3.14 TRANSPORTATION AND CIRCULATION

This section of the EIR analyzes the potential impacts of the proposed project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, and transit facilities/services. This chapter identifies the significant impacts of the proposed project and recommends mitigation measures to lessen their significance. All technical calculations can be found in Appendix K of the Draft EIR. Information in this section is also derived from the following:

- Caltrans Traffic Impact Study (TIS) Guidelines, 2002.
- City of Davis General Plan (as amended through 2013)
- City of Davis Comprehensive Bicycle Plan, 2006.
- Unitrans website (http://unitrans.com) and http://unitrans.ucdavis.edu/wp-content/uploads/2012/07/2012-13_Schedule.pdf
- Yolobus website (http://www.yolobus.com/)
- Federal Railroad Administration website: http://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/xingqryloc.aspx
- *Highway Capacity Manual* Transportation Research Board, 2000.
- *California Manual on Uniform Traffic Control Devices for Streets and Highways* (Caltrans, 2012)
- City of Davis Travel Demand Model Development Report, Fehr & Peers, 2003
- *Trip Generation* (Institute of Transportation Engineers, 2008).
- *Trip Generation Handbook* (ITE, 2004)
- *Growing Cooler* (ULI, 2008)
- *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions -- Special Report 298* (Transportation Research Board, 2009)
- *Covell Village Draft EIR* (2004)
- *Unitrans General Manager Report Fiscal Year 2010-2011* (Unitrans, January 2012)
- City of Davis Capital Improvement Program (CIP)

Various public agencies, neighborhood groups, and individuals made comments on the Notice of Preparation (NOP) for this EIR. Key comments that pertain to the transportation analysis included:

- Concern regarding inclusion of an emergency vehicle access across the railroad tracks.
- The cumulative impact analysis should consider the Covell Village development.
- The Pole Line Road/Picasso Avenue and Pole Line Road/Donner Avenue intersections should be added to this list of study intersections.
- What impacts will the project have on the surrounding streets and neighborhoods?
- The traffic study should be prepared in accordance with Caltrans Traffic Impact Study (TIS) Guidelines. The TIS should include the following:
    - Project trip distribution exhibit.

  - Analysis of roads/intersections including Covell Boulevard, J Street, Mace Boulevard, F Street, Pole Line Road, and Richards Boulevard.
  - Analysis of segments/interchanges along State Route 113 and Interstate 80.
- Traffic study should be conducted while UC Davis is in session.

In response to these comments, the Pole Line Road/Picasso Avenue and Pole Line Road/Donner Avenue intersections were added as study intersections. Consistent with these comments, the transportation analysis includes multiple intersections along Covell Boulevard, F Street, J Street, L Street, Pole Line Road, and Mace Boulevard. Intersections along Richards Boulevard were not studied because minimal amounts of project traffic are expected to use this route, and project traffic will likely use other routes for regional travel (e.g., Covell Boulevard to SR 113, and Mace Boulevard to I-80). A portion of the trips generated by the project will travel to/from downtown; accordingly, intersections along 5th Street and 8th Street are also studied.

As described in Chapter 3.7, the City of Davis, with support from the Sacramento Area Council of Governments (SACOG) has concluded that the proposed project is consistent with the Sustainable Communities Strategy (SCS) prepared and recently adopted by SACOG. Under SB 375, projects that are determined to be SCS consistent are granted certain CEQA streamlining benefits. These include exemptions related to the analysis of project impacts on: passenger vehicle greenhouse gas emissions, the regional transportation network, and growth inducement. In this context, the "regional transportation network" means existing and proposed transportation system improvements, including the state transportation system. Therefore, in accordance with the Public Resources Code Section 21159.28, it was not necessary to analyze the state transportation system (i.e., I-80 and SR 113 and associated ramp terminal intersections).

3.14.1 ENVIRONMENTAL SETTING

PROJECT LOCATION

The proposed project would be located in the City of Davis, CA. The project site is bordered on the south by Covell Boulevard and on the west by the California Northern Railroad Company railroad tracks. According to the 2007 City of Davis General Plan land use map, the property is designated for industrial uses. The vacant land located immediately to the north and east of the project is currently located in the County of Yolo and is zoned Limited Industrial. Figure 3.14-1 displays the project site in relation to the study intersections included in the transportation analysis.

STUDY AREA ROADWAYS AND INTERSECTIONS

Covell Boulevard provides direct access to the project site. Other key roadways in the project vicinity include Pole Line Road, F Street, J Street, and L Street. These roadways are described below. The next section provides a description of bicycle and pedestrian facilities on these roadways.

Covell Boulevard is a four-lane east-west roadway that borders the southern edge of the site. Although many street signs (but not all) along Covell Boulevard refer to it as either "West" or "East" depending on whether the street is east or west of the F Street, this study consistently refers to this street as "Covell Boulevard" for ease of reference. The City of Davis General Plan (amended 2007) classifies this street as a major arterial. Speed limits vary from 35 miles per hour (mph) west of Wright Boulevard to 40 mph east of Wright Blvd.. Adjacent to the site, Covell Boulevard has a posted speed limit of 35 mph, and carries approximately 19,000 vehicles per day according to traffic counts collected by the City of Davis in October 2011. In the project vicinity, the eastbound and westbound travel lanes are separated by a raised median. To the east, Covell Boulevard turns into Mace Boulevard and continues southeasterly to I-80. To the west, Covell Boulevard intersects with SR 113 via an interchange.

Pole Line Road is a two-lane north-south roadway located east of the project site. The segments of Pole Line Road both north and south of Covell Boulevard carry 11,000 vehicles per day based on October 2011 traffic counts. According to the City of Davis General Plan, Pole Line Road is classified as a major arterial north of Covell Boulevard and a minor arterial south of Covell Boulevard. The road is undivided with a 40 mph speed limit from Covell Boulevard to Moore Boulevard, and a 45 mph speed limit north of Moore Boulevard. Pole Line Road extends southerly from Covell Boulevard for one mile, crossing over I-80 to connect North and South Davis.

F Street is a two-lane north-south minor arterial located west of the project site. It has a posted speed limit of 25 mph south of Covell Boulevard and 30 to 35 mph north of Covell Boulevard. F Street extends from 1st Street in downtown Davis northerly to the City limits (where it is called County Road 101A) and beyond. Traffic counts collected in 2011-2012 indicate that F Street carries approximately 7,000 vehicles per day north of Covell Boulevard, and 10,000 vehicles per day south of Covell Boulevard.

J Street is a two-lane north-south collector that extends southerly from Covell Boulevard (at the project's main entry/exit) into downtown Davis, terminating at 2nd Street. It currently carries 3,000 vehicles per day south of Covell Boulevard (based on January 2012 traffic counts). It has a 30 mph posted speed limit north of 8th Street, and fronting residential with on-street parking.

