. Rather, walkways made of asphalt, decomposed granite, or other more rural appearing material will be installed. For the interior tract development of new residential homes, concrete sidewalks may be replaced with either: 1) no sidewalks (upon Council approval), or 2) sidewalks made of asphalt or decomposed granite, etc.

- The development of road frontage and the requirement for dedicated right of way shall only exist on: 1) land that is actively being developed, 2) frontage from a landowner who has sold a portion of a parcel for active development, or 3) areas otherwise needed for orderly street access. Where improved streets front along land parcels that are not developed more densely than 0.5 Single Family Residence units per acre, urban appearing landscape vegetation will not be required, and owner landscaping will be allowed.

10.0 Commercial Uses

At present, few commercial uses exist within the Dry Creek Area. Existing commercial uses include commercial agriculture, a veterinary clinic, a nursery, equestrian center, a boutique winery, and several cottage industry uses. All of these uses were/are properly permitted under Fresno County, and are permissible uses under the County's Rural Residential designation. Many of these are mixed uses, wherein the business owners reside at their place of business. Most existed under existing County RR (2 acre-minimum) zoning, or were allowed pursuant to County-issued variances or permits. All such prior permitted uses shall be grandfathered here and continue to be allowed within the Plan area.

It is the intent of this Plan that particular types of commercial use that are not allowed under Fresno County's Rural Residential designation will not be allowed within the Dry Creek Preserve.

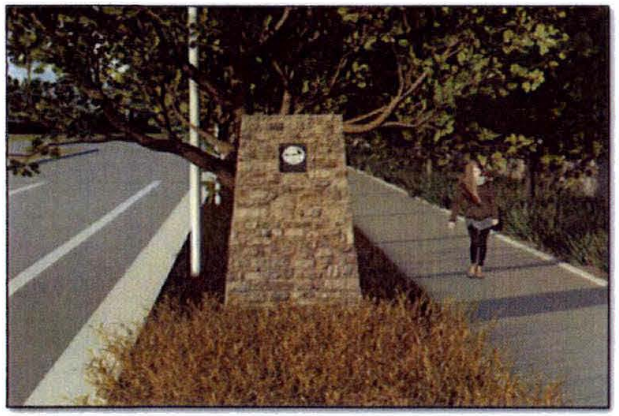
Several landowners have expressed interest in very low intensity commercial enterprises, such as bed and breakfast facilities, a winery, a commercial community gardening enterprise, along with the several existing commercial uses already noted above.

To the extent that these uses are consistent with County regulations for Rural Residential parcels at the time of annexation or City Rural Residential regulations, including any required permits under those regulations, they will be allowed.

11.0 Area Signature and Branding

One of the major goals of this Master Plan is to help set this Plan Area apart from all other areas and to celebrate its uniqueness. This plan proposes to create a "signature look" for developed portions of the area that ties the area together and is found through the project in its monuments, signage, and street signs.

The logo from the Dry Creek Trailhead was deemed to be a good choice for the area (see figure below). It will appear on Dry Creek Preserve Street Signs throughout the DCP area and on various public structures and monuments.

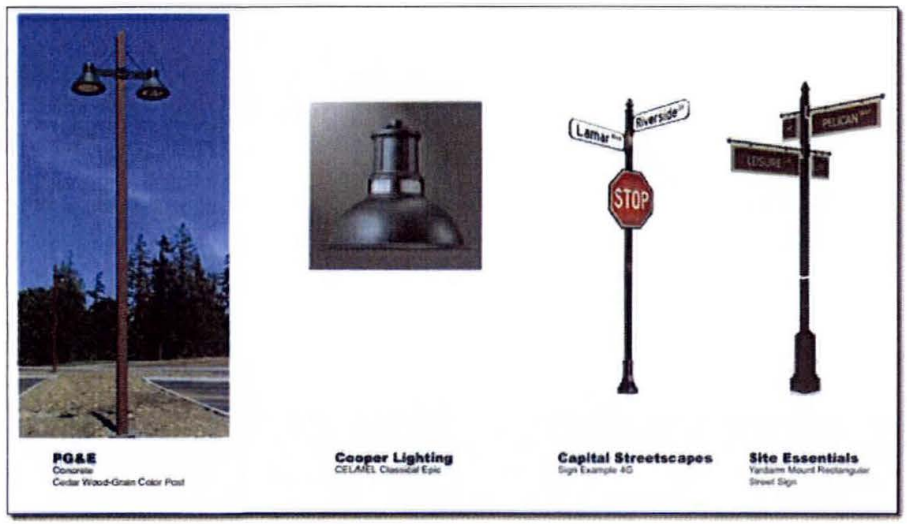


Fowler Avenue is the primary entry to the Dry Creek Preserve. As guests and owners heading south, cross over the Enterprise Canal into the Dry Creek Preserve, there will be a large monument on the west side of Fowler, providing a clear message that one is entering a special place, set apart from others in the City and County.

Welcome Entry Monument

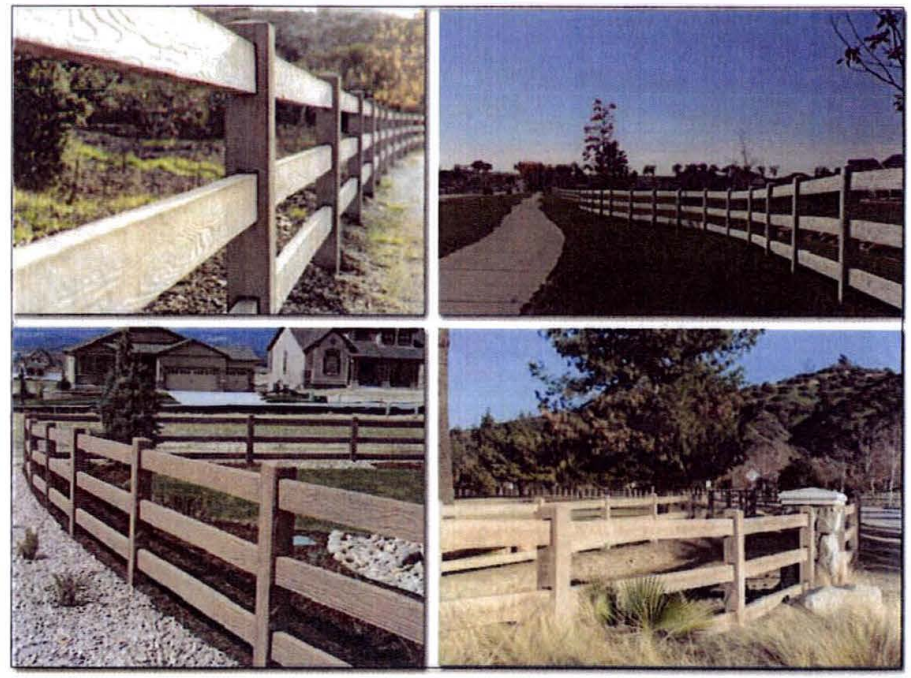
11.1 Lighting

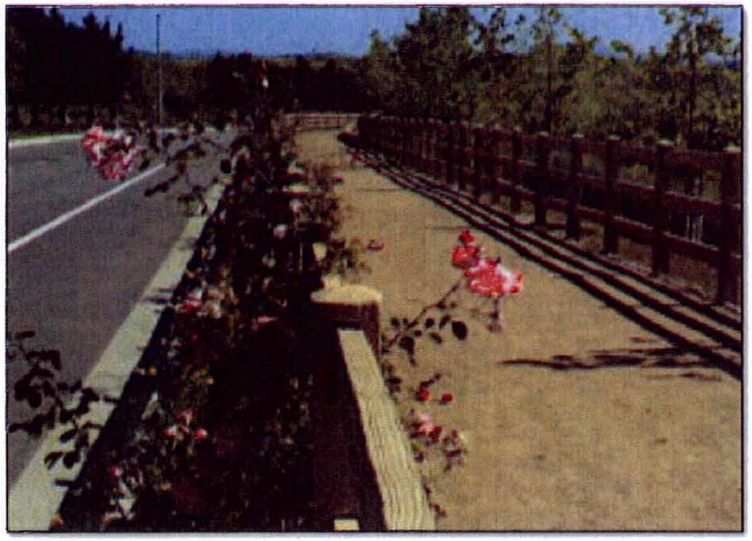
Street lights located in new residential developments shall be hooded to direct the light downward (with approvals needed by PG&E). This is an important restriction that will keep ambient light to a minimum throughout the area, thus helping to preserve the rural nature of the Dry Creek Preserve and enable area nocturnal wildlife (owls, foxes, raccoons, etc.) to continue to exist. Lighting at intersections and along developed streets will be provided by Pacific Gas and Electric Company and will be directed downward. Lamp posts and signage will be according to PG&E, and City standards, except that a Dry Creek Preserve logo will be a part of signage within the area.

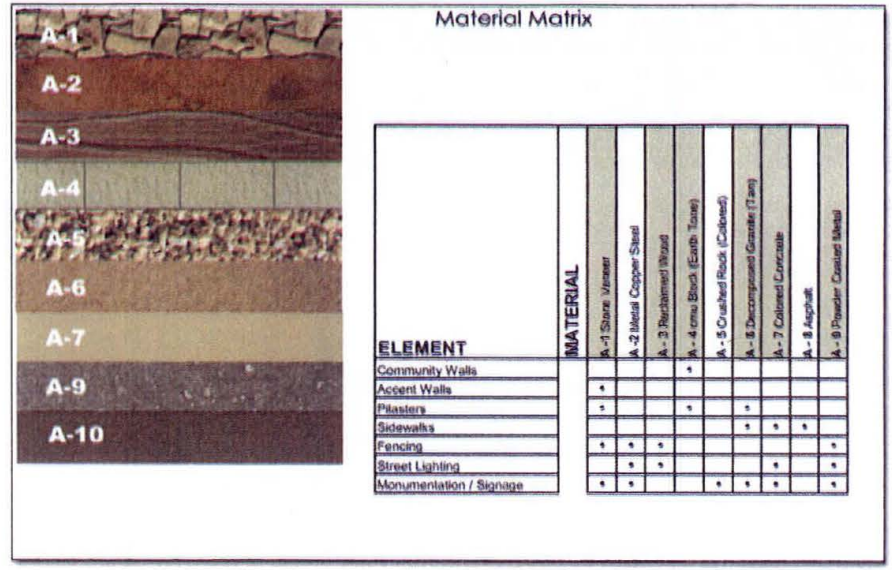


11.2 Split Rail Concrete Fencing

Split rail/concrete fencing is recommended as an accent for new development projects. This will help promulgate the countryside look and feel throughout the plan area.







Material Matrix

ELEMENT	MATERIAL	A-1 Stone Veneer	A-2 Metal Copper Steel	A-3 Reclaimed Wood	A-4 cmu Block (Earth Tone)	A-5 Crushed Rock (Colored)	A-6 Decomposed Granite (Tan)	A-7 Colored Concrete	A-8 Asphalt	A-9 Powder Coated Metal
Community Walls		•			•					
Accent Walls		•								
Pilasters		•			•		•			
Sidewalks							•	•	•	
Fencing		•	•	•						•
Street Lighting			•	•				•		•
Monumentation / Signage		•	•			•	•	•		•

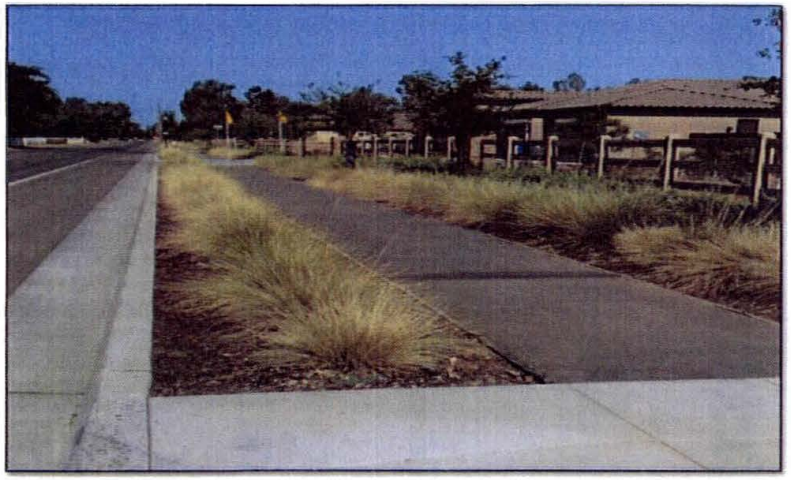
11.3 Asphalt Rather than Concrete Walkways

Developers shall utilize asphalt or other materials in place of concrete when constructing walkways on the exterior of projects, in order to maintain the rural look and feel of the area.

11.4 Landscaping

11.4.1 Ornamental Trees, Grasses, and Shrubs

Street vegetation and landscaping will be required along new development parcels. Remaining areas of the DCP will retain their existing rural appearance, without curbs, gutters, sidewalks, street trees or other public landscaping. Landscaping in the undeveloped areas will remain as it is today, individually placed and managed by property owners, unless and until further development occurs. The goals of the landscaping palette will be to keep a simple and rural look to the developed area, while avoiding the use of any noxious plants or plants that are toxic to livestock. On the following pages are the tree, shrub, and groundcover matrixes to be used along developed street segments:

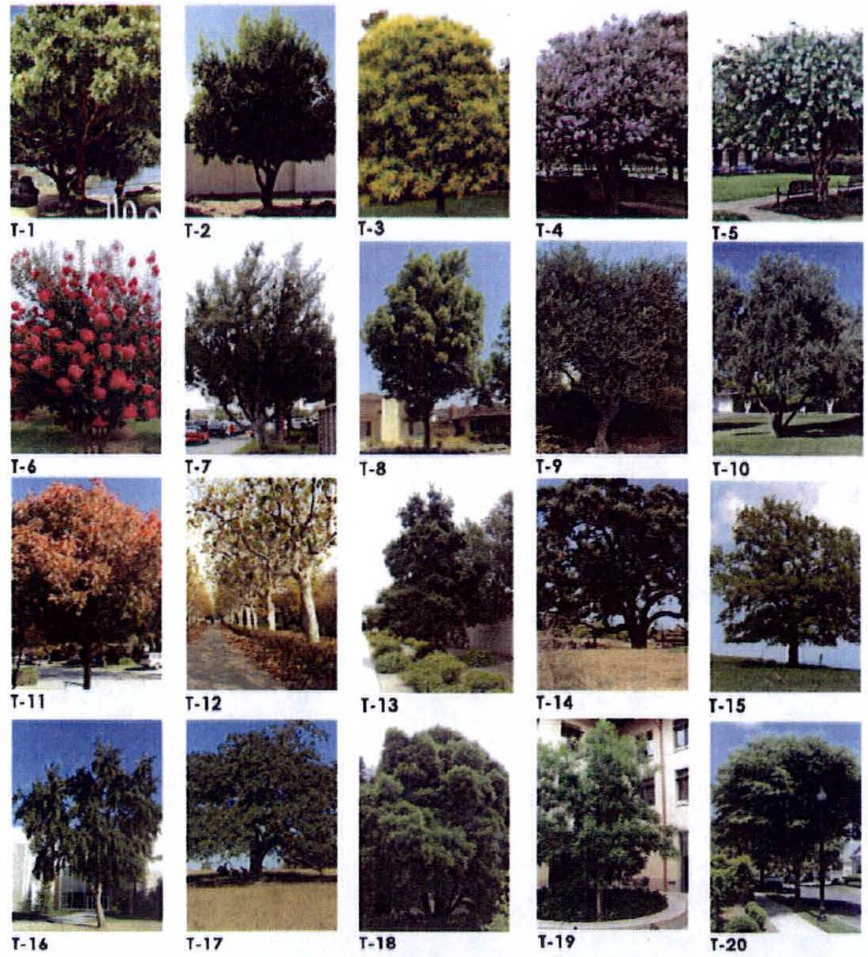


Typical Developed Street Landscaping along east Teague Avenue, Whisper Creek Development

Typical Undeveloped Street with Owner Landscaping – Teague Avenue, west of Sunnyside

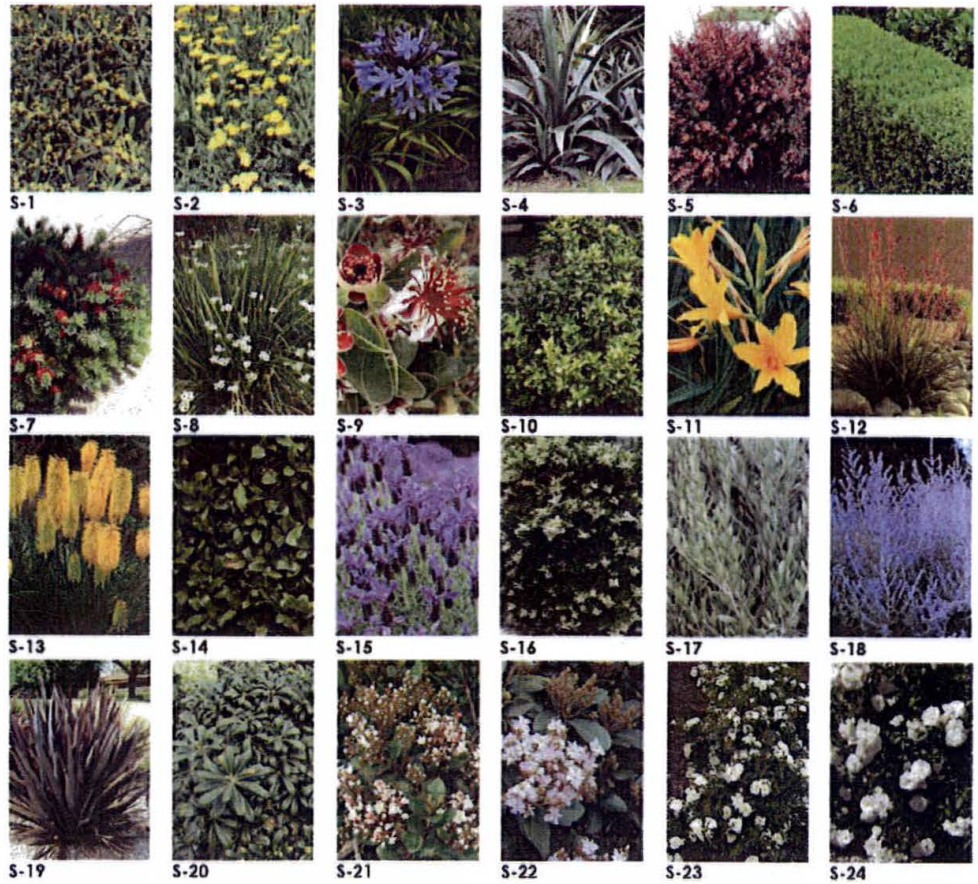
Tree palette

SYM	Common Name	Botanical Name	Water Use	Deciduous/ Evergreen
T-1	Strawberry Tree	Arbutus unedo	L	E
T-2	Lemon, orange, etc	Citrus spp.	M	E
T-3	Goldenrain Tree	Koelreuteria paniculata	M	D
T-4	Crape Myrtle (Red)	Lagerstroemia indica 'Dynamite'	L	D
T-5	Crape Myrtle (White)	Lagerstroemia indica 'Natchez'	L	D
T-6	Crape Myrtle (Pink)	Lagerstroemia indica 'Muskogee'	L	D
T-7	Bay Laurel	Laurus nobilis	L	E
T-8	Saratoga Bay	Laurus nobilis 'Saratoga'	L	E
T-9	Olive	Olea europaea	VL	E
T-10	Fruitless Olive	Olea europaea 'swan hill'	VL	E
T-11	Chinese Pistache	Pistacia chinensis 'Keith Davies'	L	D
T-12	London Plane	Platanus X acerifolia and cvs.	M	D
T-13	Holly Oak	Quercus ilex	L	E
T-14	Valley Oak	Quercus lobata	L	D
T-15	English Oak	Quercus robur	M	D
T-16	Cork Oak	Quercus suber	L	E
T-17	Southern Live Oak	Quercus virginiana	M	E
T-18	Interior Live Oak	Quercus wislizeni	VL	E
T-19	Brisbane Box	Tristaniopsis laurina	M	E
T-20	Saw Leaf Zelkova	Zelkova serrata	M	D