L Street is a two-lane north-south collector that extends southerly from Covell Boulevard into Old East Davis, terminating at 2nd Street. It has a posted speed limit of 25 mph with fronting residential with on-street parking.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

This section describes the existing pedestrian and bicycle facilities in the study area.

PEDESTRIAN FACILITIES

The City of Davis has an extensive system of off-street multi-use pathways, sidewalks, and crosswalks available for use by pedestrians. The following facilities are located in the vicinity of the project (see Figure 3.14-2):

- Multi-use paths (typically 10 feet wide and accommodate bicycle/pedestrian travel in both directions) exist as follows:
    - On the south side of Covell Boulevard from F Street to Pole Line Road.
    - Parallel to and directly west of the California Northern railroad tracks beginning at Faro Avenue, passing under Covell Boulevard, and extending to the bike tunnel under the railroad tracks that extends easterly to J Street. A short stretch of this route along H Street (south of the little league fields) is an on-street lane.
    - In the vicinity of the Davis Little League baseball fields and Community Park (south of Covell Boulevard at F Street).
    - On the east side of Pole Line Road north of Covell Boulevard.
- The Oak Tree Plaza Shopping Center driveways on Covell Boulevard include advisory (private and non-regulatory) signage for inbound motorists alerting them to the multi-use path, and signs saying "Stop Bike Lane Crossing" for outbound motorists.
- Marked crosswalks with push-button pedestrian actuation are provided on the east and south legs of the Covell Boulevard/J Street and east, south, and north legs of the Covell Boulevard/Pole Line Road intersections. Marked crosswalks are provided on all approaches to the signalized Covell Boulevard/F Street intersection. These three intersections consist of channelized triangular medians for most right-turning movements. Crosswalks are provided in these right-turn lanes with posted yield signs.

Pedestrian facilities do not exist along the north side of Covell Boulevard along the project frontage. Between J Street and Pole Line Road, the north side of Covell Boulevard is undeveloped, and thus does not have much pedestrian travel demand.

BICYCLE FACILITIES

The following types of bicycle facilities exist within the City of Davis:

- Multi-use paths (Class I) – are paved trails that are separated from roadways, and allow for shared use by both cyclists and pedestrians.
- On-street bike lanes (Class II) – are designated for use by bicycles by striping, pavement legends, and signs.
- On-street bike routes (Class III) – are designated by signage for shared bicycle use with vehicles but do not include any additional pavement width.

Figure 3.14-2 displays existing bicycle facilities within the project vicinity. The previously discussed multi-use path on the south side of Covell Boulevard is located in the vicinity of the proposed project. Class II bike lanes are located in the following areas:

- Covell Boulevard – Both directions from west of F Street to Pole Line Road.
- Pole Line Road – Both directions south of Covell Boulevard, and on the east side north of Covell Boulevard.
- F Street, J Street, and L Street – Both directions south of Covell Boulevard.
- F Street north of Covell Boulevard.

The Davis Bike Loop is an approximate 12-mile multi-use path/bicycle lane loop that extends through North, East, West, and South Davis. From the project site, it can be accessed by traveling west on Covell Boulevard to F Street, or south on J Street to a bike tunnel that connects J Street and H Street near the Little League fields. The Davis Bike Loop has green arrows and a distinctive logo that allows users to follow the route.

The single travel lane on southbound J Street (exiting the project site) approaching Covell Boulevard includes bicycle loop detection and push-button actuation.

TRANSIT SERVICE

Transit service in the City of Davis is provided by Unitrans (local), Yolobus (regional), and Davis Community Transit (paratransit).

Unitrans is a student-run public transportation bus system that serves the City of Davis. According to the Unitrans website (http://unitrans.com), bus service is provided on weekdays from 7:00 a.m. to 11:00 p.m., and on Saturdays from 9:00 a.m. to 6:00 p.m. Buses run more frequently during the University of California, Davis (UCD) academic year when ridership is higher, and less frequently during the summer and breaks. Unitrans charges one-dollar cash fare, and many types of prepaid discounted tickets and passes are available. One special fare category is UCD undergraduate students, who can show a valid student ID instead of a cash fare, because they pay a portion of their quarterly ASUCD fee to Unitrans. Seniors (60+) may also ride free with an ID card available from the Senior Center.

According to the Unitrans and Yolobus websites (http://www.yolobus.com/), the following transit routes exist in the study area. Refer to following page for description of bus stop locations near project site.

- **Unitrans Route A (Downtown / 5th St. / Alhambra)** – provides fixed-route service to the City of Davis. The A Line travels between Silo Terminal and El Cemonte Avenue & Cowell Boulevard via Hutchinson Drive, A Street, 1st Street, B Street, 2nd Street, 3rd Street, L Street, 5th Street, Alhambra Drive, Mace Boulevard, and Chiles Road. Unitrans operates "sweeper" buses on these routes during periods of high demand. Weekday service hours are 7:00 AM until 11:10 PM with approximately 30-minute headways (when UCD is in session). Weekday (M-Th) evening service hours are 8:10 PM until 11:10 PM with 60-minute headways. The A Line does not operate on weekends.

- **Unitrans Route E (Downtown / F St. / J St.)** – provides fixed-route service to the City of Davis. The E Line travels between Memorial Union Terminal and Covell Boulevard & F Street via Howard Way, Russell Boulevard, B Street, 3rd Street, and F Street. Weekday service hours are 7:00 AM until 7:10 PM with approximately 30-minute headways (when UCD is in session). Weekday (M-Th) evening service hours are 7:35 PM until 10:35 PM with 60-minute headways. The E Line does not operate on weekends.

- **Unitrans Route G (Anderson / Alvarado / N. Sycamore)** – provides fixed-route service to the City of Davis. The G Line travels between Memorial Union Terminal and the North Sycamore Loop via Howard Way, Russell Boulevard, Anderson Road, Alvarado Avenue, and Sycamore Lane. Weekday service hours are 7:00 AM until 7:10 PM with approximately 15-minute headways. Weekday (M-Th) evening service hours are 7:35 PM until 11:10 PM with 60-minute headways (when UCD is in session). The G line does not operate on weekends.

- **Unitrans Route J (Anderson / Alvarado / N. Sycamore)** – provides fixed-route service to the City of Davis. The J Line travels between Silo Terminal and the North Sycamore Loop via Hutchison Drive, La Rue Road, Anderson Road, Alvarado Avenue, and Sycamore Lane. Weekday hours of operation are 6:55 AM until 7:10 PM with approximately 15-minute headways. Weekday (M-Th) evening service hours are 7:30 PM until 10:30 PM with approximately 30-minute headways (when UCD is in session). Weekend service hours are 9:30 AM until 5:30 PM with 60-minute headways.

- **Unitrans Routes P&Q (Davis Perimeter)** – provide fixed-route service to the City of Davis. The P and Q Lines operate as loop service originating from and terminating at Memorial Union Terminal. Buses travel on Russell Blvd., Arlington Boulevard, Lake Boulevard, West Covell Boulevard, Anderson Road, Villanova Drive, 14th Street, F Street, Covell Boulevard, Mace Boulevard, Cowell Boulevard, Pole Line Road, and 5th Street. The P Line travels clockwise and the Q Line travels counter-clockwise. Weekday service hours are 6:25 AM until 7:10 PM with approximately 30-minute headways. Weekday (M-Th) evening service

hours are 8:10 PM until 11:10 PM with 60-minute headways (when UCD is in session). Weekend service hours are 9:00 AM until 5:00 PM with 60-minute headways.

- **Unitrans Route T (Davis High School)** – provides fixed-route service for North, East, and South Davis to Davis High School. Operating hours are 7 – 9 AM and 2:30 – 4:30 PM, which are the pre- and post-high school start/end times. The route runs along Covell Boulevard with a stop at J Street adjacent to the project site. Similarly, Unitrans runs Route S, which serves the Holmes and Harper Junior High School campuses. This route does not stop in the immediate vicinity of the project site.

- **Yolobus Routes 42A & 42B (Intercity Loop)** – provides fixed-route service to Davis, Woodland, the Sacramento International Airport, Sacramento, and West Sacramento. The two routes operate as loop service, travelling on Interstate 80, CA-113, and Interstate 5. Route 42A travels clockwise and Route 42B travels counter-clockwise. Route 42A weekday service hours are 5:35 AM until 10:35 PM with 60-minute headway. Route 42A Saturday service hours are 6:35 AM until 9:35 PM with 60-minute headway. These routes also operate on weekends. Surface streets include: 5th Street/Russell Boulevard, F Street, Covell Boulevard, Mace Boulevard, and Anderson Road. These routes have a stop on Covell Boulevard at J Street.

- **Yolobus Route 43** – provides five morning and four afternoon trips, Monday-Friday, between central and east Davis to downtown Sacramento. It operates on 50-minute headways during the morning commute (6 – 8:30 AM), and 30-minute headways during the evening commute (4 – 6 PM).

Bus stops are located in both directions of Covell Boulevard directly east of J Street. The westbound stop includes a bus shelter and turnout. The eastbound stop includes a shelter and bike parking. The following bus routes feature stops at this location:

- Unitrans Routes P & Q, and T. During peak periods, headways on routes P and Q range from 25 to 35 minutes, and a trip from the project site to the Memorial Union in UC Davis takes approximately 30 minutes due to the routing through west Davis. However, as described on page 27 of the Unitrans Bus 2012-2013 bus schedule, routes P and Q provide access to a wide variety of land uses throughout Davis including multiple shopping centers, parks, pools, recreational attractions, schools, City Hall, DMV, Amtrak Station, Post Office, library, and hospitals/medical centers.
- Yolobus Routes 42A & 42B, and 43. These routes provide connections to downtown Sacramento, Woodland, West Sacramento, and Sacramento International Airport. As such, these complement the Unitrans routes, which serve the City and UCD campus only.

FREIGHT RAIL

The California Northern Railroad Company (CNR) operates a freight-only railroad line that runs north-south through the City of Davis. The railroad tracks border the western edge of the project

site and are grade-separated from Covell Boulevard. At grade crossings exist to the south within the study area at 8th Street, 5th Street, 4th Street, and 3rd Street. According to the Federal Railroad Administration (website at: http://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/xingqryloc.aspx), this line is used by an average of 22 trains per day.

3.14.2 ANALYSIS METHODS

The operational performance of the roadway network is commonly described with the term Level of Service or LOS. LOS is a qualitative description of operating conditions, ranging from LOS A (free-flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The LOS analysis methods outlined in the *Highway Capacity Manual* (Transportation Research Board, 2000) were used in this study. The HCM methods for calculating LOS for signalized intersections and unsignalized intersections are described below. These methodologies were applied using the Synchro traffic analysis software.

Signalized Intersections

Traffic operations at signalized intersections are evaluated using the LOS method described in Chapter 16 of the 2000 *Highway Capacity Manual*. A signalized intersection's LOS is based on the weighted average control delay measured in seconds per vehicle. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Table 3.14-1 summarizes the relationship between the control delay and LOS for signalized intersections.

Table 3.14-1
Signalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Unsignalized Intersections

In Chapter 17 of the Transportation Research Board's 2000 *Highway Capacity Manual*, the LOS for unsignalized intersections (side-street or all-way stop controlled intersections) is also defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. For side-street stop-controlled intersections, delay is calculated for each stop-controlled movement and for the uncontrolled left turns, if any, from the main street. The delay and LOS for the intersection as a whole and for the worst movement are reported for side-street stop intersections. The intersection average delay is reported for all-way stop intersections. Table 3.14-2 summarizes the relationship between delay and LOS for unsignalized intersections. The delay ranges for unsignalized intersections are lower than for signalized intersections as drivers expect less delay at unsignalized intersections.

Table 3.14-2
Unsignalized Intersection LOS Criteria

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).

The *California Manual on Uniform Traffic Control Devices for Streets and Highways* (Caltrans, 2012) provides criteria for eight signal warrants. Warrant 3 (Peak Hour Volumes) was applied to determine if traffic signals are warranted at the unsignalized study intersections. The use of the peak hour signal warrant is intended to examine the general correlation between existing/projected traffic levels and the need to install new traffic signals. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated. Furthermore, the decision to install a signal should not be based solely upon the warrants, because the installation of signals can lead to increases in certain types of collisions.

ANALYSIS SCENARIOS

The operations of the study intersections were evaluated for the following five scenarios:

Existing Conditions – establishes the existing setting, which is used to measure the significance of project impacts.

Existing Plus Project Conditions –adds traffic resulting from full buildout of the proposed project to existing conditions traffic.

Cumulative No Project Conditions (Covell Village Developed as Residential) – represents cumulative travel conditions based on output from the City of Davis Traffic Model. This scenario assumes the adjacent Covell Village project is developed with 1,200 housing units and the Cannery Park project site remains vacant.

Cumulative Plus Project Conditions (Covell Village Developed as Residential) – adds the Cannery Park project to the above scenario.

Cumulative No Project Conditions (Covell Village Developed as Light Industrial) – represents cumulative travel conditions based on output from the City of Davis Traffic Model. This scenario assumes the adjacent Covell Village project is developed per its existing Yolo County zoning designation of Light Industrial (yielding 4.6 million square feet of space), and that Cannery Park project site remains vacant.

Cumulative Plus Project Conditions (Covell Village Developed as Light Industrial) – adds the Cannery Park project to the above scenario.