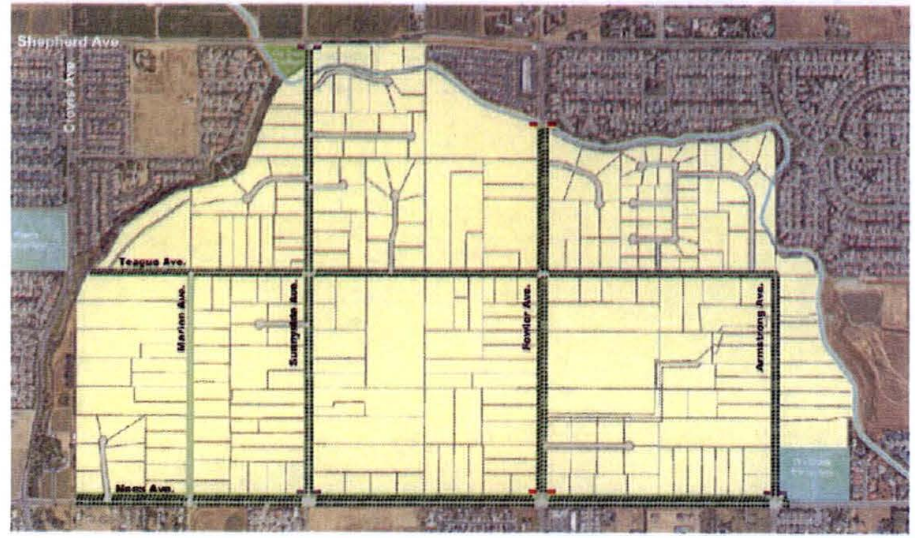
Shrub matrix

SYM	Common Name	Botanical Name
S-1	Prostrate Acacia	Acacia redolens 'Desert Carpet'
S-2	Fern Leaf Yarrow	Achillea 'Moonshine'
S-3	Lily of the Nile	Agapanthus africanus 'Queen Anne'
S-4	Weber Agave	Agave weberi
S-5	Crimson Pygmy Barberry	Berberis thunbergii autropurpurea
S-6	Japanese Boxwood	Buxus m. japonica
S-7	Bottle Brush	Callistemon citrinus 'Little John'
S-8	Fortnight Lily	Dietes bicolor
S-9	Pineapple Guava	Feijoa sellowiana
S-10	Evergreen Euonymus	Euonymus japonicus
S-11	Daylily (Evergreen varieties)	Hemerocallis spp.
S-12	Red Yucca	Hesperaloe parvifolia
S-13	Red Hot Poker	Kniphofia uvaria
S-14	Bay Laurel	Laurus nobilis
S-15	Spanish Lavendar	Lavandula stoechas 'Otto quast'
S-16	Japanese Privet	Ligustrum japonicum 'texanum'
S-17	Little Ollie Dwarf Olive	Olea europaea 'Montra'
S-18	Russian Sage	Perovskia atriplicifolia
S-19	New Zealand Flax	Phormium tenax
S-20	Dwarf Pittosporum	Pittosporum tobira 'Wheelers Dwarf'
S-21	Dwarf Indian Hawthorne	Rhaphiolepis indica 'Ballerina'
S-22	Yeddo Hawthorne	Rhaphiolepis umbellata
S-23	Carpet Rose	Rosa
S-24	Floribunda Rose	Rosa floribunda
S-25	Rosemary	Rosmarinus officinalis 'Tuscan Blue'
S-26	Trailing Rosemary	Rosmarinus 'Prostratus'
S-27	Germander	Teucrium chamaedrys 'Nanum'
S-28	Society Garlic	Tulbaghia violacea
S-29	Laurustinus	Viburnum tinus
S-30	Yellow Bells	Tecoma Stans
S-31	Stacked Bulbine	Bulbine Frutescens
S-32	True Myrtle	Myrtus Communis
S-33	Lantana	Lantana
S-34	Gopher Spurge	Euphorbia rigida



12.0 Circulation and Traffic Objectives

When traffic enters the DCP, drivers will know they are entering a less intensive neighborhood of different character, intensity and uses. Faster traffic will be encouraged to use Fowler Avenue. Speeds must be slower, and traffic patterns calmer on Sunnyside, Armstrong, and Marion Avenues.



Circulation Objectives:

1. Provide for through traffic circulation across the Plan Area only on major roads such as Fowler and Nees Avenues, while recognizing the need for speed limits and other traffic controls to be consistent with side-entering private driveways, passive recreationists, and multi-modal transportation.

2. Discourage non-Plan Area-related traffic from utilizing the minor Area roads to avoid adverse noise and safety issues.

3. Support safety of non-motorized modes of transportation including walking, bicycling, and equestrian.

4. Provide attractive signage along through roads to promote the unique identity of the area and its recreational values, and to interpret the need, reasons for and values associated with slower speed travel within the area.

5. Require land developments to mitigate for their traffic impacts by dedicating rights-of-way for public streets and roads and upgrading roads to serve their developments, including constructing frontage improvements and left-turn channelization where appropriate, and where consistent with the neighborhood appearance.

12.1 Street Design Criteria

The following street design criteria will apply to streets within the Master Plan area. The diagrams and descriptions include street segment designs for areas that are more intensively developed (usually shown on the left side of diagrams), as well as for areas that remain in their existing rural residential use (right side on most diagrams). The different design intensities are provided because, where development does not occur, improvement of the streets will not have an available financing source.

In most cases, roads adjacent to properties that are not developed will have little change from their present condition, unless or until development occurs. This reflects the desire for slower, less intensive streets in the rural residential neighborhoods and where multiple individual driveway entries exist. In general, the DCP streets, except the Fowler Avenue Arterial, have been designed at minimum levels for their forecast traffic, with the intent to: 1) encourage heavy and faster traffic to utilize more highly developed roadways, and 2) reduce the degree of change and resultant traffic congestion impacts which will exist within the road development transitions across the area. Those objectives are consistent with the overall goal of providing a quieter, more rural environment within the DCP.

12.1.1 Service Streets

The Plan Area has eight existing local streets which serve the residents of rural residential areas. They include:

- Cole Avenue (2 reaches)
- Serena Avenue
- Linda Lane
- Powers Avenue (2 reaches)
- Richmond Avenue
- Lebanon Avenue
- Purdue Avenue
- Preuss Drive

Many of these streets end in a cul-de-sac; therefore, although they are dedicated public rights of way, they are not a part of the through traffic circulation within the Plan Area. These street reaches will remain public rights of way. They will be paved but will have no lane striping.

12.1.2 Intersection Traffic Control

Intersections can be controlled with two-way or all-way stop signs, traffic signals, or roundabouts. The appropriate type of traffic control is determined by guidance in the California Manual on Uniform Traffic Control Devices.

12.1.3 Traffic Signals

A traffic signal is currently in place at the intersection of Nees and Fowler Avenues. Additional traffic signals are planned at Nees and Sunnyside Avenues, Nees and Armstrong Avenues, and Shepherd and Sunnyside Avenues when warrants are met. Signalization at the Fowler-Teague intersection may also be required, if future traffic loads make it necessary.

12.1.4 Bicycle Facilities

Substantial walking and bicycle recreation exists today along the quiet Plan Area streets and roadways. It is intended that this non-developed recreation will continue, until more formally developed facilities are in place. Subject to funding and normal road improvement timetables, bikeways will be provided along all area roads and streets, in accordance with the design diagrams included for each area roadway segment.

12.2 Circulation Implementation and Road Design Standards

See below for the design plans for the various streets in the Plan Area adjacent to developed subdivisions or undeveloped rural residential parcels. Where new Rural Residential parcel maps or lot line adjustments are proposed, rights of way for eventual street development will be required. However, full build-out of streets will not be required of such parcel divisions as long as the resulting lots remain Rural Residential parcels.

The network of roads and bicycle and pedestrian facilities has been designed to meet the needs of the residents of the Dry Creek Preserve community, as well as the needs of other users who visit or commute through the area. Facilities will not be over-designed, in order to minimize the associated capital improvement and ongoing maintenance costs and also to maintain more of a rural appearance to area streets, consistent with the Master Plan and Clovis 2014 General Plan objectives. Additional facility improvements may be needed to meet regional transportation needs beyond the 20-year horizon of this Master Plan, and the City of Clovis Planning and Development Services Department shall ensure that sufficient rights-of-way are set aside for future improvements.

The roadbeds and rights-of-way within the DCP are described below with accompanying typical street cross-sectional diagrams.

12.2.1 Fowler Avenue

Fowler Avenue, north of Nees Avenue is designated as an Arterial Roadway in the Clovis General Plan and Regional Transportation Plan. It carries Dry Creek Preserve traffic, as well as regional traffic from the unincorporated area to the north. Because this route connects to State Highway 168, it carries substantial traffic loads at times, particularly during peak commute hours. During these commute hours, there is occasionally traffic congestion primarily at controlled intersections.

Normally, street intersections are improved at the time adjacent property is developed, but in an attempt to remediate congestion issues on Fowler more quickly, the City of Clovis and the development community (those adding trips to Fowler Avenue) will participate in completing certain Fowler Avenue improvements on an accelerated time line.

The improvement and widening of Fowler Avenue will take place as development occurs adjacent to the roadway. Improvements to intersection capacity will take place as warranted and to mitigate impacts associated with new development within the plan area. The ultimate configuration of Fowler Avenue will depend on whether the adjacent predominant development is intensified (density higher than 0.5 du/ac). On these frontages, the right-of-way width will be 60' and improvements will include 16' landscaped median, 2-twelve foot travel lanes, an eight foot bike lane, curb and gutter, and a 20' wide landscape and pedestrian strip. Along frontages that are to remain predominantly rural in character, the right-of-way width will be 53' and improvements will include 16' landscaped median, 2- twelve foot travel lanes, a 6' bike lane and 15' for drainage and pedestrian use. It is intended that as properties are divided or developed along these roadway segments, the right-of-way would be dedicated and cleared, but the improvements would not be required as a condition of development. Such improvements would be done when warranted or when there is participation from the City or other sources. The Fowler Avenue cross section showing both conditions is depicted in Figure A.

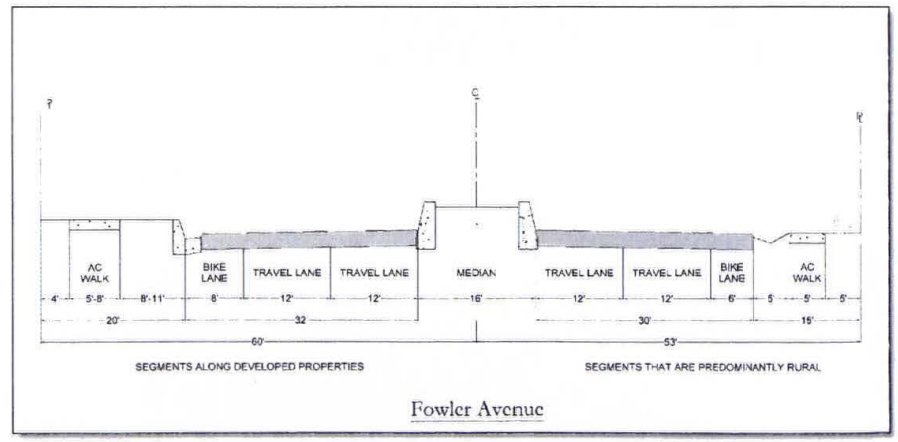


Figure A: Fowler Avenue

12.2.2 Sunnyside Avenue

Sunnyside Avenue is a designated Collector Street in the Clovis General Plan and Regional Transportation Plan. Today, it principally carries traffic between Shepherd and Nees Avenues, thus serving the areas north and east of the Dry Creek Preserve, and connecting the DCP area to the Clovis Central District. Because a major school facility, Century Elementary School, is located on Sunnyside just south of the DCP, considerable traffic utilizes Sunnyside during morning and afternoon hours. The roadway is adequate to carry this traffic at present, and because Sunnyside does not connect directly to State Highway 168, it is less likely than Fowler Avenue or Clovis Avenue to experience major future increases in traffic loads.

Sunnyside Avenue is planned to remain a rural-appearing collector street, with one 11-foot-wide travel lane in each direction. Figure B shows the street configuration and required right-of-way widths for segments of the roadway that are adjacent to both developed and undeveloped properties. The vehicular travel lanes will be separated by solid double striping and be signed to prohibit vehicles passing. This is due to the number of existing rural residential driveway entries located along both sides of the roadway. Sunnyside will be signalized at its intersections with Nees Avenue and Shepherd Avenue, and initially be maintained as a four-way stop at its intersection with Teague Avenue. If land development occurs which materially increases the traffic loads and causes delays at the Teague-Sunnyside four-way stop intersection, the City may require those developments to mitigate project impacts by signalizing the Teague intersection or by providing alternative traffic accommodations, such as a roundabout at this location. Developments along Sunnyside will also be required to provide needed signalization and left-turn channelization at Nees Avenue, Shepherd Avenue and Teague Avenue intersections, if traffic studies at the time indicate need.

Sunnyside is planned with five-foot-wide bicycle lanes on both sides (Figure B). It is understood that the bicycle and pedestrian facilities will not be constructed unless either: 1) external grant funds can be secured to construct them, or 2) sufficient properties with Sunnyside frontage become developed to enable financing of the facilities through project mitigation or other fees.

Developments fronting onto Sunnyside will be required to provide along their street frontage, an 11'-wide travel lane, a 5'-wide bicycle lane, construction of asphalt curbs and appropriate street drainage (if required based on site characteristics), and a 5'-wide decomposed granite or asphalt walkway. The needed right of way for these facilities will also be required to be dedicated.

Non-developed reaches of Sunnyside will have an 11-foot-wide travel lane, a five-foot-wide bike lane, and a four-foot unpaved shoulder.

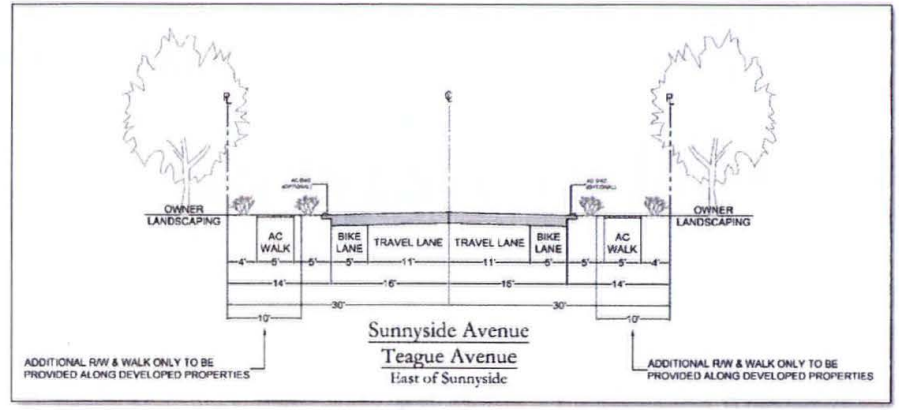


Figure B: Sunnyside Avenue and Teague Avenue East of Sunnyside

12.2.3 Teague Avenue East of Sunnyside Avenue

Teague Avenue is designated as a Collector Street in the Clovis 2014 General Plan. It carries traffic in an east-west direction across the DCP, providing a northern connection between Armstrong and Marion Avenues. Its principal traffic use occurs between Fowler and Sunnyside Avenues. The reach of Teague extending west from Sunnyside Avenue is quite different from the remainder of the street. It primarily serves a rural residential neighborhood planned to have less than 50 residences, located along Teague, west of Sunnyside, and Marion Avenues. This western reach is thus planned separately as a Residential Street. It is described together with Marion Avenue, below.

The characteristics of the eastern segment of Teague Avenue are shown in Figure B. This street reach is planned to have one eleven-foot-wide travel lane and a five-foot-wide bicycle lane in each direction. In developed reaches, a five-foot-wide walkway will also be required, separated from traffic by a four-foot-wide landscaped separator on the developed side, wherever development with street frontage occurs. The reach located east of Fowler Avenue has already been improved equivalent to those standards, with the development of the Whisper Creek Subdivision. The remaining area between Fowler and Sunnyside Avenues will be improved incrementally at the time development occurs within that street segment. It will be financed similar to the mechanisms described for Sunnyside Avenue.

12.2.4 Teague Avenue West of Sunnyside

This segment of Teague Avenue extends for less than ¼ mile, terminating at its intersection with Marion Avenue. At present, it has only a 16-foot paved width, with unpaved shoulder and no striping. It is adequate for its low volume of traffic, being one of two streets serving about 50 Rural Residential parcels, with less than 500 combined trips per day. This segment is planned to have one 11-foot-wide travel lane and a 5' bicycle lane in each direction (see Figure C, below), however in the expected absence of future subdivision activity, it is doubtful that financing will be available for the improvements in the foreseeable future, unless external grants or other funding can be arranged. Planned improvements for this street segment are shown in Figure C, in the event such financing becomes available.

Potential may exist for a trail connection extending west from Sunnyside Avenue, along Teague Avenue to Marion Avenue, then west to the Dry Creek Trail. It would require acquisition and use of a currently undedicated private dirt farm access road. Future grant acquisition could be considered to finance a bicycle and walking path through that alignment, including a pedestrian-bicycle bridge over Dry Creek to connect with the existing Dry Creek Trail. Because the west end of the trail would emerge in the immediate vicinity of Woods Elementary School, State *Safe Routes To School* grant program funding may have application for this feature.

12.2.5 Marion Avenue

Marion Avenue is planned to have 11-foot-wide travel lanes and 5-foot-wide bicycle lanes in each direction, accommodated within the existing 40' right-of-way. The design characteristics are shown in Figure C, below.