The decision to assign 1,200 housing units to the Covell Village site under the Residential scenario was based on two factors: 1) The City of Davis Housing Element Steering Committee assumed that 1,150 units would be facilitated on the Covell Village site as part of the City's work to identify adequate sites to meet the Regional Housing Needs Allocation. 2) An NOP comment letter was received from Davis Neighbors, Inc., which suggested that the neighboring property (Covell Village) would eventually be developed, and that consideration should be given in the EIR to the overall interrelated impacts of development of both the Cannery site and the Covell Village site. This comment letter suggested that the assumption of 1,200 residential units should be used in the EIR's cumulative traffic analysis in order to determine fair-share financial obligations for future roadway improvements that may be warranted if both projects were developed. Therefore, in order to be conservative, this analysis assumes the development of 1,200 residential units on the Covell Village site under this cumulative scenario.

DATA COLLECTION

Study intersections were selected in consultation with City of Davis staff and based on the project's expected travel characteristics (i.e., project location and amount of project trips) as well as facilities susceptible to being impacted by the project. A total of 39 intersections were selected for study.

These facilities are shown on Figure 3.14-1 and include 16 intersections along Covell Boulevard and three intersections along Pole Line Road north of Covell Boulevard. South of Covell Boulevard, there are three study intersections on F Street, two study intersections on J Street, three study intersections on L Street, and four study intersections on Pole Line Road.

Traffic counts were collected during the morning (7-9 AM) and evening (4-6 PM) peak periods at the vast majority of these intersections during mid-May 2011 while UC Davis and local schools were still in session. These counts were collected anticipating that work on the EIR technical analysis would begin later in summer 2011. However, the EIR technical analysis did not commence until early 2012. Therefore, to ensure that conditions had not changed since the counts were conducted in May 2011, a new set of counts were collected at seven particularly critical intersections (e.g., Covell Boulevard / Pole Line Road) in February 2012. The May 2011 and February 2012 counts were compared. In a couple of instances, the May 2012 counts were greater and were then used in the analysis (where necessary balancing of the increase in traffic was performed to ensure that appropriate adjustments were made to adjacent intersections). In

response to NOP comments, the Pole Line Road/Picasso Avenue and Pole Line Road/Donner Avenue intersections were added to the list of study intersections and counts were made in May 2012.

Figure 3.14-3 displays the existing AM and PM peak hour traffic volumes at the study intersections. These volumes represent field-measured conditions when UC Davis and local schools were in session. This figure also displays the existing traffic controls and lane configurations at each intersection, which were collected through review of aerial imagery and field observations. As shown, 26 of the 39 study intersections are controlled by traffic signals with the remainder consisting of all way or side-street stop-control.

Bicycle volumes were observed at the following study intersections along Covell Boulevard during February 2012. These counts were taken during dry weather conditions while schools were in session. It should be noted that the extensive system of multi-use paths along Covell Boulevard including various bike bridges, undercrossings, and tunnels enables bicycle travel without requiring travel through certain intersections.

- Covell Boulevard/Pole Line Road: 87 AM peak hour and 56 PM peak hour bicyclists passing through intersection.
- Covell Boulevard/J Street: 46 AM peak hour and 28 PM peak hour bicyclists passing through intersection.
- Covell Boulevard/Anderson Road: 128 AM peak hour and 79 PM peak hour bicyclists passing through intersection.

Pedestrian traffic at the Covell Boulevard/Pole Line Road intersection totaled 45 AM and 60 PM peak hour crossings. Pedestrian traffic at the Covell Boulevard/Anderson Road intersection was approximately 10 AM and 40 PM peak hour crossings. Pedestrian traffic at the Covell Boulevard/J Street intersection is more modest (about 10 AM and 25 PM peak hour crossings) given the lack of developed properties on the north side of Covell Boulevard.

This data suggests that pedestrian activity is present at intersections in which development has occurred nearby. Bicycle travel was observed both at intersections with adjacent development and in areas with less development (given the greater travel speeds afforded by bicycles versus walking). Certain movements at some signalized intersections include in-pavement bicycle detection to accommodate bicyclists. The technical analyses presented in this section consider the effects of these bicyclists and pedestrians on intersection operations and delays. Conversely, the effects of the project on these non-motorized travel modes are also evaluated.

EXISTING INTERSECTION OPERATIONS

Existing operations were analyzed for the weekday AM and PM peak hours at the study intersections. Table 3.14-3 displays the intersection analysis results.

Table 3.14-3
Peak Hour Intersection Level of Service – Existing Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
1. Covell Blvd/Shasta Drive/Risling Ct	Traffic Signal	35	C	30	C
2. Covell Blvd/John Jones Rd	Traffic Signal	11	B	15	B
3. Covell Blvd/Sycamore Ln	Traffic Signal	24	C	25	C
4. Covell Blvd/Anderson Rd	Traffic Signal	24	C	26	C
5. Covell Blvd/Oak Ave	Traffic Signal	22	C	14	B
6. Covell Blvd/Catalina Dr	Traffic Signal	13	B	11	B
7. Covell Blvd/F St	Traffic Signal	25	C	27	C
8. Covell Blvd/J St	Traffic Signal	8	A	7	A
9. 14th St/Oak Ave	All-Way Stop	14	B	10	B
10.14th St/B St	All-Way Stop	17	C	9	A
11. 14th St/F St	Traffic Signal	12	B	10	A
12. Drexel Dr/J St	All-Way Stop	8	A	8	A
13. 8th St/Oak Ave	Traffic Signal	11	B	10	A
14. 8th St/B St	Traffic Signal	12	B	11	B
15. 8th St/F St	Traffic Signal	19	B	20	B
16. 8th St/J St	All-Way Stop	22	C	19	C
17. 5th St/F St	Traffic Signal	21	C	37	D
18. 5th St/G St	Traffic Signal	18	B	28	C
19. Covell Blvd/L St	Side-Street Stop	3 (90)	A (F)	4 (93)	A (F)
20. Covell Blvd/Oak Tree Plaza Dwy.	Side-Street Stop	6 (167)	A (F)	32 (414)[2]	D (F)
21. Covell Blvd/Pole Line Rd	Traffic Signal	28	C	35	D
22. Covell Blvd/Birch Ln	Traffic Signal	17	B	7	A
23. Covell Blvd/Wright Blvd	Traffic Signal	13	B	11	B
24. Covell Blvd/Monarch Ln	Side-Street Stop	1 (14)	A (B)	2 (19)	A (C)
25. Covell Blvd/Alhambra Dr	Traffic Signal	8	A	6	A
26. Covell Blvd/Harper JR HS Access	Traffic Signal	4	A	4	A
27. Alhambra Dr/Mace Blvd	Traffic Signal	12	B	12	B