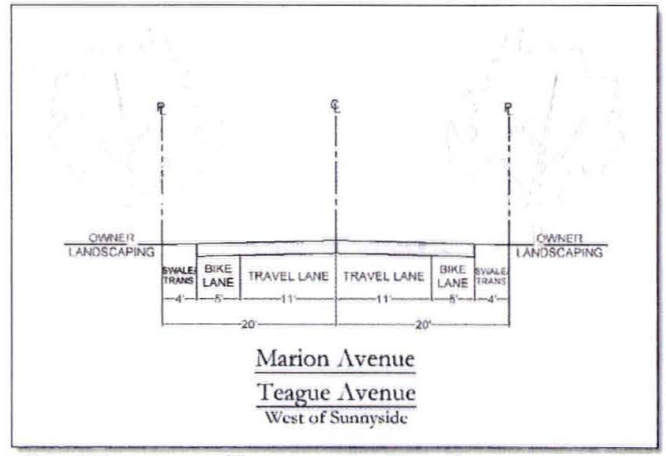


Figure C: Marion Avenue and Teague Avenue West of Sunnyside

Properties adjacent to Marion Avenue and the west segment of Teague Avenue area are already nearly fully built out into rural residential homesites, and potential exists for less than twenty additional rural residential SFR units in that area at maximum build out. Absent subdivision development, street improvement financing will not exist, unless outside funding sources can be identified, such as grants to build bike lanes.

12.2.6 Armstrong Avenue

Armstrong Avenue is designated a Collector Street in the Clovis 2014 General Plan and Regional Transportation Plan. The street terminates on the north at the intersection of Teague Avenue, therefore it does not carry significant traffic from areas outside the Dry Creek Preserve. It principally serves a rural residential neighborhood of about 40 existing homes, and the Whisper Creek subdivision, containing 31 homes. Because the Master Plan objective is to preserve the existing rural residential neighborhoods within the Dry Creek Preserve, there is little expectation of future subdivision development within the Armstrong Avenue corridor in the foreseeable future.

Armstrong Avenue has traffic congestion at times, due to the position of Dry Creek Elementary School at the intersection of Armstrong and Nees Avenues. During peak times, the school generates significant traffic. But the school size is unlikely to change significantly, and the roadway is currently able to handle the traffic loads, therefore Armstrong Avenue north of Nees Avenue is planned to remain largely a residential street, with paths intended to provide safe pedestrian passage along the roadway and safe access to and from Dry Creek School. Figure D shows the planned street configuration for Armstrong Avenue.

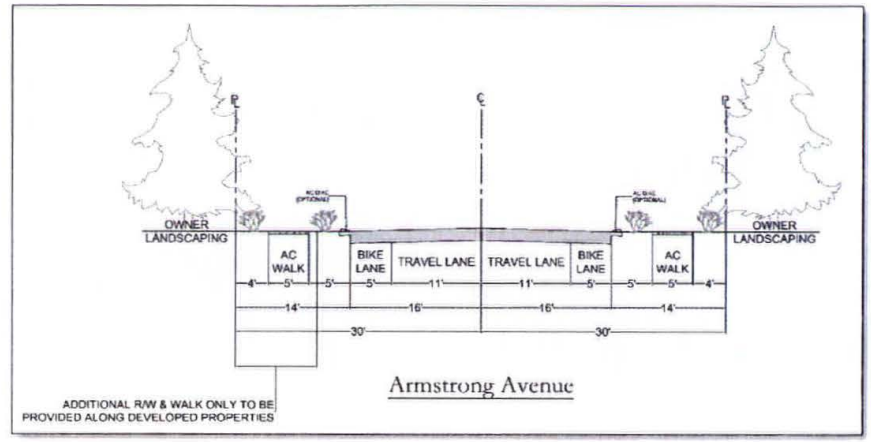


Figure D: Armstrong Avenue

Armstrong is planned to have one eleven-foot-wide travel lane and a five-foot-wide bike lane in each direction, along with a five-foot-wide pedestrian and bicycle path that is separated from vehicular traffic by a four-foot-wide landscaped strip. The intersection at Nees Avenue will remain a four-way stop, unless future traffic loads increase and warrants for installation of a traffic signal are met. Left turn channelization is not currently present at this intersection, but will be considered as future traffic conditions warrant.

Absent planned development within the area, it is unlikely that the planned pedestrian path and divider strips will be constructed along Armstrong Avenue, unless external grants (e.g., State Safe Routes To School Grant Program) or other financing can be secured.

13.0 Concluding Remarks and Vision for the Dry Creek Preserve

The Dry Creek Preserve is truly a unique place – a place with surprisingly sparse development, considering its location in the heart of what Clovis is to become as it gradually occupies its intended footprint. Today, we are at a crossroads in determining the DCP's future destiny and providence as a part of that surrounding urban Clovis Community. Here we have 795 acres of land, of which 747 acres are privately owned, under about 250 individual ownerships. The area is still largely undeveloped, by urban standards, so it offers a more or less blank pallet upon which to create a future landscape. On one hand, we might create yet another intensively developed urban residential area, like so many others that provide their particular array of benefits to the community. They may have architectural, location and price-point distinctions, but to the 30,000 foot view, their variation from the rest of the urban landscape is unremarkable.

We have chosen a different path for the DCP – one that allows the area to offer a reasonable amount of residential development opportunity, including housing on much larger Rural Residential, Estate Level, and/or Low Density lots and parcels, to accommodate a segment of the housing market that is currently underprovided. At the same time, the Dry Creek Preserve will live up to its name, by being "preserved" as a more bucolic place, right in the heart of Clovis, where residents' families can have space enough to enjoy outdoor activities or gatherings, and where visitors to and through the area can enjoy longer, softer landscape views, and hopefully relax and reconnect with Clovis' agricultural roots. Living quality will be the emphasis within the DCP area – both for residents and for Clovis residents who will come to appreciate and utilize the area for enjoyment, passive recreation, and relaxation.

Serious compromises took place to produce this Master Plan. It reflects the results of many discussions, negotiations and compromises. As such, neither the Plan nor its Appendix (Annexation Agreement) should be taken lightly, as future land use and public works decisions are contemplated. The Plan provides a reasonable balance between interests, while providing what we believe to be a unique "Quality of Life" asset for the benefit of Clovis. It provides aesthetic as well as economic benefits, given that new companies seeking to locate in Clovis will appreciate the added range of housing types and the community living quality which this Plan provides. The area's community aesthetic values will exist regardless of whether lands within the DCP are ever annexed into the City Limits. They have existed and been utilized by surrounding City residents for some time. Landowners have become accustomed to having families bicycle or trek through their neighborhoods, interacting with their livestock and enjoying the wildlife that is abundant throughout most of the area. Most owners view that passive recreation as desirable and a part of their land stewardship.

It is hoped that nothing in this Master Plan will materially alter the DCP's long-term cohesiveness as a Clovis community, or change its land uses and character to the extent that landowners and residents no longer appreciate its uniqueness and value. Hopefully the limited development allowed within this Plan will not materially change the character of the area, but will be sufficient to finance any infrastructure that may become critically needed by residents or by the surrounding community in the future. The Dry Creek Preserve will thus continue to be an important Clovis asset.

Appendix A

Draft Annexation Agreement to Protect Landowner Rights During Annexation

DRY CREEK PRESERVE MASTER PLAN

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Planning and Development Services

DATE: May 11, 2020

SUBJECT: Consider Approval - Res. 20-___, RO301, A Resolution of Application for the Annexation of the Territory known as the Teague-Fowler SW Reorganization located at the southwest corner of Teague and N. Fowler Avenues. Various owners; Woodside 06N, LP., applicant; Yamabe & Horn Engineering, Inc., representative.

Staff: George González, MPA, Associate Planner
Recommendation: Approve

ATTACHMENTS:
1. Legal and Map Description
2. Draft Resolution 20 - ____, RO301
3. Project Area Map
4. Specific Service Plan

CONFLICT OF INTEREST
None.

RECOMMENDATION
Staff recommends the City Council approve a Resolution of Application for the Annexation of the Territory known as the Teague-Fowler Southwest Reorganization, accepting applications and requesting the Fresno Local Agency Formation Commission to proceed with reorganization.

EXECUTIVE SUMMARY
The total area of the annexation is approximately 50.80 acres (52.26 acres including public rights-of-way) located at the southwest corner of Teague and N. Fowler Avenues. The Project site includes an approved Vesting Tentative Tract Map TM6284, for a 74-lot single-family residential development. The project area is in the process of being prezoned to the Clovis R-1 and R-R Zone Districts under Prezone R2019-007, consistent with the General Plan Land Use Diagram, Herndon-Shepherd Specific Plan and Dry Creek Preserve Master Plan.

BACKGROUND

Property Owners:	13 Rick J. & Susan M. Warren Trustees, McKenney Properties, LLC., Charles & Sheree Lee Merrill, Javier L. & Irma Herrejon, Carol J. Haun Trustee, Adam & Kelsey Kook, Ronald E. & Judith A. Talent Trs., Dina Ibrahim Trs., Russell A. & Esther I. Carter Trustees, Sidney J. Jr. & Linda J. Adams, Robert Wilson Sharma, and Amardeep S. Aulakh.
Owners Consenting to Annexation:	11 (85%)
Registered Voters:	26
Acreage:	50.80 acres (52.26 acres including public rights-of-way)

Standard Conditions of Annexation:

The City Council has established standard conditions which the City considers a baseline for most annexation projects that it considers. The City's standard conditions for annexation are incorporated into the draft resolution, which reflect and are consistent with the requirements agreed to by the tax sharing agreement and to the timing of public services to the site. The conditions are satisfied by the development approvals granted separately for the site, and through LAFCo's standard processing policies and guidelines. In addition to the standard conditions of annexation, staff is recommending a condition specific to the proposed project addressing the County of Fresno's comments regarding the maintenance of Teague Avenue. This condition and its background are discussed on the next page under the section titled "County of Fresno Comments."

FISCAL IMPACT

Assessed Value:

Land only:	$ 2,805,920
Improvements:	$ 1,824,667
Ratio of Improvements to Land	0.65:1 (Undeveloped)

Estimated Tax Share:

	Before	After
County:	$ 15,327	$ 13,151
City:	$ 0	$ 7,724
FCFPD: (Fresno County Fire Protection District)	$ 5,351	$ 0
KRCD: (Kings River Conservation District)	$ 227	$ 0

Note: the County will also receive the cash equivalent of 8% of the City's sales/use tax for this area.

County of Fresno Comments

City staff requested comments from the County of Fresno regarding the proposed annexation. The County's response identified four conditions that they believe should be incorporated into the annexation project. Two of these conditions are standard and have been incorporated as a matter of normal practice. The other two conditions are outlined as follows:

1. Agree to assist and support necessary traffic enforcement along Sunnyside Avenue, between Shepherd and Nees Avenues.

2. Include the full width of right-of-way to Teague Avenue, between the annexation boundary west to including the Teague/Sunnyside Avenue intersection. If the City is not agreeable to annexation, the City shall execute a road maintenance agreement providing for the long-term maintenance of this road segment instead.

With regard to item one, subsequent discussions with County staff clarified that while City support for traffic enforcement on Sunnyside was desired, the County understands there may be limitations to this request. The County is asking that the City acknowledge its support and willingness to work with the County to address neighborhood traffic complaints that will undoubtedly come with the development of this project and others in the vicinity. An example of such support is deployment of City's radar trailer. No specific condition of approval is recommended in response to this item, though the Council may provide direction on this matter as it deems appropriate.

As to item two, City staff evaluated the request and has determined that while annexation of the referenced street segment would constitute an improper boundary, City maintenance of the affected 1/8 mile segment is a reasonable request considering the adjacent development project. The developer has agreed to improve that portion of the street within the existing right of way. Maintenance of the new improvements will not constitute a substantive expense, though perpetual maintenance responsibility will eventually result in high costs. The following condition is recommended:

> *Through a new Specific Project Agreement as allowed under the previously executed Master Agreement for Multijurisdictional projects, or through an alternative mechanism mutually agreeable to both the City and County, the City will agree to maintain that portion of Teague Avenue between the westerly project limits for TM 6284 and Sunnyside Avenue.*

California Environmental Quality Act (CEQA)

The City of Clovis has completed an environmental review (an assessment of the project's impact on natural and manmade environments) of the proposed project, as required by the State of California. The City Planner has recommended approval of a mitigated negative declaration (a written statement announcing that this project will not have a significant effect on the environment). Recommendation of a proposed mitigated negative declaration does not necessarily mean this project will be approved. The initial study and mitigated negative

declaration prepared for this project may be reviewed under **Item 4** of the City Council's agenda for May 11, 2020.

The City published notice of this public hearing in *The Business Journal* on Wednesday, April 29, 2020.

REASON FOR RECOMMENDATION
The annexation proposed is within the City's adopted sphere of influence and is consistent with the City of Clovis' General Plan land use diagram, Herndon-Shepherd Specific Plan and Dry Creek Preserve Master Plan. Also, the proposed annexation is intended for urban development, as is evidenced by the approved Vesting Tentative Tract Map TM6284, covering 63 percent of the developable area.

ACTIONS FOLLOWING APPROVAL
The annexation application will be prepared and submitted to LAFCo after all materials have been submitted by the applicant, sufficient to meet the conditions for the application.

NOTICE OF HEARING

Property owners within 800 feet notified and the entire DCP property owners:	264
Interested individuals notified:	10

Prepared by: George González, MPA, Associate Planner

Reviewed by: City Manager

Area to be detached from the Fresno County Fire Protection District and the Kings River Conservation District and Annexed to the City of Clovis.

All that portion of the Northwest quarter, the Southwest quarter and the Southeast quarter of Section 28, Township 12 South, Range 21 East, Mount Diablo Base and Meridian, according to the Official United States Government Township Plat thereof, in the County of Fresno, State of California, described as follows:

COMMENCING at the Northwest corner of the Southwest quarter of said Section 28; thence South 89°24'18" East, 669.34 feet along the North line of said Southwest quarter to the point of intersection of said North line with the Southerly prolongation of the West line of Tract No. 4943, "Skochko Estates", according to the map thereof recorded in Volume 65 of Plats at Pages 74 and 75, Fresno County Records, said point being the **TRUE POINT of BEGINNING** of this description; thence

1) North 0°33'24" East, 30.00 feet along said Southerly prolongation of said West line of said Tract No. 4943, to the Southwest corner of Lot 1 of said Tract No. 4943, said Southwest corner also being a point on a line 30.00 feet North of and parallel with the North line of the Southwest quarter of said Section 28; thence

2) South 89°24'18" East, 649.35 feet along said parallel line to the Southeast corner of Lot 9 of said Tract No. 4943, said Southeast corner also being a point on the existing line of the City Limits of the City of Clovis; thence

3) continuing along the existing City Limits line of the City of Clovis, South 0°33'30" West, 30.00 feet to the point of intersection of the Southerly prolongation of the East line of said Tract No. 4943 with the North line of the Southwest quarter of said Section 28; thence

4) continuing along the existing City Limits line of the City of Clovis, South 0°34'25" West, 20.00 feet to a point on a line 20.00 feet South of and parallel with the North line of the Southwest corner of said Section 28; thence

5) continuing along the existing City Limits line of the City of Clovis, South 89°24'18" East, 780.63 feet along said parallel line; thence

6) continuing along the existing City Limits line of the City of Clovis, South 0°35'36" West, 10.00 feet to a point on a line 30.00 feet South of and parallel with the North line of the Southwest quarter of said Section 28; thence

7) continuing along the existing City Limits line of the City of Clovis, South 89°24'18" East, 538.04 feet along said parallel line to a point on the East line of the Southwest quarter of said Section 28; thence

8) continuing along the existing City Limits line of the City of Clovis, South 89°22'57" East, 30.00 feet to a point on a line 30.00 feet East of and parallel with the East line of the Southwest quarter of said Section 28; thence

ATTACHMENT 1

9) leaving the line of the City Limits of the City of Clovis, South 0°36'25" West, 794.47 feet along last said parallel line to the intersection of said parallel line with the Easterly prolongation of the South line of the North half of the East half of the North half of Lot 23 of the Map of Nees Colony, according to the map thereof recorded in Book 2 of Record of Surveys at Page 57, Fresno County Records; thence

10) North 89°22'33" West, 704.12 feet along said Easterly prolongation of and the South line of the North half of the East half of the North half of Lot 23 of the Map of said Nees Colony, to the Southwest corner of the North half of the East half of the North half of said Lot 23; thence

11) South 00°35'28" West, 164.81 feet along the West line of the North half of the East half of the North half of said Lot 23, to the Northeast corner of the South half of the West half of said Lot 23; thence

12) North 89°22'11" West, 644.07 feet along the North line of the South half of the West half of said Lot 23, to the Northwest corner of the South half of said Lot 23;

13) South 0°34'31" West, 659.02 feet along the West line of Lots 23 and 22 of the map of said Nees Colony, to the Southeast corner of Parcel 1 of Parcel Map No. 2903, according to the map thereof recorded in Book 19 of Parcel Maps at Page 33, Fresno County Records; thence

14) North 89°20'50" West, 657.77 feet along the South line of said Parcel 1, to the Southeast corner of the land described in the Grant Deed recorded October 22, 2015 as Document No. 2015-0136913, Official Records Fresno County; thence

15) North 0°32'36" East, 329.38 feet along the East line of the land described in said Document No. 2015-0136913 and the Northerly prolongation of said East line to a point on the South line of Lot 26 of the Map of said Nees Colony; thence

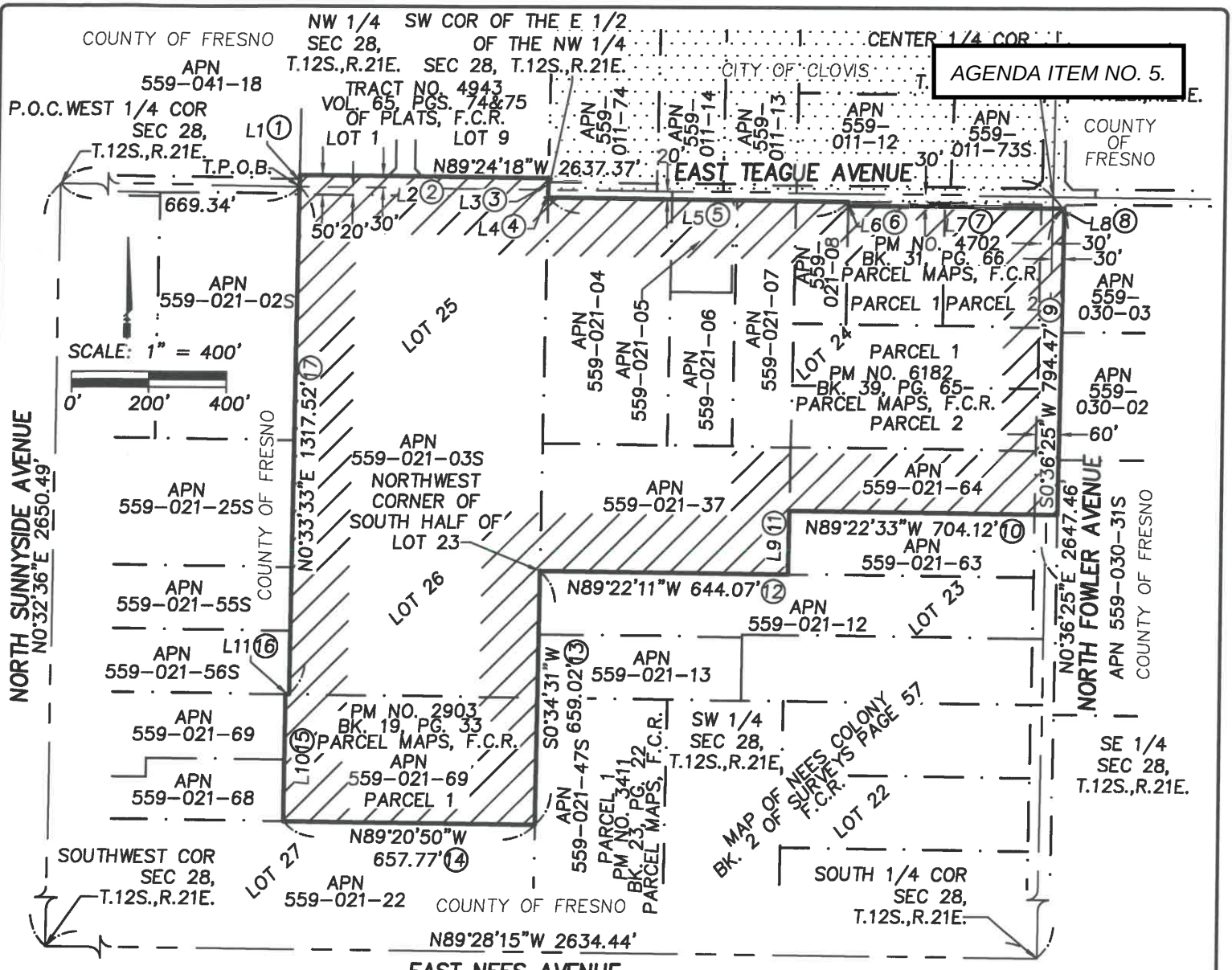
16) South 89°21'32" East, 8.98 feet along said South line to the Southwest corner of the East half of said Lot 26; thence

17) North 0°33'33" East, 1317.52 feet along the West line of the East half of Lots 26 and 25 of the Map of said Nees Colony and the Northerly prolongation of said West line to the **TRUE POINT of BEGINNING.**

Containing and area of 52.26 acres, more or less.