Table 3.14-3
Peak Hour Intersection Level of Service – Existing Conditions

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS
28. 2nd St/Mace Blvd	Traffic Signal	36	D	24	C
29. Chiles Rd/Mace Blvd	Traffic Signal	32	C	31	C
30. Donner Ave/Pole Line Rd	Side-Street Stop	2 (20)	A (C)	1 (24)	A (C)
31. Picasso Ave/Pole Line Rd	Side-Street Stop	2 (24)	A (C)	7 (61)	A (F)
32. Moore Blvd/Pole Line Rd	Side-Street Stop	8 (33)	A (D)	5 (32)	A (D)
33. Oak Tree Plaza Dwy./Pole Line Rd	Side-Street Stop	2 (14)	A (B)	3 (18)	A (C)
34. Loyola Dr/Pole Line Rd	Traffic Signal	13	B	14	B
35. 8th St/Pole Line Rd	Traffic Signal	12	B	15	B
36. 5th St/Pole Line Rd	Traffic Signal	26	C	29	C
37. Drexel Dr/L St	All-Way Stop	8	A	8	A
38. 8th St/L St	Traffic Signal	12	B	11	B
39. 5th St/L St	Traffic Signal	18	B	22	C

Notes:

1. For signalized and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses next to the average intersection delay and LOS. All results are rounded to the nearest second.
2. When side-street traffic volumes are near the boundary of the traffic software's input range, delay estimates can become imprecise (e.g., Intersection 20 has side-street LOS F, although it is unlikely that the average delay is 7 minutes per vehicle as the model estimated).

Source: Fehr & Peers, 2012

This table indicates that all signalized or all-way-stop intersections currently operate at LOS D or better. The side-street stop-controlled intersections of Covell Boulevard/L Street, Covell Boulevard/Oak Tree Plaza full access Driveway, and Pole Line Road/Picasso Avenue operate at LOS F for the worst-case side-street movement during one or both peak hours.

The 12 unsignalized study intersections were evaluated to determine if they satisfy the Peak Hour warrant for consideration of a traffic signal. The warrant analysis consists of plotting data points that represent the side-street traffic (busiest approach) and major street traffic (both approaches) on a nomograph, upon which the warrant analysis conclusion is based. The Peak Hour signal warrant is used as part of the significance criteria to identify significant impacts at unsignalized intersections.

The full-access Covell Boulevard/Oak Tree Plaza Driveway intersection (#20) satisfies the peak hour volume warrant during the PM peak hour. Through traffic levels on Pole Line Road passing through the Picasso Avenue and Donner Avenue approaches are not sufficient to

meet the signal warrants at either location despite side-street volumes that would satisfy the warrant.

3.14.3 PROJECT TRAVEL CHARACTERISTICS

PROJECT DESCRIPTION

Project Description

For analysis purposes, the proposed project was assumed to consist of the following trip generating land uses (based on the NOP's project description and discussions with the project team). Refer to Section 2.0 for more detailed project description including a project site plan exhibit.

- 336 single-family dwelling units
- 40 second (granny) units
- 274 multi-family dwelling units
- 236,000 square feet of retail/commercial space
- 4.7-acre park
- 1.0-acre neighborhood center

The multi-family units would consist of a mix of condominiums, apartments, and live/work lofts. Based on discussions with the project team, it was decided that trip generation should be based on the most conservative of these land use types, which are apartments. The 236,000 square feet (sq. ft.) of non-residential could consist of a mix of office, flex, R&D, restaurants, entertainment, day care, and general retail. Based on discussions with the project team, it was assumed to consist of two-thirds office (157,333 sq. ft.) and one-third general retail (78,667 sq. ft.). These assumptions recognize the uncertainty of specific land uses to be constructed, and provide a reasonably conservative set of trip generation assumptions.

TRIP GENERATION

The trip generation of the project is based on the following three-step process. As described below, this process considers internal trips, pass-by traffic to the retail uses, and external trips made by all travel modes:

Step 1 – Estimate gross trip generation of proposed land uses.

Step 2 – Estimate expected internalization of trips between complementary land uses and pass-by trips to retail uses.

Step 3 – Calculate number of external project trips made by walking, bicycling, or transit, with the remainder being external vehicle trips.

Prior to proceeding with these steps, an overview of the travel behavior characteristics in North Davis is provided for context.

According to the 2000 US Census (2010 Census mode split data was not yet available at the time the analysis was conducted), the residential area of North Davis (bounded by Covell Boulevard on the south, the railroad tracks on the east, and Catalina Drive on the west) exhibited the following journey-to-work travel characteristics (see traffic technical appendix, Appendix K):

- Drive Alone/Carpool: 74.1%
- Bike: 15.1%
- Walk: 1.4%
- Public Transit: 5.0%
- Other: 4.4%

The 2005 version of the SACSIM travel demand model, which was developed by SACOG, estimates that the City of Davis has a combined bike/walk/transit mode share of 27 percent for the total number of person trips generated throughout the City. In contrast, the Sacramento region's average was 8.7 percent for these three modes. This information provides strong evidence that adjustments to trip generation rates are justified to account for the greater levels of walking, biking, and transit that occurs within the Davis community versus typical suburban areas from which trip rates (to be presented below) were originally derived.

Step 1 – Estimate Gross Trip Generation

Table 3.14-4 shows the gross trip generation associated with buildout of the proposed project using trip rates from the City of Davis Traffic Model (source: *City of Davis Travel Demand Model Development Report*, Fehr & Peers, 2003). For the retail uses, the Central Business District land use category was selected because its trip rates are similar to those of the Shopping Center category contained in *Trip Generation* (Institute of Transportation Engineers, 2008). The Neighborhood Commercial category within the City's model was considered but not used because its trip rate also includes a "Non-Home-Based XI" trip component, which assumes some trips begin at a model gateway (i.e., I-80 at Yolo Causeway) to reach the retail center. This type of 'highway commercial' land use is not contemplated within the project site. The urban farm is not anticipated to be a significant or regular generator of vehicle trips to or from the project site. The urban farm is not proposed for use as a site for a farmers' market or other purposes that would generate visitor traffic on a regular or predictable basis. The urban farm would be anticipated to account for occasional haul trips, but the number or frequency of such trips would be speculative to predict. For this reason, table 3.3-14 does not include trips associated with the urban farm.

As shown, the project would generate about 1,010 AM peak hour trips, 1,110 PM peak hour trips, and 13,350 daily trips before considering internal trip-making, pass-by traffic, and external trips made by non-auto travel modes.

Step 2 – Estimate Internal Trip Capture and Pass-by Traffic

The expected internalization of trips generated by complementary land uses within the project site was estimated based on the Mixed-Use (MXD) Trip Generation Model, which was developed by Fehr & Peers and several academic researchers. Although an internal trip calculation methodology is contained in *Trip Generation Handbook* (ITE, 2008), it was not used in this instance because the procedure is based on only a handful of studies from over 15 years ago, which have been found by Fehr & Peers through other applications to be unreliable.

Table 3.14-4:
Proposed Project Trip Generation

Land Use	ITE Land Use Code	Units[1]	Trip Rates[2]			AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
			AM	PM	Daily	In	Out	Total	In	Out	Total	Total
Single Family	210	336 du's	1.01	1.04	12.82	49	290	339	244	105	349	4,308
Apartments	220	314 du's [3]	0.42	0.46	5.96	20	112	132	101	43	144	1,871
Retail	820	78.67 ksf	3.39	4.77	54.40	192	75	267	135	240	375	4,280
Office	710	157.33 ksf	1.64	1.49	17.5	201	57	258	84	150	234	2,753
Park	412	4.7 acres	0.21	0.21	3.40	1	0	1	1	0	1	16
Community Center	495	5.5 ksf	1.62	1.45	22.88	5	4	9	3	5	8	126
Gross Trips						468	538	1,006	568	543	1,111	13,354
Internal Trips [4]						-20	-21	-41	-26	-26	-52	-620
Pass-By Trips [5]						-22	-22	-44	-61	-61	-122	-694
New (External) Trips [6]						**426**	**495**	**921**	**481**	**456**	**937**	**12,040**

Notes: [1]du's = dwelling units. ksf = thousand square feet

[2]Trip rates based on data from City of Davis Travel Demand Model for uses except Community Center, in which trip rates obtained from *Trip Generation* (ITE, 2008).

[3]Includes 40 second (granny) units.

[4]Internal trips estimated based on mixed-use trip generation model results.

[5] Pass-by traffic to retail uses assumed to be 34% for PM peak hour based on data from *Trip Generation Handbook* (ITE, 2004). Pass-by traffic assumed to be 17% for daily and AM peak hour.

[6]Includes external trips made by vehicle, walk, bike, and transit. Refer to text for estimated split for each mode.

The model estimates the percentage of daily and peak hour trips that remain internal to a project site as well as external transit, walk, and vehicle mode splits. The model was developed from surveys of residents and employees in 240 mixed-use projects in six major metropolitan areas (Sacramento, Houston, Boston, Atlanta, Portland, and Seattle) in the United States. A set of 15 independent mixed use sites that were not included in the initial model were tested to validate the

model. It should be noted that an alternative approach for estimating walk/bike trips (described on the following page) was used instead of the MXD model given the unique bicycling and walking environment within the City of Davis.

Appendix K contains the MXD trip generation model inputs and results for the proposed project. On a daily basis, 4.6 percent of all trips generated by the project are expected to remain internal to the site. This result is consistent (if not somewhat slightly conservative) when compared with output from the City of Davis Travel Demand Model, which showed a six percent internalization level.

Pass-by trips to the retail uses were estimated based on information contained in the *Trip Generation Handbook* (ITE, 2008). Footnote 5 in Table 3.14-4 shows the expected pass-by percentages for daily, AM peak hour, and PM peak hour conditions. After accounting for internal and pass-by trips, the project would generate about 920 AM peak hour trips, 940 PM peak hour trips, and 12,000 daily trips. The next step further disaggregates these external trips by travel mode.

Step 3 – Estimate External Trips by Travel Mode

Table 3.14-5 shows the expected number of external trips by travel mode. Refer to footnotes in the table for the rationale and methodologies used to estimate external trip mode split.

After accounting for internal trips, pass-by trips, and external trips made by walking, bicycling, and transit, the project would generate about 810 new AM peak hour vehicle trips, 830 new PM peak hour vehicle trips, and 10,600 new daily vehicle trips. These values represent an approximate 16 percent reduction in traffic relative to the gross trip generation estimates (with pass-by reductions already taken) shown in Table 3.14-4.

Table 3.14-5:
External Trips by Travel Mode

Travel Mode	AM Peak Hour	PM Peak Hour	Daily
Total External Trips [1]	921	937	12,040
External Trips by Walk/Bike [2]	74	75	963
External Trips by Transit [3]	37	38	482
External Trips by Vehicle [4]	**810**	**824**	**10,595**

Notes:

1 Source: last row of Table 3.14-4.

2 8 percent expected to be walk/bike based on the following methodology:

If ITE predicts a land use will generate 100 vehicle trips, it would generate 108 total external trips if walk/bike trips are also considered (this assumes about 7.5% bike/walk mode, which is similar to what exists in the Sacramento region). Based on Census and SACSIM data, it was conservatively assumed that 15% of external trips would be bike/walk (North Davis residents had a 16.5% walk/bike mode split). However, ITE rates already include a certain level of bike/walk trips. To account for this, the external vehicle trip generation would be 108*85% = 92 vehicle trips, which is a 8% reduction from the ITE predicted value.

3 4 percent expected to use transit based on the following methodology:

If ITE predicts a land use will generate 100 vehicle trips, it would generate 101 total external trips if transit trips are also considered (this assumes about 1.2% transit mode, which is similar to what exists in the Sacramento region). Based on Census and SACSIM data, it was assumed that 5% of external trips would be transit. However, ITE rates already include a certain level of transit trips. To account for this, the external vehicle trip generation would be 101*95% = 96 vehicle trips, which is a 4% reduction from the ITE predicted value.

4 External trips not estimated to use walk, bike, or transit modes would otherwise travel by vehicle.

Source: Fehr & Peers, 2012.

Data and Research Supporting Bike/Pedestrian/Transit Mode Splits

The study area includes numerous facilities that will enable project residents, employees, and shoppers to walk, bicycle, or use transit to travel to/from the project.

- *Walking/Bicycling* – a number of destinations are within less than a ¾-mile walk/bike ride from the edge of the project site including Oak Tree Plaza Shopping Center, Holmes Junior High School, North Davis Elementary School, Davis Community Park / Little League Fields, Yolo County Library, and Davis High School. These uses can be accessed by the system of multi-use paths located on the south side of Covell Boulevard.
- *Transit* – Six different bus routes (Unitrans Routes P&Q, and T, and Yolobus Routes 42A&42B, and 43) feature AM and PM peak period stops at the Covell Boulevard/J Street intersection. As noted earlier, these routes provide access to a wide array of destinations ranging from regional attractors (e.g., downtown Sacramento) to a variety of land uses throughout Davis including multiple shopping centers, parks, pools, recreational attractions, schools, City Hall, DMV, Amtrak Station, Post Office, library, and hospitals/medical centers.