4-2-20

AGENDA ITEM NO. 5.



LEGEND

AREA TO BE DETACHED FROM THE FRESNO COUNTY FIRE PROTECTION AND THE KINGS RIVER CONSERVATION DISTRICTS AND ANNEXED TO THE CITY OF CLOVIS. AREA = 52.26 ACRES

EXISTING CITY OF CLOVIS LIMITS

① COURSE CALL OF LEGAL DESCRIPTION

P.O.C. POINT OF COMMENCEMENT
T.P.O.B. TRUE POINT OF BEGINNING
F.C.R. FRESNO COUNTY RECORDS

BASIS OF BEARINGS:

GEODETIC OBSERVATION OF THE EAST LINE OF THE SW 1/4 OF SECTION 28, T12S, R21E, MDB&M. TAKEN TO BE NORTH 0°36'25" EAST.

PROFESSIONAL LAND SURVEYOR
DAVID C. HORN
No. 8204
STATE OF CALIFORNIA
4-2-20

PREPARED FOR:

WOODSIDE 06N, LP
9 RIVER PARK PLACE, STE. 430
FRESNO, CA 93720

LINE TABLE

COURSE	LINE	BEARING	DISTANCE
①	L1	N0°33'24"E	30.00'
②	L2	S89°24'18"E	649.35'
③	L3	S0°33'30"W	30.00'
④	L4	S0°34'25"W	20.00'
⑤	L5	S89°24'18"E	780.63'
⑥	L6	S0°35'36"W	10.00'
⑦	L7	S89°24'18"E	538.04'
⑧	L8	S89°22'57"E	30.00'
⑪	L9	S0°35'28"W	164.81'
⑮	L10	N0°32'36"E	329.38'
⑯	L11	S89°21'32"E	8.98'

RES. NO. _____ ADOPTED: _____

Ref. & Rev.

TEAGUE-FOWLER SOUTHWEST

REORGANIZATION
A PORTION OF
SECTION 28, T. 12 S., R. 21 E., M.D.B.&M.
TO BE ANNEXED TO THE CITY OF CLOVIS AND DETACHED FROM THE FRESNO COUNTY FIRE PROTECTION AND THE KINGS RIVER CONSERVATION DISTRICTS

PREPARED BY
YAMABE & HORN ENGINEERING, INC.
2985 N. BURL AVENUE
(559)244-3123

FILE NO. _____
ANNEX. NO. _____
ACRES 52.26
COUNCIL DIST. NO. _____
DRAWN BY _____
CHECKED BY _____
DATE 4/02/2020

996

F:\2019\19-191\dwg\Exhibits\Annexation\19-191_ANNEX.dwg

RESOLUTION 20-___

A RESOLUTION OF APPLICATION BY THE CITY OF CLOVIS REQUESTING THE FRESNO LOCAL AGENCY FORMATION COMMISSION TO TAKE PROCEEDINGS FOR THE TEAGUE-FOWLER SOUTHWEST REORGANIZATION

WHEREAS, the City of Clovis desires to initiate proceedings pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Division 3, commencing with Section 56000 of the California Government Code, for the reorganization; and

WHEREAS, the specific changes of organization requested are annexation to the City of Clovis and detachment from the Fresno County Fire Protection District and the Kings River Conservation District; and

WHEREAS, the territory proposed to be reorganized is inhabited, and on this day contains 26 voters, according to information received from the County Election Officer; and

WHEREAS, a description of the boundaries of the territory is set forth in **Attachment 1** attached hereto and by this reference incorporated herein; and

WHEREAS, this proposal is consistent with the sphere of influence of the affected City; and

WHEREAS, the proposal complies with the terms and standards of the tax sharing agreement between the City of Clovis and the County of Fresno; and

WHEREAS, on May 11, 2020, the City Council adopted a mitigated negative declaration for the annexation and development project of the property which the subject of the Teague-Fowler Southwest Reorganization; and

WHEREAS, it is desired to provide that the proposed Teague-Fowler Southwest Reorganization be subject to the following terms and conditions:

1. The regular assessment roll shall be utilized.

2. Each new development will be required to demonstrate adequate water availability and, if necessary, will be required to drill and test a well, and to connect it to the city water system.

3. Each new development will be required to obtain sewage capacity from the trunk sewer specified by the City Engineer.

4. The provisions of Article II, Annexation by City, as agreed between the City of Clovis and the County of Fresno pursuant to the June 6, 2017, Memorandum of Understanding, as amended from time to time, regarding tax sharing shall apply.

ATTACHMENT 2

5. The applicants shall reimburse the City for any expense associated with the transition agreement for fire services with the Fresno County Fire Protection District that would apply to this proposal.

6. A "Right-to-Farm" covenant shall be recorded for each tract map or made a condition of each tract map.

7. Pursuant to Government Code Section 56663, the City shall consent to the annexation and waive its rights to a hearing.

8. Prior to approval, recordation or filing of an annexation, tentative map, final map, parcel map, or site plan (Project), the property covered by the Project shall be included within or annexed to a Community Facilities District (CFD), established by the City for the provision of public facilities and services, for which proceedings have been consummated, and shall be subject to the special tax approved with the formation or annexation to the CFD.

   The applicant and the property owner acknowledge and agree that if the Project was not part of a CFD, the City might lack the financial resources to operate facilities and provide public services, such as police protection, fire protection, emergency medical services, parks and recreation services, street maintenance, and public transit. Absent the requirement for inclusion of the Project within a CFD, the City might not be able to make the finding that the Project is consistent with the General Plan and relevant specific plans, and might not be able to make the findings supporting approval of the Project as required by the Subdivision Map Act and the California Environmental Quality Act, and the City might be required to deny the application for the Project.

   The owner/developer shall notify all potential lot buyers prior to sale that this Project is a part of a Community Facilities District and shall inform potential buyers of the special tax amount. Said notification shall be in a manner approved by the City.

   This requirement may be waived in the discretion of the City Council if, at the time of the approval, recordation, or filing of the Project, the City Council has determined that it is not necessary that the Project be included in the CFD.

9. Through a new Specific Project Agreement as allowed under the previously executed Master Agreement for Multijurisdictional projects, or through an alternative mechanism mutually agreeable to both the City and County, the City will agree to maintain that portion of Teague Avenue between the westerly project limits for TM 6284 and Sunnyside Avenue.

WHEREAS, the terms and conditions above are the sole responsibility of the City of Clovis to monitor and enforce. The Fresno Local Agency Formation Commission will not be required to enforce the aforesaid terms and conditions as a responsible agency; and

WHEREAS, the reason for this proposed reorganization is to provide municipal services, local controls, and logical growth to the unincorporated area of the County that is remote from County services and undergoing urban development; and

WHEREAS, this annexation proposal is consistent with the City of Clovis' general plan land use diagram, Herndon-Shepherd Specific Plan, Dry Creek Preserve Master Plan, and the Dry Creek Preserve Annexation Program; and

WHEREAS, the City Council does approve a Mitigated Negative Declaration pursuant to CEQA guidelines; and

WHEREAS, the City Council has reviewed and approved the master service plan for the subject change of organization.

NOW, THEREFORE, THE CITY COUNCIL RESOLVES AND FINDS AS FOLLOWS:

1. The annexation of property within the boundaries set forth in **Attachment 1** is within and consistent with the Dry Creek Preserve Master Plan Annexation Program as adopted by the City.

2. The annexation of property within the boundaries set forth in **Attachment 1** is in compliance with the Standards of Annexation as identified in the Memorandum of Understanding between the City of Clovis and the County of Fresno which is commonly referred to as the Tax Sharing Agreement.

3. This Resolution of Application is hereby adopted and approved by the City Council of the City of Clovis, and the Fresno Local Agency Formation Commission is hereby requested to take proceedings for the reorganization of the territory as described in **Attachment 1**, according to the terms and conditions stated above and in the manner provided by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

* * * * *

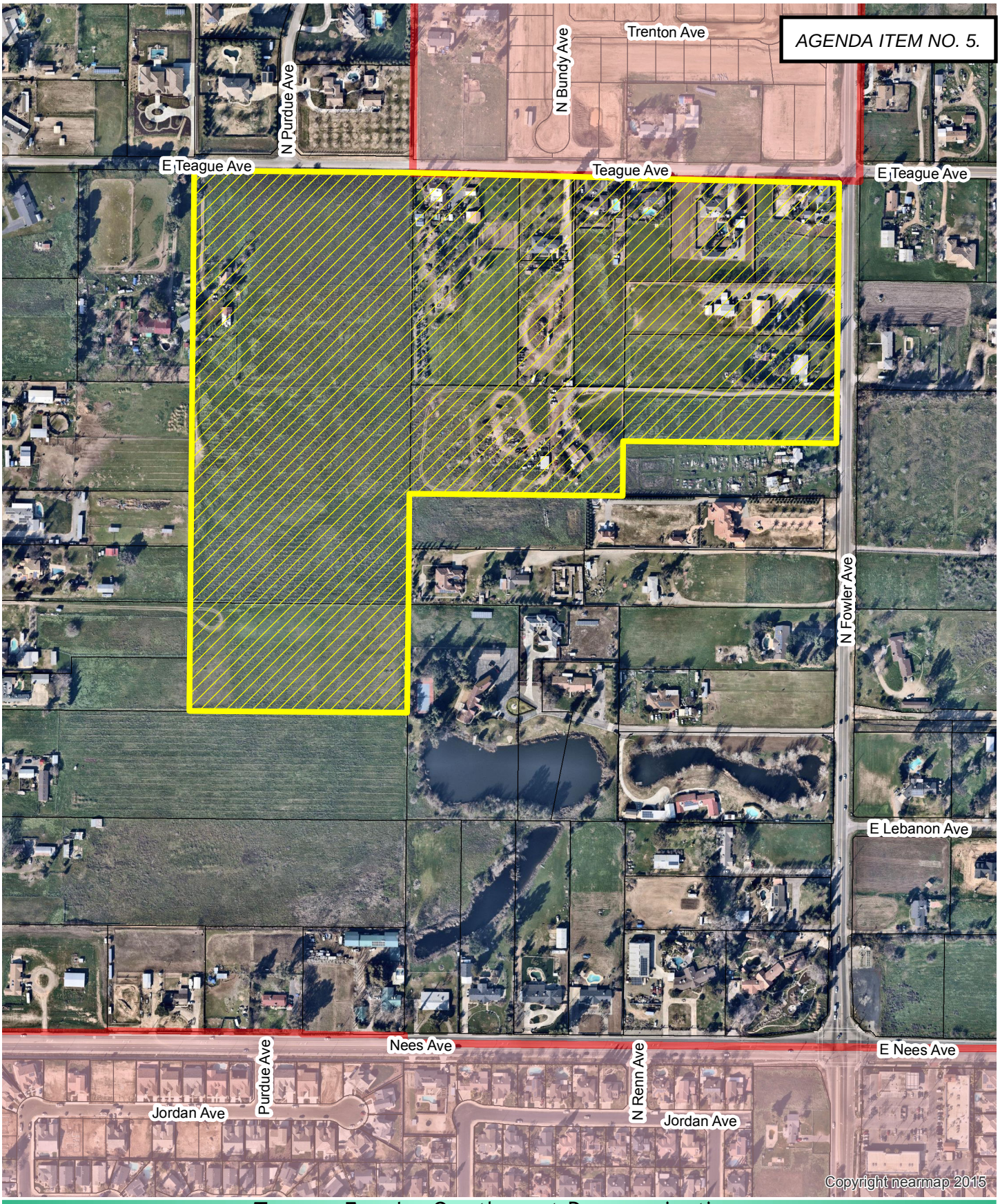
The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on May 11, 2020, by the following vote, to wit.

AYES:
NOES:
ABSENT:
ABSTAIN:

DATED: May 11, 2020

_____ _____

Mayor City Clerk



Teague-Fowler Southwest Reorganization
Project Area Map
Attachment 3

Annexation Area

City Limits

4/22/2020

1 " = 400

CITY of CLOVIS
PLANNING & DEVELOPMENT
1033 FIFTH STREET • CLOVIS, CA 93612

SPECIFIC SERVICE PLAN
TEAGUE-FOWLER SW REORGANIZATION
GPA2019-006, R2019-007, TM6284, AND RO301

1.1 INTRODUCTION

A Site Specific Service Plan for providing services and improvements to land being annexed to the City is required by the Fresno Local Agency Formation Commission (LAFCo). The site specific service plan provides assurance to LAFCo that newly annexed land to the City will be properly served as urban territory. The service plan also provides information to property owners, districts and interesting parties who may have projects underway within the vicinity of the proposed annexation.

On April 9, 2020, the Clovis Planning Commission approval General Plan Amendment GPA2019-006, Prezone R2019-007 and Vesting Tentative Tract Map TM6284 for property located in the south west area of Teague and N. Fowler Avenues. The entitlements requested approved a 74-lot single-family residential development with public streets and prezoning to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

On May 11, 2020, the Clovis City Council approved General Plan Amendment GPA2019-006, Prezone R2019-007 and Vesting Tentative Tract Map TM6284 for property located in the south west area of Teague and N. Fowler Avenues. The entitlements requested approved a 74-lot single-family residential development with public streets and prezoning to the Clovis R-1 (Single-Family Residential) and R-R (Rural Residential) Zone Districts.

On May 11, 2020, the Clovis City Council approved entitlement Reorganization RO301, requesting the Fresno Local Agency Formation Commission (LAFCo) to take proceedings for the reorganization of the territory known as the Teague-Fowler SW Reorganization.

1.2 SERVICES EXISTING OR PROPOSED

1. Community Water Service

The Water Master Plan Update, completed in 2017, by Provost & Pritchard Consulting Group, was prepared to support the 2014 Clovis General Plan, and the development plans therein. The plan examined the feasibility of continued growth in the greater Clovis area from a water resource perspective. This included a review of existing and future demands for water from surface, groundwater, and reclaimed water. The study area corresponded with the General Plan planning area. The 2015 Urban Water Management Plan updated the water supply and demand issues identified in the 2017 Master Plan.

The City and Tarpey Village have 37 domestic water wells to provide for the needs of its residents. Some of these have wellhead treatment facilities to treat contaminated groundwater. The wells discharge water into a distribution main grid, based on a minimum of 12-inch mains, spaced at half-mile intervals. The present water storage facilities consist of one elevated tank and three ground level tanks. The total storage capacity is 7 million gallons.

The City began operations of the Surface Water Treatment Facility, located on the Enterprise Canal on the east side of Clovis, in 2004. Kings River water is supplied to the plant via Fresno Irrigation District's (FID) Enterprise Canal. This 15 million gallons per day (MGD) plant allows Clovis to serve existing users and new growth areas, while lessening the demand on groundwater. In 2014, treatment capacity at the SWTF was increased to 22.5 MGD.

In 2009, the City began operation of the Water Reuse Facility (WRF) to treat wastewater from a portion of the City's growth areas. In 2012, the City began using recycled water from this facility to irrigate public landscapes. At build-out of the system, this facility will be able to produce 8.4 MGD of recycled water.

The strategy for future water supply is termed "conjunctive use" where multiple elements are used to provide a secure long-term supply. It includes using both groundwater and treated surface water to insure a secure drought-resistant water supply with the flexibility to use surface and groundwater supplies in a cost and operationally-efficient manner. This strategy is conducive to phased development that is critical to both community approval and existing operational constraints.

Water systems for newly developed areas, such as the project site, will be financed by development fees, assessment districts, and capital facilities funding. Additional surface water supplies for certain growth areas will be financed by the Water Supply development fee.

The following water conditions have been placed on the project:

1. The applicant shall identify and abandon all water wells to City standards.

2. The applicant shall install water mains of the sizes and in the locations indicated below, and provide an adequately looped water system prior to occupancy. The water improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.

    - Teague Avenue – install 16" main between Fowler Avenue and the western property line.
    - North Sunnyside Avenue – install 12" main between Portland Avenue and Nees Avenue.
    - Interior streets - install 8" mains.

3. The applicant shall provide dedication of 15-foot wide utility easements for all on-site water mains, hydrants, blow-offs, and water meters not located in otherwise dedicated rights-of-way.

4. The applicant shall install a City standard water service to each lot of the proposed subdivision. Water services shall be grouped at property lines to accommodate automatic meter reading system, including installation of connecting conduit. The water meter shall be placed in the sidewalk and not in planters or driveways.

5. The applicant shall notify all property owners' annexed to the City and along streets where a new water main will be constructed to determine if they wish to be connected to City water. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that water connection fees are required if they choose to connect.

6. The applicant shall install a City standard water service connection or connections of the necessary size to all parcels along the new water main where new pavement will be installed.

7. Prior to recording a final map of any phase, the applicant shall demonstrate to the satisfaction of the City Fire Chief and City Engineer that there is adequate water pressure to serve the units to be

constructed. The applicant shall work with the City Engineer to determine the adequacy of water supply/pressure for the proposed development.

2. Wastewater

The Fresno-Clovis Regional Wastewater Treatment Facility serves the Fresno and Clovis urban area from its location southwest of the two cities. The City of Clovis owns and maintains sewer lines within the City Sphere of Influence, with the exception of the Tarpey Village area, which is maintained by the City of Fresno. The City operates the Water Reuse Facility which treats wastewater from a portion of the City and provides recycled water for use in public landscapes. This facility will be expanded as required to serve portions of the northwest and northeast growth areas. The City does not have sewer collection facilities constructed for the entire current Sphere of Influence at this time, but all areas have been master planned.

The Clovis Wastewater Master Plan Update in 2017 provided the City with a course of action with respect to wastewater service needs through the year 2035, in keeping with the Clovis General Plan.

Wastewater facilities for newly developed areas will be financed by development fees, assessment districts, and capital facilities funding.