A number of academic and professional studies have demonstrated that the built environment can have a profound effect on travel. According to *Growing Cooler* (ULI, 2008, pg 88), ten studies examined the effects of regional location on travel. The studies yielded the same general conclusion: infill locations generate substantially lower vehicle trips and vehicle miles of travel (VMT) per capita than do greenfield locations (from 13 to 72 percent). Designing projects with greater Densities, access to regional Destinations (e.g., UC Davis), site Design, and Diversity of land use (the '4Ds') can result in meaningful reductions in vehicle trips and VMT.

Chapter 1 of *Driving and the Built Environment: The Effects of Compact Development on Motorized Travel, Energy Use, and CO2 Emissions -- Special Report 298* (Transportation Research Board, 2009) reached the following key conclusions:

- *Finding 1:* Developing more compactly, that is, at higher residential and employment densities, is likely to reduce VMT.
- *Finding 2:* The literature suggests that doubling residential density across a metropolitan area might lower household VMT by about 5 to 12 percent, and perhaps by as much as 25 percent, if coupled with higher employment concentrations, significant public transit improvements, mixed uses, and other supportive demand management measures.

TRIP DISTRIBUTION/ASSIGNMENT

The distribution of project trips was estimated using a variety of sources and analytical techniques. The following describes those sources and analysis techniques:

- Project-only traffic assignment using the Base Year City of Davis travel demand model: This process consists of adding the proposed project to the traffic model, rerunning the model, and tracking the number/directionality of project trips assigned to the surrounding roadway network.

- Location of complementary land uses: Residential uses within the project will produce trips that are attracted to nearby schools, shopping, employment centers (i.e., UC Davis, South Davis technology parks, etc.), and recreational opportunities. Retail and office uses within the project will attract trips primarily from residential uses with retail trip distances generally being shorter than office commute trip lengths.

- Review of existing travel patterns for nearby residential and commercial developments: Existing turning movements were analyzed to determine the following travel patterns:

    - Residential on F Street north of Covell Boulevard: 19% west on Covell Boulevard, 37% east on Covell Boulevard, and 44% south on F Street

    - Wildhorse Residential Area north of Covell Boulevard and east of Pole Line Road: 38% west on Covell Boulevard, 29% east on Covell Boulevard, 22% south on Pole Line Road, and 11% north on Pole Line Road.

- Oak Tree Plaza Shopping Center at the Covell Boulevard/Pole Line Road intersection: 31% west on Covell Boulevard, 38% east on Covell Boulevard or north on Pole Line Road, and 31% south on Pole Line Road.

The proposed project will not have identical trip distribution characteristics of any of these three nearby land uses because the project consists of a mix of uses (versus retail or residential only). Nevertheless, information from these uses is helpful for reviewing the overall reasonableness of the estimated project trip distribution.

Figure 3.14-4 shows the expected distribution of project trips under existing plus project conditions. About half of project trips are expected to be distributed to/from the west on Covell Boulevard (toward F Street). Continuing westerly on Covell Boulevard, project traffic percentages gradually decrease to 29 percent approaching Anderson Road. One-third of trips are expected to be to/from the east (toward Pole Line Road). The remaining 16 percent are to/from the south on J Street.

Access to the project would be provided off Covell Boulevard by the signalized intersection at the proposed Road B opposite J Street, and by a proposed right-turn only Road A that would be situated further west. U-turns would be permitted from the eastbound left-turn lane at J Street to enable project traffic to enter the right-turn only entrance.

3.14.4 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the Proposed Project are summarized below. This information provides a context for the impact discussion related to the project's consistency with applicable regulatory conditions and development of significance criteria for evaluating project impacts.

City of Davis General Plan

The following are applicable goals and policies from the City of Davis General Plan related to transportation and circulation:

Goal MOB 1. *Provide attractive streets designed to serve a broad spectrum of travel modes as well as automobiles. A multi-modal street is illustrated in Figure 18 (of the Davis General Plan).*

Policy MOB 1.1 Provide and maintain a roadway network to meet the needs of vehicular traffic in Davis.

- The City of Davis shall have a network of vehicle circulation routes consisting of major arterials, minor arterials, collector, local streets and cul-de-sacs.

- LOS E for automobiles is sufficient for arterials and collectors during peak traffic hours. LOS D for automobiles is sufficient for arterials, collectors and major intersections during non-peak hours.
- Neighborhood plans or corridor plans can allow for a LOS F at peak times if approved by the City Council. LOS F is acceptable during peak hours in the Core Area. Reasons for adopting the new standards include:
  - High LOS standards to achieve low levels of congestion are not necessarily linked to urban vitality and quality of life.
  - The reduced standards would be consistent with community objectives of avoiding road widening which would be unacceptable in terms of community character.
  - High LOS standards make infill development more difficult because infill uses the capacities of streets and may cause traffic volumes to approach capacities of streets.
  - Allowing higher levels of congestion may encourage alternative modes of transportation.
- Davis streets shall have no more than four through automobile lanes, plus a single left-hand turning lane, even if this requirement reduces LOS. Additional turning lanes may be added for safety or design considerations.

Policy MOB 1.3 Encourage the use of alternative transportation modes.

Policy MOB 1.4 Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.

Policy MOB 1.5 Develop a traffic calming program and implement traffic calming measures, where appropriate and feasible, to minimize the impacts on the use of local streets by vehicular traffic and to maintain, or as necessary enhance, livability of the neighborhoods. Consider traffic calming measures along collector and minor arterial streets, where appropriate and feasible, to slow speeds where needed. Examples of assorted traffic calming treatments are shown in Figure 20 *(of the Davis General Plan)*.

Policy MOB 1.6 Build new intersections and redesign existing intersections to maximize pedestrian and bike convenience and safety relative to automobile needs.

Policy MOB 1.7 Adopt development policies to improve the appearance of each major arterial street, as illustrated in Figure 21 *(of the Davis General Plan)*.

Policy MOB 1.11 Promote the use of electric vehicles and other low-polluting vehicles, including neighborhood Electric Vehicles.

Goal MOB 2 *Balance the needs to provide adequate parking for residential and commercial developments with the desire to limit automobile travel.*

Policy MOB 2.1 Use parking as a transportation system management technique.

Goal MOB 3 *Increase walking and the use of non-polluting forms of transportation, including bicycles.*

Policy MOB 3.1 Develop continuous trails and bikeway network for both recreation and transportation that serves the Core, neighborhoods, employment centers, schools and other institutions, minimizes conflicts between pedestrian, bicyclists, equestrians, and automobiles, and that minimizes impacts on wildlife. Greenbelts and Greenstreets should serve as the backbone of much of this network. Figure 23 *(of the Davis General Plan)* shows the City's existing and planned primary bicycle network.

Policy MOB 3.2 Continue to build transportation improvements specifically targeted at bicycles.

Policy MOB 3.3 Provide pedestrian and bicycle amenities.

Policy MOB 3.4 Attempt to provide safe and convenient pedestrian access to all areas of the city.