The following sewer conditions have been placed on the project:

1. The applicant shall identify and abandon all septic systems to City standards.

2. The applicant shall install sanitary sewer mains of the size and in the locations indicated below, prior to occupancy. The sewer improvements shall be in accordance with the City's master plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the size, location, and elevations of existing improvements. Any alternative routing of the mains shall require approval of the City Engineer and shall be supported by appropriate calculations.

    - Teague Avenue – Install 10" main along frontage between the eastern limit and North Purdue Avenue.
    - Teague Avenue – Install 8" main between North Purdue Avenue and the western limit.
    - North Purdue Avenue – Install 10" main between Teague Avenue and Heritage Avenue.
    - Heritage Avenue – Install 10" main between North Miami Avenue and North Purdue Avenue.
    - North Miami Avenue – Install 12" main between Portland Avenue and Heritage Avenue.
    - Portland Avenue – Install 12" main between North Miami Avenue and North Sunnyside Avenue.
    - North Sunnyside Avenue – Install 12" main between Portland Avenue and Nees Avenue.
    - Nees Avenue – install 15" main between North Sunnyside Avenue and North Minnewawa Avenue.
    - Interior Streets – install 8" mains, except where noted.

3. The applicant has proposed a temporary pump station and force main. If the alternative temporary system is implemented by the applicant, all costs for installation and maintenance shall be borne by the applicant until the gravity system is available. The applicant shall be responsible for all costs associated with removal of the temporary system. The applicant shall work with staff to provide a funding mechanism for long term maintenance.

4. The applicant shall provide dedication of a 15' wide utility easement for all on-site sewer mains, not located in otherwise dedicated rights-of-way.

5. The applicant shall install one (1) 4" sewer service house branch to each lot within the tentative tract.

6. The applicant shall notify all property owners annexed to the City and along streets where a new sewer main will be constructed to determine if they wish to be connected to City sewer. Property owners shall work directly with the applicant regarding costs and location. The applicant shall notify property owners that sewer connection fees are required if they choose to connect.

3. Streets

The following street conditions have been placed on the project.

1. The applicant shall provide right-of-way acquisition or dedicate free and clear of all encumbrances and/or improve the following streets to City standards and the Dry Creek Preserve Master Plan. The street improvements shall be in accordance with the City's specific plans and shall match existing improvements. The applicant's engineer shall be responsible for verifying the type, location, and grades of existing improvements.

    - Teague Avenue – Along frontage, dedicate to provide right-of-way acquisition for 30' (exist 20') north **south** of centerline, and improve with asphalt dike or other approved drainage system, 5' asphalt sidewalk, drive approaches, curb return ramps, street lights, landscape strip, 32' (16' north + 16' south) permanent paving, and transitional paving as needed. For nonadjacent major street requirements, the applicant shall provide between Tract Map 6284's western limit and Sunnyside Avenue, 32' (16' north + 16' south) **24' (12' north + 12' south)** of permanent paving, asphalt dike or other approved drainage system, and all transitional paving as required, or another City approved alternate route. Street improvements shall **be constructed per City standards and shall** not be reimbursable in areas where underground utilities are not installed but ultimately required.
    - Portland Avenue – Between western limit of TTM 6284 and North Sunnyside Avenue, dedicate to provide right-of-way in fee for 27' (exist 0') north and 15' (exist 0') south of centerline, and improve with 26' (13' north + 13' south) of permanent pavement and transitional paving as needed. Additional width may be required for utility cover. This area may be used for an interim period as a Fire Access Apparatus Road and for public maintenance access. Gates per City Fire Department standards shall be required on both ends of this street to restrict access. The applicant shall install a chain link fence on the south side of the street per City standards and as approved by the City Engineer.
    - Sunnyside Avenue – Between Portland Avenue and Nees Avenue, 32' (16' west + 16' east') permanent paving, 3' paved swale, and transitional paving as needed.
    - Interior Streets – Dedicate to provide for 50' or 54' of right-of-way in conformance with the City policy on street widths, and improve with curb, gutter, 5' sidewalk adjacent to the curb, drive approaches, curb return ramps, streetlights, permanent paving, and all transitional paving as needed.
    - Cul-De-Sacs - dedicate to provide for 52' radius and improve with curb, gutter, sidewalk, street lights, 43' permanent paving and all transitional paving as needed.
    - Temporary Turnabouts – Dedicate to provide for a 48' radius and install 45' of permanent/temporary paving plus 3' paved swale at the south end of Purdue Avenue or provide of a garbage covenant for Lots 25 and 50.

2. The applicant shall provide a dedication for a 10' public utility easement, where applicable, along all frontages or alternate widths approved by the utilities companies.

3. The applicant shall not install any fences, temporary or permanent in public right-of-way.

4. The applicant shall provide preliminary title report, legal description and drawings for all dedications required which are not on the site. All contact with owners, appraisers, etc. of the adjacent properties where dedication is needed shall be made only by the City. The City will prepare an estimate of acquisition costs including but not limited to appraised value, appraisal costs, negotiation costs, and administrative costs. The applicant shall pay such estimated costs as soon as they are determined by the City.

5. The sideyard side of all corner lots shall have full width sidewalk except where planter strips or meandering sidewalk is proposed.

6. The applicant shall obtain "R Value" tests in quantity sufficient to represent all street areas, and have street structural sections designed by a registered civil engineer based on these "R Value" tests.

7. The applicant shall, at the ends of any permanent pavement abutting undeveloped property, install 2" x 6" redwood header boards that shall be placed prior to the street surfacing.

8. Standard barricades with reflectors shall be installed at ends of streets abutting undeveloped property and any other locations to be specified by the City Engineer.

9. The applicant shall provide to the City for recording a reciprocal access agreement to maintain and provide vehicular, pedestrian and public access, prior to obtaining building permits.

4. Solid Waste Collection

Refuse Collection collects and disposes of solid waste generated by residential and commercial customers located within the City. Private vendors, under City contract, collect waste from select commercial customers and recyclables and yard wastes from residential customers. For improved cost accounting and control, the Refuse Collection Unit is further organized into four sub-accounts identified as Administration, Residential, Commercial, and Community Cleanup.

Refuse Landfill conducts all operations necessary to landfill City refuse in accordance with county, state, and federal requirements. The Clovis landfill is an active Class III landfill which accepts municipal solid waste that is currently permitted through the year 2053.

Refuse Contracts provides refuse-related services to the community through contracts with private vendors. These include refuse compactor and roll-off services for larger businesses, and residential curbside recycling, and greenwaste programs.

5. Fire Protection

The Fire Department employs two primary measures in determining service for the community and future development. The first measure is distribution. “Distribution” describes station locations that allow for a rapid first-due response deployment to mitigate fire and medical aid emergencies before they result in further life/property loss. Distribution is measured by how much of the jurisdiction is covered by first due units within our adopted response time goal of arrival within 5 minutes or less 90% of the time. The second term, “concentration” is a measure of how many multiple units are within sufficient proximity to provide the necessary tools, equipment and personnel, known as an effective response force, for a large scale incident or when another unit is assigned to a concurrent emergency. An initial effective response force is one that has been determined likely to stop the escalation of a fire emergency and bring it effectively under control.

In addition to these factors, Clovis Fire has conducted several station location studies over the last ten years to ensure efficient and effective operations. Stations have generally been located in between 4.5 to 5 mile squares near major street intersections. Previous studies identified various station configurations

that could serve City growth depending on the type of development and infrastructure planned for these areas. Currently, the Clovis Fire Department operates out of five fire stations located throughout the City.

In determining desired levels of resource concentration to maintain existing standards and to provide equal protection to future growth areas, the Clovis Fire Department analyzed the risk assessment, call volume, population, critical task analysis, and industry standards. Depending on the factors previously noted, the number of units needed for an initial effective response force are dispatched as defined in the Critical Task Analysis document.

Consideration for community protection must also take into account utilization of Automatic Aid Agreements that provide the closest available resources, regardless of jurisdiction. Using software programs and data from neighboring jurisdictions, fire staff are able to analyze the concentration of units revealing detailed information regarding the deployment of resources necessary to provide an effective fire fighting force within defined response time goals for a geographic area neighboring other fire protection districts.

The Emergency Services Bureau is responsible for providing the resources needed by Fire Department staff who respond daily to requests for emergency and non-emergency services from the citizens of Clovis through four divisions: Operations, Support Services, Training, and Communications. The Operations Division activities include: responding to fires, first responder medical services, mutual/automatic aid, mapping, apparatus replacement, etc. The Training Division activities include coordination of recruitment, testing and training of new employees, in-service training for all Department employees and coordinated use of the Fire Training Center. Support Services Division activities include: apparatus maintenance, facilities maintenance, station supplies, etc. The Communications Division has responsibility for coordinating dispatch services to the Fire Department. Fire dispatch services are provided via a contract with the Fresno County Emergency Medical Services Division. Dispatch services coordinate the emergency response of all City fire resources and mutual or automatic aid resources. The Department continues to promote sound planning, economic efficiency, and effective use of the City resources while providing essential and valuable services.

The Life Safety and Enforcement Bureau is responsible for providing community risk reduction activities through two divisions: Fire Prevention and Emergency Preparedness. The Fire Prevention Division assists local businesses and building development though activities such as inspections and plan review to ensure safe occupancies comply with fire codes, standards, and local ordinances. Additional risk reduction is performed through public education where citizens learn about actions they can take to reduce their fire risk and learn emergency preparedness skills that are essential during times of crisis. Within the Bureau, the Investigations team has the responsibility to investigate all fires for cause and origin, and enforce minimum standards to safeguard life, health, property, and public welfare.

The Emergency Preparedness Division has the responsibility for preparing and carrying out emergency plans to protect property and the citizens of Clovis in case of actual or threatened conditions of disaster or extreme peril. This includes having an emergency plan in place, maintaining an Emergency Operations Center (EOC), ensuring policies and procedures are compliant with the National Incident Management System (NIMS) guidelines and exercises are conducted to evaluate system effectiveness. Within the Emergency Preparedness section are the Hazardous Materials Response Team and an Urban Search and Rescue Team. These teams are capable of responding to emergency incidents that require specialized tools, equipment, and personnel. Some funding for this division is augmented by state and federal grants.

The Fire Administration Division is responsible for supporting all department operations, administering the Accreditation program, and the development and administration of the Fire Department budget. Fire Administration provides administrative analysis, report preparation, coordination of programs, incident response data management, timekeeping, and other routine duties performed daily that support the delivery of emergency and non-emergency services. Fire Administration also identifies, writes, and manages grants to supplement funding for all Department programs.

The following fire conditions have been placed on the project:

1. Street Width: Fire apparatus access width shall be determined by measuring from “base of curb” to “base of curb” for roadways that have curbs. When roadways do not have curbs, the measurements shall be from the edge of the roadway surface (approved all weather surface).

2. Street Width for Single Family Residences: Shall comply with Clovis Fire Standard #1.1.

3. Street Width for Single Family Residences: Minimum Access Road Width of 36 feet for Single Family Residences. Roads 36 feet or wider allow for Parking on both sides of street.

4. Turning Radius: All access way roads constructed shall be designed with a minimum outside turning radius of forty-five feet (45’).

5. Electric Gate on Fire Apparatus Access Road at Portland Ave.: All electric gates shall comply with Clovis Fire Department Gates Standard #1.5. Gates in residential developments shall have Opticom devices installed. Plans shall be submitted for review and permits issued by Fire Department prior to installation.

6. Temporary Street Signs: The applicant shall install temporary street signs that meet City Temporary Street Sign Standard #1.9 prior to issuance of building permits within a subdivision.

7. All Weather Access & Water Supply: The applicant shall provide all weather access to the site during all phases of construction to the satisfaction of the approved Clovis Fire Department Standard #1.2 or #1.3.

8. Two Points of Access: Any development to this parcel will require a minimum of two (2) points of access to be reviewed and approved by the Clovis Fire Department. All required access drives shall remain accessible during all phases of construction which includes paving, concrete work, underground work, landscaping, perimeter walls.

9. Residential Fire Hydrant: The applicant shall install _9_ 4 ½” x 2 ½” approved Residential Type fire hydrant(s) and “Blue Dot” hydrant locators, paint fire hydrant(s) yellow with blue top and caps, and paint the curb red as specified by the adopted Clovis Fire Department Standard #1.4. Plans shall be submitted to the Clovis Fire Department for review and approval prior to installation. The hydrant(s) shall be charged and in operation prior to any framing or combustible material being brought onto the site.

10. Looped Water Main: The applicant shall install approved looped water main capable of the necessary flow of water for adequate fire protection and approved by the Clovis Fire Department.

11. This project was reviewed by the fire department only for requirements related to water supply, fire hydrants, and fire apparatus access to the building(s) on site.

6. Law Enforcement

The responsibility of the Police Department is to provide protection and police-related services to the community. The Department’s mission is to do this in a manner that builds public confidence and improves the quality of life in Clovis. Police headquarters is located at the Clovis Civic Center. Currently, the Police Department has 99 sworn officers. The current ratio is 0.84 sworn officers per 1,000 residents. In accordance with the recommendations contained in the Police Department Master Service Plan, the Police Department will seek funding to achieve and maintain a ratio of 1.3 officers per 1,000 residents.

Police protection to the unincorporated areas is provided by the Fresno County Sheriff and California Highway Patrol. The City has a mutual aid assistance agreement with both agencies.

The operations of the Police Department, now and as the City grows, will be funded through the General Fund, Community Facilities District (CFD) fund, and grants. It is noted that continued annexation and development without proportionate increase in the funding of safety services will have an effect on the city's ability to maintain acceptable service levels.

The Department is organized into three major divisions, which are composed of seven budgetary sections.

7. Parks & Recreation

The Parks Section provides maintenance to City parks, trails and trail lighting, street landscaping, City trees, and numerous recreational facilities, including playgrounds and picnic sites; maintains Old Town streetscape; and provides grounds maintenance at City administrative facilities. Some of these areas are maintained by Parks personnel, while others are maintained through contracts administered by the Parks section. Parks also provides support for civic activities such as hanging banners and decorating for Christmas, Rodeo Weekend, Big Hat Days, and Farmer's Market. The Parks Section administers the Landscape Maintenance District (LMD), which provides funding for maintenance of certain parks, trails, street landscaping, streetlights, and neighborhood architectural enhancement features for areas within the Landscape Maintenance District. All City owned landscaping that is not within the LMD is funded through the General Fund.

With the approval of TM6284, the applicant is required to contribute a proportionate share to the development of a "trail" system as required by the General Plan Land Use Diagram.

8. Transit Services

The Community Services Division administers various senior citizen programs at the Clovis Senior Activity Center. The Division also administers the City's Round-Up demand-response transit program, the fixed-route Stageline transit program, and administers the City's contract with Fresno Area Express (FAX). User fees, and state and federal transit funds and grants support the transit service.

9. Storm Drainage

Storm Drain responds to significant rainfall events by providing sand bags, pumping of flooded areas, monitoring stream channels, placing warning signage, and pumping temporary storm drain basins when needed. It also provides pre-storm cleaning of drain inlets to ensure debris do not hamper proper operation of the storm drain collection system.

The following grading and drainage conditions have been placed on the project:

1. The applicant shall contact the Fresno Metropolitan Flood Control District (FMFCD) and address all requirements, pay all applicable fees required, obtain any required NPDES permit, and implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate storm water pollution. Plans for these requirements shall be included in the previously required set of construction plans, and shall be submitted to and approved by FMFCD prior to the release of any development permits.

2. In the event permanent storm drainage facilities are not available, the applicant shall provide temporary on-site retention basins for storm water disposal and provide a cash deposit for each basin to offset the City's cost of maintaining the basins. The size and design shall be in accordance with the requirements of the City Engineer and may change based on design calculations and access requirements for maintenance. The temporary pond maintenance deposit shall be based

on size, depth, expected maintenance schedule, etc. However, the property owner shall be responsible for periodic cleaning of toxic material. The temporary basin is solely for the convenience of the subdivision.

3. The owner of the property on which the temporary basin(s) are located shall backfilled said basin(s) within ninety (90) days after notice is given by the City that the basin(s) are no longer needed. In the event the owner fails to backfill said basin(s) within said 90 days, the City may cause the basin to be backfilled. A lien to cover the cost of the work will be placed on the property, including the costs to prepare and enforce the lien. A covenant shall be prepared and recorded on the lot on which the basin(s) is/are located.

4. Grade differentials between lots and adjacent properties shall be adequately shown on the grading plan and shall be treated in a manner in conformance with City of Clovis Standard Drawing No. M-4 as modified by the City Council. Any retaining walls required on-site or in public right of way shall be masonry construction. All retaining walls shall be designed by a registered civil engineer.

10. Street Lighting

Signals and Street Lighting is responsible for maintenance of traffic signals, the cost of energy/repairs/replacements for PG&E-owned streetlights within the City, energy and materials for City-owned streetlights, and maintenance of City-owned streetlights.

The following street lighting condition has been placed on the project:

1. The applicant shall install street lights along the major streets to local utility provider's standards at the locations designated by the City Engineer. Street light locations shall be shown on the utility plans submitted with the final map for approval. Street lights along the major streets shall be owned and maintained by local utility providers. Proof of local utility provider's approval shall be provided. The applicant may install thematic lighting, as approved by the City Engineer. If the applicant chooses to install thematic lighting, the applicant shall provide a conceptual lighting plan identifying adjacent properties that may be incorporated with thematic lights to create a neighborhood effect. Thematic lighting shall be maintained by an additional landscape maintenance assessment.

11. Schools

The City of Clovis and its sphere of influence lies primarily within the Clovis Unified School District (CUSD). Only a small portion of the southwest area of the city lies in the Fresno Unified School District (FUSD). A small portion of the southeast area of the sphere of influence lies within the Sanger Unified School District (SUSD). These districts are affected by residential growth in the Clovis area. CUSD is managing the growth by financing new facilities through bonds, development fees, and state schools funding. The area of the City serviced by FUSD is fully built-out and future development within the City's sphere of influence will not affect this district.

The Project site is located within the Clovis Unified School District.

12. Other Services

Pacific Gas and Electric (PG&E) provides gas and electrical service to the City of Clovis, its sphere of influence, and Fresno County. Electrical service is supplied by underground and overhead lines routed through three substations in the greater Clovis area. The hierarchy of establishing electrical power lines from generation stations to customers is as follows: transmission distribution; sub-transmission; and service. PG&E provides gas to customers through plastic and steel underground lines. Residents not serviced by PG&E use propane fuel.

13. Financing of Services and Facilities

The City Council has established fiscal policies that govern the city's financial administration and are designed to safeguard the City's assets, provide a stable funding base, and ensure that adequate accounting data are compiled. These accounting data allow for the preparation of various accounting reports such as the annual budget and the annual year-end financial report. Following are the financial policies that provide the basis for the financial direction of the city.

- The City's budget policy states that all operating budgets shall be balanced and ongoing costs will not exceed current revenues plus available fund balance that exceeds reserve requirements. The minimum reserve for any operational fund is 10% of the budgeted expenditures with the goal for reserves of 15% of budgeted expenditures unless capital borrowing or extraordinary fiscal conditions require that higher levels of reserves be maintained. As discussed during the five-year forecast, the General Fund target reserve is now set at 25%, the current General Fund reserve is approximately 16.5%. Budgetary and purchasing controls have been instituted that ensure adherence to the adopted budget.

- The Enterprise Funds are to be fully supported by user fees and charges, and the Internal Services Funds are to be funded at appropriate levels to ensure reasonable ability to respond to unforeseen events. Annually, the City has designated a contribution of general funds to the General Government Services Fund (an Internal Service Fund) to address the building space needs for new fire stations, safety training facilities, regional park facilities, business and industrial parks, upgrades and new technology for improved productivity, and major remodeling, repairs, or additions to existing facilities.

- The City will not issue long-term debt to cover current operations. The City will consider the issuance of long-term debt to purchase/build capital assets when those assets will benefit users over several years and it is determined that it is more equitable to spread the capital investment and financing costs of the asset to current and future users of the asset.

- Annually the City will have an independent audit of its financial records prepared by a certified public accountant pursuant to generally accepted auditing practices of the government finance industry and submit an annual financial report to the City Council by December 31 for the previous fiscal year.

- Fees for services will be charged directly to users of the services when appropriate and should cover the full cost of service delivery. Fees are to be reviewed on an annual basis to ensure that the fee is appropriate for the service provided compared to actual cost or an approved cost index.

- Development impact fees will be established to ensure that new growth pays the cost of infrastructure improvements and is not a burden to existing tax payers.

- The City will invest available cash assets in a manner consistent with the safeguards and diversity that a prudent investor would adhere to with primary emphasis on preservation of principal, sufficient liquidity to cover anticipated payment outflows, and high yields consistent with the first two goals. The City's investments will be consistent with Section 53601 of the Government Code of the State of California that identifies which types of investments are eligible for investment of public funds and the maximum percentage of an investment portfolio that is allowed for any one investment.

The City is in compliance with all of its financial policies.

14. California Environmental Quality Act (CEQA) Compliance

The City of Clovis has completed an environmental review (an assessment of the Project's impact on natural and manmade environments) of the proposed project, as required by the State of California. A Mitigated Negative Declaration was approved and adopted by the Clovis City Council.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Community and Economic Development

DATE: May 11, 2020

SUBJECT: Consider Approval – Res. 20-___, Adoption of the City of Clovis 2020-21 Annual Action Plan for expenditure of Community Development Block Grant (CDBG) Funds and amending the 2019-20 Annual Action Plan to include expenditure of CDBG-CV Funds; and Consider Approval - Res. 20-___ Amending the FY 2019-20 Housing and Community Development Budget to Increase the Funds by $441,214.

Staff: Andrew Haussler, Community and Economic Development Director
Recommendation: Approve

ATTACHMENTS:
1) Resolution – Adopting/Amending Annual Action Plan
2) 2020-21 Annual Action Plan
3) Resolution – Budget Amendment

CONFLICT OF INTEREST
None.

RECOMMENDATION
Consider adopting the City of Clovis 2020-21 Annual Action Plan for expenditure of Community Development Block Grant Funds, amending the 2019-20 Annual Action Plan to include expenditure of CDBG-CV funds, and amending the FY 2019-20 Housing and Community Development Budget to increase the funds by $441,214.

EXECUTIVE SUMMARY
The U. S. Department of Housing and Urban Development (HUD) requires the City to adopt the attached 2020-21 Annual Action Plan identifying projects for the 2020-21 fiscal year. In addition, the Federal Government recently authorized the CARES Act which provides funding in response to the COVID-19 outbreak. As a part of the CARES Act Clovis received an additional CDBG-CV allocation of $441,214. In order to expend these funds Clovis must first

amend their FY 2019-20 Annual Action Plan to include the projects that will be funded with these additional funds.

BACKGROUND

As an entitlement city for the purpose of receiving Community Development Block Grant Funds from HUD, Clovis must adopt an Annual Action Plan to identify CDBG projects for the upcoming budget year. In 2016, City Council approved the five-year Consolidated Plan. This required an extensive analysis of housing and community development needs for disadvantaged populations to be completed through community input and census data analysis. Staff conducted over 50 interviews with agencies and Clovis residents to identify gaps in services for disadvantaged populations. This analysis has resulted in the following summary of needs by priority:

High Priority

Job Creation/Retention
ADA Sidewalk Improvements
Street/Alley Improvements
Homeless Services/Shelters

Code Enforcement
Affordable Housing for Families/Seniors/Veterans
Housing Rehabilitation
Education
Jobs for Youth
Food Pantry Programs
Programs for Foster Children Aging Out of System
Youth Counseling/Resource Center
First-Time Homebuyer Programs
Youth Centers
Community Centers

Medium Priority

Substance Abuse Services
Micro Loans to Small Businesses
More Educational Opportunities
Support Groups for Families of Disabled
Legal Services
Road Reconstruction
Tenant/Landlord Fair Housing

Parks/Recreational Facilities
Substance Abuse Services

Low Priority

Façade Improvements
Utility Improvements (Water/Sewer)
Fire Stations/Equipment

In order to be eligible for CDBG funding, projects must fall into one of the following categories:

1. Directly benefit low- and moderate-income persons.
2. Aid in the prevention and elimination of slums or blight.
3. Meet an urgent need.

Based on the identified needs and the CDBG program regulations, the following projects were approved by City Council to be funded (at estimated amounts) over the five-year Consolidated Plan period:

Consolidated Plan Clovis CDBG Goals and Funding Allocation 2016-2021			
Goals		**Priority Level**	**Estimated City Allocation**
Goal 1. Housing Rehabilitation		**H**	**$1,000,000 (30%)**
Home Repair Grants	(2016-2017)	[redacted]	$200,000
Home Repair Grants	(2017-2018)		$200,000
Home Repair Grants	(2018-2019)		$200,000
Home Repair Grants	(2019-2020)		$200,000
Home Repair Grants	(2020-2021)		$200,000
Goal 2. Economic Dev./Job Creation		**H**	**$100,000 (3%)**
Job Creation Program	(2017-2018)	[redacted]	$100,000

Goal 3. Infrastructure		**H**	**$1,077,500 (32%)**
ADA		**H**	**$525,000**
ADA Streets/Ramps/Sidewalks	(2016-2017)	[redacted]	$200,000
ADA Streets/Ramps/Sidewalks	(2017-2018)		$100,000
ADA Streets/Ramps/Sidewalks	(2018-2019)		$ 75,000
ADA Streets/Ramps/Sidewalks	(2019-2020)		$ 75,000
ADA Streets/Ramps/Sidewalks	(2020-2021)		$ 75,000
Street/Alley Reconstruction		**H**	**$552,500**
Street/Alley Reconstruction	(2016-2017)	[redacted]	$150,000
Street/Alley Reconstruction	(2017-2018)		$100,625
Street/Alley Reconstruction	(2018-2019)		$100,625
Street/Alley Reconstruction	(2019-2020)		$100,625
Street/Alley Reconstruction	(2020-2021)		$100,625
Goal 4. Public Services		**H**	**$502,500 (15%)**
Area Based Policing	(2016-2017)	[redacted]	$100,922
Area Based Policing	(2017-2018)		$100,395
Area Based Policing	(2018-2019)		$100,395
Area Based Policing	(2019-2020)		$100,394
Area Based Policing	(2020-2021)		$100,394

While this list meets many of the high priority needs identified through the consolidated planning process, some needs were not addressed with CDBG due to lack of funds. Staff, as in years past, will seek out other resources to meet needs in the community. For the 2020-21 program year, HUD has allocated $750,024 to the City of Clovis. In addition, Clovis has CDBG project savings of $122,731 to allocate to 2020-21 projects.

Through the process identified in the HUD-approved Citizen Participation Plan, a recommended list of priority projects was created. The selected projects will meet goals of the Consolidated Plan to improve neighborhoods, create jobs, and enhance the quality of life for the citizens of Clovis. The recommended projects for the 2020-21 program year will improve infrastructure by making Street/Alley improvements, increase policing in CDBG-eligible census tracts throughout Clovis, support microenterprise business, and continue to emphasize improvements to Clovis' low- and moderate-income housing stock.

Staff recommends the proposed projects for the 2020-21 program year be funded as follows:

1. Housing Rehabilitation $125,000
2. Dennis/Mitchell Alley Reconstruction $150,000
3. Dennis/Beverly Alley Reconstruction $140,000
4. Beverly/San Jose Alley Reconstruction $140,000
5. Microenterprise $ 70,247
6. Area-Based Policing (Code Enforcement) $112,503
7. Administration $135,006

In addition to the projects listed above, staff recommends the following projects be included as contingency projects to be funded if additional funds become available during the year:

Housing Rehabilitation ($50,000)
San Jose/Scott Alley Reconstruction ($155,000)
ADA Improvements ($300,000)

These projects were advertised for public comment in The Business Journal on April 3, 2020, and also on the City of Clovis website and social media. Another advertisement was placed in The Business Journal on May 4, 2020, and also on the City of Clovis website and social media, to include projects being proposed to be funded with Clovis' allocation of CDBG-CV funds. In order to expend these funds, a budget amendment is also being requested to increase the FY 2019-20 Housing and Community Development Budget by $441,214. The following projects are being proposed for the CDBG-CV funds:

1. Meals on Wheels $241,214
2. Emergency Housing Payments $200,000

FISCAL IMPACT

A total of $872,755 in CDBG funds is available for 2020-21. HUD distributes the funds on a reimbursement basis. The funds are budgeted in the 2020-21 City of Clovis budget. An additional $441,214 is now available in CDBG-CV funds for 2019-20, and a budget amendment is being requested in that amount.

REASON FOR RECOMMENDATION

HUD requires the City Council to adopt an Annual Action Plan each year. The recommended action meets HUD's requirements to receive CDBG funds as an entitlement city. Amending the 2019-20 Annual Action Plan and amending the 2019-20 budget will allow the expenditure of CDBG-CV funds.

ACTIONS FOLLOWING APPROVAL

Staff will submit the 2020-21 Annual Action Plan to HUD, as well as the amendment to the 2019-20 Annual Action Plan. Staff will then begin operation of the 2020-21 CDBG Program, and projects will be completed during the 2020-21 fiscal year. Staff will also begin operation of the projects to be completed with the COVID-19 funds.

Prepared by: Heidi Crabtree, Housing Program Coordinator

Reviewed by: City Manager

RESOLUTION NO. 20-___

AGENDA ITEM NO. 6.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS ADOPTING THE 2020-21 CDBG ANNUAL ACTION PLAN AND AMENDING THE 2019-20 ANNUAL ACTION PLAN

WHEREAS, the City Council of the City of Clovis is a U. S. Department of Housing and Urban Development (HUD) entitlement city for the purpose of receiving Community Development Block Grant funds; and

WHEREAS, HUD requires the City of Clovis to adopt an Annual Action Plan to identify projects for the 2020-21 program year; and

WHEREAS, HUD requires the City of Clovis to amend its 2019-20 Annual Action Plan to identify projects to be completed using CDBG-CV funds.

NOW, THEREFORE, BE IT RESOLVED that the Clovis City Council approve and adopt the 2020-21 Annual Action Plan and approve the amendment of the 2019-20 Annual Action Plan.

The foregoing resolution was introduced and adopted at a regular meeting of the City Council of the City of Clovis held on the11th day of May, 2020, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

DATED: May 11, 2020

_____ _____

Mayor City Clerk

ATTACHMENT 1

Clovis 2020-21 Community Development Block Grant Annual Action Plan

Executive Summary

AP-05 Executive Summary - 24 CFR 91.200(c), 91.220(b)

1. Introduction

The Action Plan is a document submitted to HUD on an annual basis that serves as a comprehensive housing affordability strategy, community development plan, and submissions for funding under any of HUD's entitlement formula grant programs.

As a CDBG Entitlement City, Clovis' Community and Economic Development Department has developed a five-year strategic plan that identifies and prioritizes the future use of the City's Community Development Block Grant (CDBG) funds. This five-year plan became effective July 1, 2016, and will end on June 30, 2021. This Annual Action Plan represents year five of the five-year plan.

In preparing the Consolidated Plan, the City utilized several methods to analyze the housing and community development needs of Clovis. Methods included, conducting interviews of community residents, stakeholders, community organizations, and multi-family unit property owners, analyzing U.S. census data, and utilizing information in several city and county planning documents. The City hosted community meetings, hearings and met with organizations as an effort to outreach to and encourage participation of all residents, particularly low- and moderate-income residents, elderly persons, and persons with disabilities. The purpose of the meetings was to inform the community about the Consolidated Plan process and to identify opportunities to improve collaborative efforts, eliminate service delivery gaps in order to develop and sustain decent and affordable housing, suitable living environments, and expanded community and economic opportunities.

2. Summarize the objectives and outcomes identified in the Plan

Clovis estimates that it will receive CDBG funding of $3,350,000 over the five-year period of the Consolidated Plan. Those CDBG funds are anticipated to be divided between four prioritized goals, as follows:

Goal 1: Housing - $1,000,000 (30%) to be used to improve the quality of owner-occupied units, increase multi-family units for low- to moderate-income households, support transitional and permanent housing for homeless persons, and support regional efforts to end chronic homelessness.

Goal 2: Economic Development - $100,000 (3%) to be used to support projects that create jobs for low- to moderate-income persons.

Goal 3: Infrastructure - $1,077,500 (32%) to be used to improve the quality and increase the quantity of public improvements that benefit low- to moderate-income residents and neighborhoods, improve the quality and increase the quantity of facilities that benefit neighborhoods, seniors, and those with special needs, and provide funds to bring public facilities into ADA compliance.

Goal 4: Public Services - $502,500 (15%) to be used to provide code enforcement and additional policing that benefits low- to moderate-income neighborhoods, support senior and youth programs, support programs and activities that benefit those with special needs, and to support food pantry programs.

The Consolidated Plan is currently being amended to include additional uses for the Housing Goal. Specifically, to allow for the use of interim assistance payments for no more than three months of rent. The Economic Development goal is being amended to include programs that allow for the retention of jobs for low- to moderate-income persons, instead of just the creation of jobs.

3. Evaluation of past performance

This is an evaluation of past performance that helped lead the grantee to choose its goals or projects.

The following is an overview of the prior year performance and goals:

Housing Rehabilitation - To date, this project served 42 households during the FY 2019-20 period. Clovis has spent $84,931.90 of the housing rehabilitation funds allocated by the City, and is on track to meet the goals identified in the FY 2019-20 Action Plan

Area-Based Policing - Additional policing has been continued with a dedicated Community Service Officer. The officer has been focusing on improving neighborhood conditions in CDBG eligible census tracts. Over 1,000 citations, notices, and individual calls for service were issued this past year and significant improvement has been made in struggling neighborhoods.

Economic Development/Job Creation

The City invests heavily in economic development activities using local resources to attract and retain businesses that provide high wage jobs for its citizens. Clovis used CDBG funds for the creation of a commercial kitchen project that allows LMI entrepreneurs expand their businesses. To date, the commercial kitchen has been completed, and eight LMI entrepreneurs have received assistance.

Capital Improvements

ADA Improvements: Various Locations (2017-18) - completed.

Helm/Lincoln Alley Reconstruction (2017-18) - completed.

Ashcroft/Holland Alley Reconstruction (2018-19) - completed.

Cherry Lane/Oxford Alley Reconstruction (2016-17) - completed.

All remaining projects are all under construction or in the process of being designed. The City invests in many capital improvement projects throughout the City including low-income neighborhoods using a variety of funding resources.

Affirmatively Furthering Fair Housing

HUD requires any jurisdiction receiving funds to commit to affirmatively further fair housing. In accordance with HUD's requirements, the City of Clovis updated its Analysis of Impediments to Fair Housing Choice in November 2019. The Analysis was sent to HUD staff for review, where it currently remains.

4. Summary of Citizen Participation Process and consultation process

Clovis developed a Citizen Participation Plan that was approved by City Council in 2006, and subsequently approved by HUD. Citizens, nonprofits, and all interested parties were provided adequate opportunity to review and comment on the plan. The purpose of the plan is to encourage citizens, particularly LMI residents, to participate in the development of the Consolidated Plan, Action Plans, Substantial Amendments, and Annual Performance Reports. Citizens are engaged through community meetings, public hearings, and individual interviews. The primary goals of Clovis' Citizen Participation Plan are 1) to generate significant public participation, specifically from LMI residents and those residing in LMI neighborhoods; 2) to gather data that accurately describes and quantifies housing and community development needs and to suggest workable solutions; and 3) to obtain comments on proposals for allocating resources. Throughout the determination of needs and allocation of resources relative to the Consolidated Plan, and the development of this action plan the City consulted with both internal and external departments, agencies, and individuals to understand Clovis' needs and available resources. Internally, Clovis met with several department representatives to provide information about the Consolidated Plan and the Community Development Block Grant. Department staff provided input on how CDBG resources can be utilized and leveraged to provide services such as housing programs, code enforcement, and infrastructure improvements.

5. Summary of public comments

This could be a brief narrative summary or reference an attached document from the Citizen Participation section of the Con Plan.

The City of Clovis held a CDBG Proposal Workshop on February 13, 2020, in an effort to assist those who wish to submit a project proposal for consideration in the 2020-21 Annual Action Plan. The workshop was announced on Clovis social media and website, with a published notice on January 31, 2020. There

was no outside attendance at the workshop. One public input meeting and one public hearing to obtain citizen input and to respond to proposals and questions were scheduled. The input meeting was to be held on March 18, 2020, with published notice on March 4, 2020. Due to COVID-19 – related orders about public gatherings, the in-person meeting was cancelled. The cancellation was published on Clovis social media and website, but it was requested that interested parties still provide comment either in writing, by phone, or through social media comments. No comments, written or oral, were received.

THIS PORTION HAS NOT YET OCCURRED, AND WILL BE REVISED IF NECESSARY. A public hearing was noticed on April 3, 2020, for a public hearing on May 4, 2020. Citizens were also noticed about the public hearing through the City's social media. No comments, written or oral, were received during the comment period. The public hearing notice included information about the locations at which the action plan would be available for review, and was published in the *The Business Journal* which services Clovis and the surrounding areas in both English and Spanish. Clovis was prepared to provide interpreters for non-English speaking citizens upon request. However, no requests were made. Both input meeting and the public hearing were held during evening hours at convenient locations that accommodate persons with disabilities.

6. Summary of comments or views not accepted and the reasons for not accepting them

N/A – No comments received.

7. Summary

Citizens were encouraged to participate in two public meetings held at the Clovis Planning and Development Services office, located in the heart of Clovis. Both were scheduled during evening hours, but the second meeting was cancelled due to COVID-19 related concerns. Clovis staff was prepared to provide extensive information relative to the CDBG program, the preparation of the Consolidated Plan and Annual Action Plans, and the Citizen Participation process and its importance. Even though great effort on the part of the City went into preparation, neither public input meeting facilitated public comment.

PR-05 Lead & Responsible Agencies – 91.200(b)

1. Agency/entity responsible for preparing/administering the Consolidated Plan

Describe the agency/entity responsible for preparing the Consolidated Plan and those responsible for administration of each grant program and funding source.

Agency Role	Name	Department/Agency
CDBG Administrator	CLOVIS	Administration

Table 1 – Responsible Agencies

Narrative (optional)

The City of Clovis Community and Economic Development Department serves as the lead department for the 2020-21 Action Plan and the administration of CDBG funds. The City's institutional structure consists of a council-manager form of government. Under the council-manager form of government, adopted by municipal code, the City Council provides policy direction to the city manager who is responsible for administering city operations. The council is the legislative body; which approves the budget and determines the tax rate, for example. The council also focuses on the community's goals, major projects, and such long-term considerations as community growth, land use development, capital improvement plans, capital financing, and strategic planning. The council hires a professional manager to carry out administrative responsibilities, and supervises the manager's performance.

Consolidated Plan Public Contact Information

Heidi Crabtree, Housing Program Coordinator
City of Clovis
1033 Fifth Street
Clovis, CA 93612
(559) 324-2094

AP-10 Consultation – 91.100, 91.200(b), 91.215(l)

1. Introduction

Throughout the determination of needs and allocation of resources relative to this Action Plan, the City consulted with both internal and external departments, agencies, and individuals to understand Clovis' needs and available resources. Internally, Clovis met with several department representatives to provide information about the Consolidated Plan and the Community Development Block Grant. Department staff provided input on how CDBG resources can be utilized and leveraged to provide services such as housing programs, code enforcement, and infrastructure improvements.

Provide a concise summary of the jurisdiction's activities to enhance coordination between public and assisted housing providers and private and governmental health, mental health and service agencies (91.215(l))

The City of Clovis currently does not have publicly-owned housing. However, the Fresno Housing Authority has started construction on a 60-unit apartment complex for low-income tenants. Construction is anticipated to be completed by early 2021. The project is called Solivita Commons, and is located at the Northeast Corner of Willow and Alluvial Avenues in Clovis. Clovis provided $1,000,000 toward the construction of the project through its Affordable Housing Development Impact Fee Reduction Program. In addition, the City works closely with Housing Authority provide referrals for Section 8 vouchers to Clovis residents.

Describe coordination with the Continuum of Care and efforts to address the needs of homeless persons (particularly chronically homeless individuals and families, families with children, veterans, and unaccompanied youth) and persons at risk of homelessness.

The City of Clovis is an active member of the Fresno Madera Continuum of Care (FMCoC), which is the organization that acts as the regional planning body to address homelessness. This collaborative group addresses homeless issues including chronic homelessness, homelessness prevention, and discharge coordination policies on the region-wide basis of Fresno and Madera Counties, which includes the City of Clovis. Based upon the consultation process, the City has recognized a need for shelters for other at-risk populations such as youth and veterans, and will pursue projects to serve these populations.

Describe consultation with the Continuum(s) of Care that serves the jurisdiction's area in determining how to allocate ESG funds, develop performance standards for and evaluate outcomes of projects and activities assisted by ESG funds, and develop funding, policies and procedures for the operation and administration of HMIS

The City of Clovis does not receive ESG funding.

Table 2 – Agencies, groups, organizations who participated

1	**Agency/Group/Organization**	Fresno Madera Continuum of Care
	Agency/Group/Organization Type	Services-homeless
	What section of the Plan was addressed by Consultation?	Homeless Needs - Chronically homeless Homeless Needs - Families with children Homelessness Needs - Veterans Homelessness Needs - Unaccompanied youth Homelessness Strategy
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	Based upon the consultation process, the City has recognized a need for shelters and other at-risk populations such as youth and veterans, and will pursue projects to serve these populations.
2	**Agency/Group/Organization**	FRESNO HOUSING AUTHORITY
	Agency/Group/Organization Type	Housing PHA Services - Housing
	What section of the Plan was addressed by Consultation?	Housing Need Assessment Public Housing Needs Market Analysis
	Briefly describe how the Agency/Group/Organization was consulted. What are the anticipated outcomes of the consultation or areas for improved coordination?	Based upon the consultation process, the City has recognized a need for public housing

Identify any Agency Types not consulted and provide rationale for not consulting

N/A

Other local/regional/state/federal planning efforts considered when preparing the Plan

Name of Plan	Lead Organization	How do the goals of your Strategic Plan overlap with the goals of each plan?
Continuum of Care	Fresno Madera Continuum of Care	This effort aligns with the strategic plan goal to support activities to respond to homelessness and its impacts on the community.
City of Clovis Housing Element (2015-2023)	City of Clovis	Government Code Section (GSC) 65300 requires cities and counties to adopt and maintain a General Plan with a minimum of seven mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety.
SJVHC Goals and Objectives	Fresno State Community & Economic Development	The San Joaquin Valley Housing Collaborative (SJVHC) serves as a regional voice for effective affordable housing policy in the San Joaquin Valley. The group establishes and supports a broad network of partners to promote and increase the development of affordable and workforce housing in the Valley.

Table 3 – Other local / regional / federal planning efforts

AP-12 Participation – 91.105, 91.200(c)

1. Summary of citizen participation process/Efforts made to broaden citizen participation
Summarize citizen participation process and how it impacted goal-setting

Clovis developed a Citizen Participation Plan that was approved by City Council in 2006, and subsequently approved by HUD. Citizens, nonprofits, and all interested parties were provided adequate opportunity to review and comment on the plan. The purpose of the plan is to encourage citizens, particularly LMI residents, to participate in the development of the Consolidated Plan, Action Plans, Substantial Amendments, and Annual Performance Reports. Citizens are engaged through community meetings, public hearings, and individual interviews. The primary goals of Clovis' Citizen Participation Plan are 1) to generate significant public participation, specifically from LMI residents and those residing in LMI neighborhoods; 2) to gather data that accurately describes and quantifies housing and community development needs and to suggest workable solutions; and 3) to obtain comments on proposals for allocating resources. Throughout the determination of needs and allocation of resources relative to the Consolidated Plan, and the development of this action plan the City consulted with both internal and external departments, agencies, and individuals to understand Clovis' needs and available resources. Internally, Clovis met with several department representatives to provide information about the Consolidated Plan and the Community Development Block Grant. Department staff provided input on how CDBG resources can be utilized and leveraged to provide services such as housing programs,

The City of Clovis held a CDBG Proposal Workshop on February 13, 2020, in an effort to assist those who wish to submit a project proposal for consideration in the 2020-21 Annual Action Plan. The workshop was announced on Clovis social media and website, with a published notice on January 31, 2020. There was no outside attendance at the workshop. One public input meeting and one public hearing to obtain citizen input and to respond to proposals and questions were scheduled. The input meeting was to be held on March 18, 2020, with published notice on March 4, 2020. Due to COVID-19 – related orders about public gatherings, the in-person meeting was cancelled. The cancellation was published on Clovis social media and website, but it was requested that interested parties still provide comment either in writing, by phone, or through social media comments. No comments, written or oral, were received.

THIS PORTION HAS NOT YET OCCURRED, AND WILL BE REVISED IF NECESSARY. A public hearing was noticed on April 3, 2020, for a public hearing on May 4, 2020. Citizens were also noticed about the public hearing through the City's social media. No comments, written or oral, were received during the comment period. The public hearing notice included information about the locations at which the action plan would be

available for review, and was published in the *The Business Journal* which services Clovis and the surrounding areas in both English and Spanish. Clovis was prepared to provide interpreters for non-English speaking citizens upon request.

Citizen Participation Outreach

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
1	Public Meeting	Minorities Non-English Speaking - Specify other language: Spanish Persons with disabilities Non-targeted/broad community Residents of Public and Assisted Housing	No public attendance	No public comments	N/A	

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
2	Public Hearing	Minorities Non-English Speaking - Specify other language: Spanish Persons with disabilities Non-targeted/broad community Residents of Public and Assisted Housing	Representative of Elder Abuse Services, Inc. was in attendance for the public hearing.	Elderly should be a priority to serve, and inquired about submitting a proposal for funding for FY 2020-21.	N/A	

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
3	Newspaper Ad	Minorities Non-English Speaking - Specify other language: Spanish Persons with disabilities Non-targeted/broad community Residents of Public and Assisted Housing	Published notice requesting comments during 30-day comment period leading up to public hearing.	No public comments	N/A	

Sort Order	Mode of Outreach	Target of Outreach	Summary of response/attendance	Summary of comments received	Summary of comments not accepted and reasons	URL (If applicable)
4	Internet Outreach	Minorities Non-English Speaking - Specify other language: Spanish Persons with disabilities Non-targeted/broad community Residents of Public and Assisted Housing	Advertised public input meeting and public hearing.	No comments received	N/A	

Table 4 – Citizen Participation Outreach

Expected Resources

AP-15 Expected Resources – 91.220(c)(1,2)

Introduction

The City anticipates that, over the five year period of the current Consolidated Plan, CDBG allocations totalling $3,350,000 will be received. These funds will be used for activities such as housing, infrastructure, public facilities and services, and economic development. 100% of the CDBG funds used will benefit LMI persons.

Anticipated Resources

Program	Source of Funds	Uses of Funds	Expected Amount Available Year 1				Expected Amount Available Remainder of ConPlan $	Narrative Description
			Annual Allocation: $	Program Income: $	Prior Year Resources: $	Total: $		
CDBG	public - federal	Acquisition Admin and Planning Economic Development Housing Public Improvements Public Services	750,024	0	0	750,024	0	See introduction

Table 5 - Expected Resources – Priority Table

Explain how federal funds will leverage those additional resources (private, state and local funds), including a description of how matching requirements will be satisfied

There is no matching requirement for the use of CDBG funds. However, Clovis strives to leverage as many funding sources as possible when planning community and economic development activities. For example, in the previous funding year Clovis used remnant Redevelopment Agency funds and State HOME funds for the purpose of expanding and preserving Clovis' affordable housing stock.

If appropriate, describe publically owned land or property located within the jurisdiction that may be used to address the needs identified in the plan

The City of Clovis donated three publicly-owned lots (purchased with RDA funds) in the Stanford Addition to the local Habitat for Humanity affiliate for construction of three affordable housing units. All three homes are now completed and occupied by low-income households. Clovis recently purchased a vacant, dilapidated home at the Northeast Corner of 4th Street and Sunnyside Avenue in Clovis. The home will be demolished, and the lot split into two parcels. The City will partner with an affordable housing development to construct two new single-family homes on the site to be occupied by low-income households.

Discussion

The City of Clovis is committed to leveraging as many funds as possible against the CDBG allocation. In addition to the narrative above, the City provided $1,000,000 to the Fresno Housing Authority for the construction of 60 units of affordable housing. The funding was provided through the City's Affordable Housing Development Impact Fee Reduction Program.

Annual Goals and Objectives

AP-20 Annual Goals and Objectives

Goals Summary Information

Sort Order	Goal Name	Start Year	End Year	Category	Geographic Area	Needs Addressed	Funding	Goal Outcome Indicator
1	Affordable Housing	2016	2020	Affordable Housing		Affordable Housing	CDBG: $125,000	Homeowner Housing Rehabilitated: 28 Household Housing Unit
2	Public Facilities	2016	2020	Non-Housing Community Development		Public Facilities	CDBG: $430,000	Public Facility or Infrastructure Activities other than Low/Moderate Income Housing Benefit: 15801 Persons Assisted
3	Economic Development	2016	2020	Non-Housing Community Development		Economic Development	CDBG: $70,247	Microenterprise: 6 Low/Moderate Income Persons

Table 6 – Goals Summary

Goal Descriptions

1	**Goal Name**	Affordable Housing
	Goal Description	Clovis will provide housing rehabilitation grants to LMI homeowners within the City of Clovis. The grants will pay for repairs related to health and safety deficiencies in the home.

2	**Goal Name**	Public Facilities
	Goal Description	Clovis will reconstruct the alleys at Dennis and Mitchell Avenues in the amount of $150,000; Dennis and Beverly Avenues in the amount of $140,000; and Beverly and San Jose Avenues in the amount of $140,000.
3	**Goal Name**	Economic Development
	Goal Description	Clovis will use $70,247 of CDBG funding for continuation of the commercial kitchen project that allows LMI entrepreneurs to expand their businesses.

Projects

AP-35 Projects – 91.220(d)

Introduction

The goals described in the current Consolidated Plan represent high priority needs for the City of Clovis, and serve as the basis for the strategic actions the City will use to meet those needs. It is our goal that meeting these needs will expand and preserve the affordable housing stock in Clovis, as well as provide public facilities improvements and public services that will strengthen neighborhood revitalization. The City of Clovis implements all CDBG-funded activities in-house.

Projects

#	Project Name
1	Housing Rehabilitation
2	Dennis/Mitchell Alley Reconstruction
3	Dennis/Beverly Alley Reconstruction
4	Beverly/San Jose Alley Reconstruction
5	Microenterprise
6	Area-Based Policing
7	Administration

Table 7 - Project Information

Describe the reasons for allocation priorities and any obstacles to addressing underserved needs

The projects were selected because they align with the goals that were prioritized as high in the Consolidated Plan. One obstacle to addressing underserved needs is a lack of available funding to meet the need.

AP-38 Project Summary

Project Summary Information

1	**Project Name**	Housing Rehabilitation
	Target Area	
	Goals Supported	Affordable Housing
	Needs Addressed	Affordable Housing
	Funding	CDBG: $125,000
	Description	Provide grants to low-income owner-occupied households for the purpose of making repairs to health and safety-related deficiencies in the home.
2	**Project Name**	Dennis/Mitchell Alley Reconstruction
	Target Area	
	Goals Supported	Public Facilities
	Needs Addressed	Public Facilities
	Funding	CDBG: $150,000
	Description	Reconstruct the alley between Dennis Avenue and Mitchell Avenue in Clovis.
3	**Project Name**	Dennis/Beverly Alley Reconstruction
	Target Area	
	Goals Supported	Public Facilities
	Needs Addressed	Public Facilities
	Funding	CDBG: $140,000
	Description	Reconstruct the alley between Dennis Avenue and Beverly Avenue in Clovis.
4	**Project Name**	Beverly/San Jose Alley Reconstruction
	Target Area	
	Goals Supported	Public Facilities
	Needs Addressed	Public Facilities
	Funding	CDBG: $140,000

	Description	Reconstruct the alley between Beverly Avenue and San Jose Avenue in Clovis.
5	**Project Name**	Microenterprise
	Target Area	
	Goals Supported	Economic Development
	Needs Addressed	Economic Development
	Funding	CDBG: $70,247
	Description	Continuation of the commercial kitchen project that allows LMI entrepreneurs to expand their businesses.
4	**Project Name**	Area-Based Policing
	Target Area	
	Goals Supported	Crime Awareness
	Needs Addressed	Crime Awareness
	Funding	CDBG: $112,503
	Description	Provide area-based policing in LMI census tracts/block groups in Clovis.
5	**Project Name**	Administration
	Target Area	
	Goals Supported	Public Facilities Affordable Housing
	Needs Addressed	Affordable Housing Public Facilities Economic Development
	Funding	CDBG: $135,005
	Description	General administration of Clovis' CDBG allocation for FY 2020-21, including staff time.

AP-50 Geographic Distribution – 91.220(f)

Description of the geographic areas of the entitlement (including areas of low-income and minority concentration) where assistance will be directed

Home rehabilitation assistance will be open to all LMI owner-occupied households throughout Clovis. ADA improvements will benefit a Limited Clientele (presumed LMI) throughout Clovis. Alley reconstruction and area-based policing will take place only in LMI Census Tracts/Block Groups.

Geographic Distribution

Target Area	Percentage of Funds

Table 8 - Geographic Distribution

Rationale for the priorities for allocating investments geographically

CDBG investments will be made in Census Tracts were at least 51% of the residents are low- to-moderate-income.

A map that identifies the LMI Census Tracts in Clovis is attached.

Affordable Housing

AP-55 Affordable Housing – 91.220(g)

Introduction

Clovis intends to provide home repair grant assistance to approximately 50 LMI households for the purposes of correcting health and safety deficiencies within owner-occupied homes.

One Year Goals for the Number of Households to be Supported	
Homeless	0
Non-Homeless	28
Special-Needs	0
Total	28

Table 5 - One Year Goals for Affordable Housing by Support Requirement

One Year Goals for the Number of Households Supported Through	
Rental Assistance	0
The Production of New Units	0
Rehab of Existing Units	28
Acquisition of Existing Units	0
Total	28

Table 6 - One Year Goals for Affordable Housing by Support Type

AP-60 Public Housing – 91.220(h)

Introduction

The City of Clovis currently does not have publicly-owned housing. However, the Fresno Housing Authority has started construction on a 60-unit apartment complex for low-income tenants. Construction is anticipated to be completed by early 2021. The project is called Solivita Commons, and is located at the Northeast Corner of Willow and Alluvial Avenues in Clovis. Clovis provided $1,000,000 toward the construction of the project through its Affordable Housing Development Impact Fee Reduction Program.

Actions planned during the next year to address the needs to public housing

Clovis supports the Solivita Housing Authority project, and will continue to work with the Housing Authority to facilitate additional projects in the future.

Actions to encourage public housing residents to become more involved in management and participate in homeownership

The City of Clovis has a first-time homebuyer program, funded with State HOME funds (when available), and advertises the program throughout the City and on the City's website.

If the PHA is designated as troubled, describe the manner in which financial assistance will be provided or other assistance

The Fresno Housing Authority is not considered troubled.

AP-65 Homeless and Other Special Needs Activities – 91.220(i)

Introduction

The City of Clovis does not receive funding specifically to assist the homeless population. The City of Clovis is an active member of the Fresno Madera Continuum of Care (FMCoC), which is the organization that acts as the regional planning body to address homelessness in the region. This collaborative group addresses homeless issues including chronic homelessness, homelessness prevention, and discharge coordination policies on the region-wide basis of Fresno and Madera Counties, which includes the City of Clovis. Based upon the consultation process, the City has recognized a need for shelters for other at-risk populations such as youth and veterans, and will pursue projects to serve these populations. Clovis shares tax revenue with Fresno County that helps support programs such as the Marjaree Mason Center, which reports servicing over 300 battered women from the Clovis area per year. In addition, the tax revenue supports the EOC Sanctuary Youth Center that reports sheltering over 200 homeless youths ages 11-17 annually.

Describe the jurisdictions one-year goals and actions for reducing and ending homelessness including

Reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

The City of Clovis has no dedicated homeless shelters or services, but does have one transitional housing facility. The City is an active supporter of the MAP Point at POV, and those needing homeless services within Clovis are provided an opportunity to utilize the MAP services. Operated by The Poverello Housing (a homeless shelter), MAP (Multi-Agency Access Program) is an integrated intake process that connects individuals facing housing, substance abuse, physical health and/or mental health challenges to supportive services. MAP Point at POV is a physical intake location for the community homeless population. Clovis Police Department has an officer assigned to be a liaison to those who are homeless in Clovis, and will provide transportation to services including MAP Point and the Fresno Rescue Mission.

Addressing the emergency shelter and transitional housing needs of homeless persons

The City of Clovis Development Code allows emergency shelters and transitional housing, by-right, in all areas zoned as residential. The City is currently working with a developer who would like to develop a permanent supportive housing project in Clovis. This will be Clovis' first PSH development.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals

and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

The City of Clovis has no dedicated homeless shelters or services. However, the City is an active supporter of the MAP Point at POV, and those needing homeless services within Clovis are provided an opportunity to utilize the MAP services. Operated by The Poverello Housing (a homeless shelter), MAP (Multi-Agency Access Program) is an integrated intake process that connects individuals facing housing, substance abuse, physical health and/or mental health challenges to supportive services. MAP Point at POV is a physical intake location for the community homeless population.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); or, receiving assistance from public or private agencies that address housing, health, social services, employment, education, or youth needs.

Clovis does not have supportive housing for those described in this section. However, Clovis residents have access to many facilities within Fresno County. In the neighboring City of Fresno, there are 236 licensed community care facilities with a total of 4,386 supportive housing beds available for persons with health-related conditions, including:

- Adult Residential Facilities are facilities of any capacity that provide 24-hour non-medical care for adults ages 18-59, who are unable to provide for their own daily needs. Adults may be physically handicapped, developmentally disabled, and/or mentally disabled.
- Residential Care Facilities for the Elderly provide care, supervision and assistance with activities of daily living, such as bathing and grooming. They may also provide incidental medical services under special care plans. The facilities provide services to person 60 years of age and over, and persons under 60 with comparable needs. These facilities can also be known as assisted living facilities, nursing homes, and board and care homes.
- Social Rehabilitation Facilities are facilities that provide 24-hour non-medical care and supervision in a group setting to adults recovering from mental illnesses who temporarily need assistance.

AP-75 Barriers to affordable housing – 91.220(j)

Introduction:

Clovis faces barriers to affordable housing that are common across housing markets, including decreasing supply of developable land, which increases the cost of acquisition and development of the land.

Actions it planned to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment

In its 2015-2023 Housing Element, Clovis identified several governmental constraints to the development, maintenance, and improvement of housing and affordable housing, as follows: Zoning Code Amendments, Lot Consolidation and Lot Splits, and Monitoring of Planning and Development Fees. Nongovernmental constraints were identified as follows: Land Costs, Construction Costs, and Availability of Financing.

AP-85 Other Actions – 91.220(k)

Introduction:

The City of Clovis intends to accomplish its goals and projects by investing its CDBG funds in rehabilitation of affordable housing, and repairs to public facilities in low- to moderate-income census tracts in the City. 100% of the CDBG funds expended in this program year will benefit low- to moderate-income persons.

Actions planned to address obstacles to meeting underserved needs

Once approved by HUD, Clovis will immediately begin the implementation of the projects described in this action plan. In addition, the City will continue to pursue additional Federal, State, and private funding, when available, to assist in meeting the underserved needs of Clovis residents.

Actions planned to foster and maintain affordable housing

Clovis, through the use of CDBG funds, will offer grants to low- to moderate-income owner-occupied households in need of repairs due to health and safety deficiencies.

Clovis will continue promote homeownership through its First-Time Homebuyer Program for low- to moderate-income households. This program is funded by State of California HOME funds. Homebuyers participating in the program can receive up to 50% of the total acquisition cost of a modest home located within the City of Clovis. The assistance is provided as a low-interest, deferred, 30-year loan. Clovis was awarded a $1,000,000 HOME grant by the State of California, and the contract for the grant is currently in progress.

Clovis will continue to engage affordable housing developers to attempt to plan and develop affordable housing in Clovis.

Clovis donated three parcels of property in the Stanford Addition to Habitat for Humanity Fresno County. Each lot can accommodate a single-family home. All three homes have been completed and are currently occupied by low-income households. The City has recorded a deed restriction against each parcel, securing continued affordability for a minimum of 55 years.

Clovis will monitor available state and federal funding for affordable housing, and apply when appropriate.

Clovis will continue to offer its Affordable Housing Development Impact Fee Reduction Program as an

incentive to affordable housing developers to develop affordable housing in Clovis.

Actions planned to reduce lead-based paint hazards

Clovis will work with the Fresno County Department of Public Health, Environmental Health Division, and Residential Housing and Lead Program when necessary. Through the County's programs to address Lead-Based Paint hazards, City staff will work with homeowners and landlords to abate LBP hazards in their housing units.

Actions planned to reduce the number of poverty-level families

Poverty-level families are at constant risk of homelessness. Unfortunately, Clovis does not receive funding specifically for homeless services. However, the City of Clovis is an active member of the Fresno Madera Continuum of Care (FMCoC), and helps Clovis' most vulnerable residents access the services of the region's social service providers.

Actions planned to develop institutional structure

City of Clovis staff responsible for the administration of the CDBG program will continue to access online, local and regional training to improve and enhance the City's knowledge of the CDBG regulations.

Actions planned to enhance coordination between public and private housing and social service agencies

The City of Clovis will continue to maintain memberships and participation in the FMCoC, and the San Joaquin Valley Housing Collaborative. In addition, the City will continue to work closely with Habitat for Humanity of Fresno County, Self Help Enterprises, and other local affordable housing developers.

Program Specific Requirements

AP-90 Program Specific Requirements – 91.220(l)(1,2,4)

Introduction:

Projects planned with CDBG funds available for the 2020-21 program year are identified in the project tables.

Community Development Block Grant Program (CDBG)
Reference 24 CFR 91.220(l)(1)

Projects planned with all CDBG funds expected to be available during the year are identified in the Projects Table. The following identifies program income that is available for use that is included in projects to be carried out.

1. The total amount of program income that will have been received before the start of the next program year and that has not yet been reprogrammed	0
2. The amount of proceeds from section 108 loan guarantees that will be used during the year to address the priority needs and specific objectives identified in the grantee's strategic plan.	0
3. The amount of surplus funds from urban renewal settlements	0
4. The amount of any grant funds returned to the line of credit for which the planned use has not been included in a prior statement or plan	$122,731
5. The amount of income from float-funded activities	0
Total Program Income:	**$122,731**

Other CDBG Requirements

1. The amount of urgent need activities	0
2. The estimated percentage of CDBG funds that will be used for activities that benefit persons of low and moderate income.Overall Benefit - A consecutive period of one, two or three years may be used to determine that a minimum overall benefit of 70% of CDBG funds is used to benefit persons of low and moderate income. Specify the years covered that include this Annual Action Plan.	100.00%

100% of Clovis' CDBG funds will be spent for the benefit of LMI.

RESOLUTION 20-____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CLOVIS APPROVING AN AMENDMENT TO THE FY 2019-2020 HOUSING AND COMMUNITY DEVELOPMENT BUDGET

WHEREAS, the City Council adopted the FY2019-2020 City budget on June 10, 2019; and

WHEREAS, through the Federal CARES Act, the City of Clovis has received an additional $441,412 allocation of Community Development Block Grant funds in response to the COVID-19 outbreak (CDBG-CV); and

WHEREAS, these revenues and expenditures were not included in the original adopted budget; and

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the City Council of The City of Clovis hereby approves the budget amendment as shown in the "Summary of Expenditures/Revenues by Department" and "Summary of Expenditures/Revenues by Fund" as attached as Exhibit A.

* * * * * * *

The foregoing resolution was approved at the regularly scheduled meeting of the Clovis City Council on the 11th day of May, 2020, by the following vote to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

Dated:

_____ _____

Mayor City Clerk

Attachment 3

EXHIBIT A

SUMMARY OF EXPENDITURES BY DEPARTMENT

HOUSING AND COMMUNITY DEVELOPMENT	
CDBG-CV	$441,412.00
TOTAL DEPARTMENT	$441,412.00
TOTAL ALL DEPARTMENTS	**$441,412.00**

SUMMARY OF EXPENDITURES BY FUND

Housing and Community Development	$441,412.00
TOTAL DEPARTMENT	$441,412.00

SUMMARY OF REVENUES BY DEPARTMENT

HOUSING AND COMMUNITY DEVELOPMENT	
Housing and Community Development	$441,412.00
TOTAL DEPARTMENT	$441,412.00

SUMMARY OF REVENUES BY FUND

Housing and Community Development	$441,412.00
TOTAL DEPARTMENT	$441,412.00

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Administration

DATE: May 11, 2020

SUBJECT: Consider Approval – Program Guidelines for City of Clovis Meals on Wheels Program and Emergency Housing Payments Program.

Staff: Andrew Haussler, Community and Economic Development Director
Recommendation: Approve

ATTACHMENTS: 1. Meals on Wheels Program Guidelines
2. Emergency Housing Payments Program Guidelines

CONFLICT OF INTEREST
None.

RECOMMENDATION
Approve the guidelines for the Meals on Wheels Program and the Emergency Housing Payments Program.

EXECUTIVE SUMMARY
Approval of this request would authorize the operating guidelines for the new Community Development Block Grant (CDBG) Meals on Wheels Program and the Emergency Housing Payments Program. The guidelines are required by the U.S. Department of Housing and Urban Development (HUD) to ensure the program is compliant with federal regulations.

BACKGROUND
As part of the federal CARES Act, Clovis has received an additional CDBG allocation of $441,412 to respond to COVID-19 related issues in the community. In compliance with federal guidelines, the following programs are being implemented to be funded by the additional allocation of funds:

Meals on Wheels Program
Clovis will enter into contracts with local food service providers to provide meals once a week to Clovis residents who are 65 years and older in Clovis' senior communities (i.e., mobile home parks and multi-family residential complexes).

Emergency Housing Payments Program

Clovis will enter into an agreement with a local HUD-approved housing counseling agency to assist both owner-occupied households and tenant households who are facing foreclosure/eviction once current COVID-19 related protections are lifted. Counselors will assist these low-income households by working with the client's mortgage lender or landlord to attempt a work-out of any past due amounts. In the event a work-out cannot be reached, funds will be granted to the client in an amount of no more than three months' worth of rent/mortgage payments to bring the balance due current, thus eliminating the threat of homelessness to the household.

FISCAL IMPACT

All funding for the programs comes from federal grant funds which are provided on a reimbursement basis. A budget amendment is being requested to accommodate the additional allocation of funds.

REASON FOR RECOMMENDATION

This action allows the City to operate these new programs in a manner compliant with HUD regulations.

ACTIONS FOLLOWING APPROVAL

Staff will begin operation of the Meals on Wheels Program and the Emergency Housing Payments Program.

Prepared by: Heidi Crabtree, Housing Program Coordinator

Reviewed by: City Manager

CITY OF CLOVIS

CDBG-CV
EMERGENCY HOUSING PAYMENTS
PROGRAM GUIDELINES

MAY 2020

CITY OF CLOVIS
EMERGENCY HOUSING PAYMENTS
PROGRAM GUIDELINES

The Emergency Housing Payments Program ("Program") described in these guidelines is designed to assist households who are facing eviction or foreclosure due to COVID-19 related income loss by providing a maximum of three months of housing costs that are available from the Program. Applications for the City's Emergency Housing Payments Program can be obtained by calling the City of Clovis at (559) 324-2094, or printed from the City of Clovis website at www.cityofclovis.com/affordablehousing.

The funding source used by the City for the Emergency Housing Payments program is the Community Development Block Grant – CV funding provided in response to the COVID-19 pandemic by the U.S. Department of Housing and Urban Development through the federal CARES Act.

APPLICATION PROCESS

I. APPLICANT ELIGIBILITY

A. Conflict of Interest

To the extent consistent with the State of California's conflict of interest laws as they apply to local government officials, employees and agents, the following rules shall apply regarding eligibility for this program. No member of the governing body of the City nor other official, employee, or agent of the City government who exercises policy or decision-making authority in connection with the planning and implementation of the Program shall directly or indirectly be eligible for this Program. This ineligibility shall continue for one year after an individual's relationship with the City ends.

B. Residency Requirement

Applicants will be required to submit to the City at the time of application a statement that the residence in eviction status or foreclosure status is the applicant's primary residence. All assisted households must be located within the City of Clovis.

C. Income

To be eligible to participate in the City's program, gross household income must not exceed eighty percent (80%) of the area median income (AMI) for Fresno County, which is adjusted for household size and reported in the most current income guidelines published by HUD. The applicant's income combined with the income of all household members, related or non-related, aged 18 and older cannot exceed 80% of AMI. All persons in the residence are considered household members for the purpose of income eligibility.

D. Fair Housing

This policy will be implemented consistent with the City's commitment to fair housing practices. No person shall be excluded from participation in, denied the benefit of, or be subjected to discrimination on the basis of his or her religion or religious affiliation, age, race, color, ancestry, national origin, sex, marital status, familial status (children), physical or mental disability, sexual orientation, or any other arbitrary cause. Individuals who believe they have been discriminated against in a housing-related action may contact the City of Clovis Housing Program Coordinator at (559) 324-2094, or the Fair Housing Council of Central California at (559) 244-2950.

E. Temporary Relocation

Relocation benefits will not be provided.

F. Race and Ethnicity

Applicants will be requested to identify race and ethnicity at the time of submitting an application. All applications will be processed in accordance with state and federal fair lending regulations to assure nondiscriminatory treatment, outreach, and access to the Program. No person shall be excluded or denied benefits on the grounds of age, ancestry, color, creed, physical or mental disability or handicap, marital or familial status, medical condition, national origin, race, religion, gender or sexual orientation.

G. Preferences

The City will accept applications on a first-come, first-served basis.

II. APPLICATION PROCEDURE

A. Application Forms

Applicants may call the City and request an application packet to be mailed. An application packet can also be printed from the City of Clovis website at www.cityofclovis.com/affordablehousing. Only complete application packets will be accepted and evaluation for eligibility. A complete application packet consists of the following:

1. Application
2. Verification of income from all sources for all household members aged 18 and older
3. Proof of pending foreclosure or eviction action

B. Application Process

The following is a list of procedures followed when applying for a rehabilitation or replacement loan:

1. *Application* – An application must be completed by the applicant and received by the City of Clovis.
2. *Preliminary Approval* – A City representative will evaluate the application and all supporting documentation to determine if the applicant meets preliminary requirements for the program.
3. *Notice of Approval or Denial* – Applicants who do not meet the preliminary requirements for the program will be notified of the denial. Preliminary approved applicants will be contacted by a HUD-approved housing counselor.

C. Determining Amount of Assistance

For preliminarily-approved applicants, a HUD-approved housing counselor will work with the creditor to determine the amount of funds needed to halt the eviction or foreclosure action and bring the household current, as follows:

1. Tenant Households: the counselor will contact the landlord on the client's behalf and negotiate the amount of funds required to halt the eviction action. This includes negotiation of any fees that have accrued on the balance due.

2. Owner-Occupied Households: the counselor will contact the mortgage lender and attempt a work-out or modification of the client's mortgage in order to halt the foreclosure.

In no circumstance will more than three months of housing costs being provided on behalf of the client. Any additional amount due will be the responsibility of the client.

D. Payment of Assistance

All assistance amounts will be approved by City staff before they are paid to the creditor. Once the amount has been approved by the City the HUD-approved housing counseling agency will issue payment to the creditor, and will then invoice the City for reimbursement.

E. Other

1. Assistance is provided as a grant to the client.

2. Households will not be eligible to be assisted through the program more than one time.

CITY OF CLOVIS

CDBG-CV
MEALS ON WHEELS
PROGRAM GUIDELINES

MAY 2020

CITY OF CLOVIS
CDBG-CV MEALS ON WHEELS
PROGRAM GUIDELINES

The Meals on Wheels Program ("Program") described in these guidelines is designed to assist City residents 65 and older who are unable to safely leave their homes due to the COVID-19 pandemic and current shelter in place orders. Applications for the Meals on Wheels program can be obtained by contacting the Clovis Senior Center at (559) 324-2750.

The funding source used by the City for the Meals on Wheels program is the Community Development Block Grant – CV funding provided in response to the COVID-19 pandemic by the U.S. Department of Housing and Urban Development through the federal CARES Act.

APPLICATION PROCESS

I. APPLICANT ELIGIBILITY

A. Conflict of Interest

To the extent consistent with the State of California's conflict of interest laws as they apply to local government officials, employees and agents, the following rules shall apply regarding eligibility for this program. No member of the governing body of the City nor other official, employee, or agent of the City government who exercises policy or decision-making authority in connection with the planning and implementation of the Program shall directly or indirectly be eligible for this Program.

B. Age Requirement

Eligible applicants must be 65 or older.

C. Residency Requirement

Eligible applicants must live in the City of Clovis, and must reside in one of Clovis' senior communities (i.e. senior mobile home parks and senior multifamily apartment complexes).

D. Income

Applicants will self-certify their income. To be eligible to participate in the City's program, gross household income must not exceed eighty percent (80%) of the area median income (AMI) for Fresno County, which is adjusted for household size and reported in the most current income guidelines published by HUD. The applicant's income combined with the income of all household members, related or non-related, aged 18 and older cannot exceed 80% of AMI. All persons in the residence are considered household members for the purpose of income eligibility.

E. Fair Housing

This policy will be implemented consistent with the City's commitment to fair housing practices. No person shall be excluded from participation in, denied the benefit of, or be subjected to discrimination on the basis of his or her religion or religious affiliation, age, race, color, ancestry, national origin, sex, marital status, familial status (children), physical or mental disability, sexual orientation, or any other arbitrary cause. Individuals who believe they have been discriminated against in a housing-related action may contact the City of Clovis Housing Program Coordinator at (559) 324-2094, or the Fair Housing Council of Central California at (559) 244-2950.

F. Race and Ethnicity

Applicants will be requested to identify race and ethnicity at the time of submitting an application. All applications will be processed in accordance with state and federal fair lending regulations to assure nondiscriminatory treatment, outreach, and access to the Program. No person shall be excluded or denied benefits on the grounds of age, ancestry, color, creed, physical or mental disability or handicap, marital or familial status, medical condition, national origin, race, religion, gender or sexual orientation.

II. APPLICATION PROCEDURE

A. Application Forms

Applications will be available from the property managers of eligible senior communities in Clovis. In addition, applicants may call the City of Clovis Senior Center and request an application to be mailed. A complete application consists of the following:

1. Application
2. Self-certification of household income

B. Application Approval

Applications will be accepted and processed on a first-come first-served basis. Applicants will be notified within 5 business days of application approval or denial. Applications will be accepted only until CDBG-CV funds for the program have been exhausted.

III. MEAL SUPPLY VENDORS

A. Requirements

The following criteria must be met in order to be an approved meal supply vendors for the Program:

1. The vendor must hold a current City of Clovis Business License.
2. The vendor must be a restaurant or catering company with a business operating within the City limits of Clovis.
3. The contractor cannot be on the State or Federal Debarred Contractors list.
4. The contractor must have current and valid General Liability Insurance.

B. Procurement/Selection

The City of Clovis will issue a Request for Proposals (RFP) to qualified businesses. The RFP will request information including but not limited to the number of meals that can be provided by the vendor per day, cost per meal, and nutritional information. All vendors who submit proposals will be notified as to whether they were selected to provide meals for the program.

C. Meal Delivery Process

Each client will receive one meal per week. Clovis Senior Center staff will pick up the m
selected vendors, and will then deliver the meals to the senior community on the sche
day. Delivery of the meals will be coordinated with the property manager in charge of the property being delivered to that day.

AGENDA ITEM NO. 8.

CITY of CLOVIS

REPORT TO THE CITY COUNCIL

TO: Mayor and City Council

FROM: Administration

DATE: May 11, 2020

SUBJECT: Workshop – For the Clovis City Council to conduct a workshop to discuss the impact on ongoing City operations during the COVID-19 State of Emergency as declared by the Federal Government, State of California, County of Fresno, and City of Clovis; and to explore actions the City may take in response to the crisis.

Staff: Luke Serpa, City Manager
Recommendation: Approve

City Manager Luke Serpa will give a verbal presentation on this item. This item will remain on the agenda during the State of Emergency.

Please direct questions to the City Manager's office at 559-324-2060.