Policy MOB 3.5 Develop a system of trails at the periphery of the city and within the city for recreational use and to allow walkers and bicyclist to reach open space and natural areas.

Goal MOB 4 *Reduce automobile use by improving transit service and encouraging transit use.*

Policy MOB 4.1 Facilitate the provision of convenient, frequent, dependable and efficient scheduled transit and demand responsive transit for Davis residents.

Policy MOB 4.2 Make transit more available and accessible to students and youth.

Policy MOB 4.3 Require new development designs that maximize transit potential.

Goal MOB 5 *Develop alternative transportation solutions which will help alleviate peak hour congestion and improve air quality.*

Policy MOB 5.1 Develop and maintain a trip-reduction program designed to achieve a 10-percent reduction by 2010 in motor vehicle trips per capita relative to 1987 levels, or higher if so required by the US Environmental Protection Agency, the California Air Resources Board, or the Yolo-Solano Air Quality Management Districts.

Policy MOB 5.2 Develop a student trip reduction program with DJUSD.

Goal MOB 6 *Increase safety of and decrease noise and air pollution from transportation throughout the city.*

Policy MOB 6.1 Safety and noise concerns should take priority over traffic flow in roadway planning.

Policy MOB 6.2 Cooperate with the school district in promoting safe and convenient student bicycle/pedestrian routes between school and home.

City of Davis Comprehensive Bicycle Plan

This document included discussions regarding goals and objectives, bicycle facility guidelines, engineering standards, and implementation and funding. It was presented to and adopted by the City Council in 2006. This document includes numerous goals and policies regarding enforcement, education, and engineering design. The following policies are particularly relevant to this study:

Goal: Provide bike lanes along arterial and collector streets. Provide separated bike paths adjacent to arterial and collector streets only where justified, with full consideration of the potential safety problems this type of facility can create.

Goal: Consider bicycle-operating characteristics in the design of bikeways, intersections, and traffic control systems.

In addition, this document shows a variety of existing and proposed bicycle facilities. No new proposed facilities were shown in this document within the project vicinity.

The City of Davis intends to undertake a corridor plan in 2012-2013 that will study Covell Boulevard between F Street and Pole Line Road. The purpose of this plan is to identify a series of "complete streets" enhancements to the corridor that will benefit all travel modes and also accomplish other objectives. Although the Cannery Park EIR study effort is separate and distinct from the Covell Boulevard Corridor Plan, the two efforts are nevertheless inter-related by their overlapping study area. Accordingly, the remainder of this chapter includes descriptions of how the Corridor Plan may influence the identification of impacts and mitigation measures.

3.14.5 THRESHOLDS OF SIGNIFICANCE

This section describes the thresholds or criteria that determine whether the project causes a significant impact on the roadway, bicycle, pedestrian, and/or transit systems. These thresholds are based on policies from the City of Davis General Plan and recommended/example thresholds from the CEQA guidelines.

Traffic Impacts

According to the City of Davis General Plan, intersection and roadway operations at LOS E or better are acceptable. For the purposes of this EIR analysis, significant traffic impacts at intersections are defined when the addition of project traffic is expected to cause any one of the following:

- For signalized intersections, cause overall intersection operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F);
- For signalized intersections, exacerbate unacceptable (LOS F) operations by increasing an intersection's average delay by five seconds or more;
- For unsignalized intersections, cause the worst-case movement (or average of all movements for all-way stop-controlled intersections) to worsen from an acceptable level (LOS E or better) to an unacceptable level (LOS F) and result in meeting the peak hour signal warrant;
- For unsignalized intersections that operate unacceptably (LOS F) and meet the peak hour signal warrant without the project, worsen operations by increasing the intersection's overall volume by more than one percent; or
- For unsignalized intersections that operate unacceptably but do not meet the peak hour signal warrant without the project, add sufficient volume to meet the warrant.

Transit, Bicycle, and Pedestrian Impacts

The Proposed Project is considered to result in a significant transit, bicycle, and/or pedestrian impact if:

- The project conflicts with existing or planned transit, bicycle, and/or pedestrian facilities and services;
- The project conflicts or creates demand for public transit services above that which is provided or planned; or
- The project does not provide connections to bicycle and pedestrian circulation systems of the surrounding area.

Additional Impacts

The Proposed Project is considered to result in a significant impact if any of the following conditions occur:

- The project does not provide for adequate emergency vehicle access or project access; or
- Construction-related traffic causes significant intersection impacts as defined by the traffic system criteria described above.

3.14.6 IMPACTS AND MITIGATION MEASURES

Project Access

Vehicular access to the project would be provided by the following entry roads:

- Road A – would be a right-turn only access on Covell Boulevard situated 450 feet to the west of the Covell Boulevard/J Street intersection. The outbound right-turn would be controlled by a stop sign.
- Road B – would be the north leg of the existing signalized Covell Boulevard/J Street intersection.

The project description includes a narrative of the proposed improvements to be made by the applicant at the Covell Boulevard/J Street/Road B intersection. However, those improvements have not yet been reviewed or approved by the City. Therefore, it was decided that the following two access scenarios would be analyzed at the project's signalized entry:

- Scenario 1 (Frontage Improvements Only) – assumes the existing intersection configuration, but with improvements along the north side of Covell Boulevard along the project frontage. These improvements include the following:
    - Southbound approach – would consist of a dedicated left-turn lane and a shared through/right lane. The existing raised triangular right-turn island would be eliminated to provide adequate space to accommodate eastbound u-turns.
    - Westbound approach – reconfigured to remove the raised right-turn island and convert the outside westbound through lane to a shared through/right lane.
    - The north and south approaches to the intersection would operate with split phasing. A crosswalk would remain at the east leg of the intersection, and be added to the north leg of the intersection.

- Scenario 2 (Full Improvements) – assumes the frontage improvements described in Scenario 1. Also includes the following:
    - Eastbound approach – channelized, yield-controlled right-turn lane would be replaced by a shared through/right lane.
    - Northbound approach – channelized, yield-controlled right-turn lane would be replaced by a shared through/right lane, resulting in one left-turn lane and one shared through/right lane.
    - The north and south approaches to the intersection would operate with protected left-turn phasing. Crosswalks would be present on all legs of the intersection. Right-turns are assumed to be prohibited from each shared through/right lane (assumed as a worst-case scenario in the event a bike box is added to each approach).

In summary, Scenario 1 results in an intersection that maintains the low-delay eastbound and northbound channelized right-turns, but operates with less efficient (given the volumes and lanes) north/south split-phasing. In contrast, Scenario 2 results in an intersection that removes these channelized right-turns but operates with more efficient north/south protected left-turn phasing. Both scenarios are analyzed for the "plus project" conditions described in this chapter.

A Class I multi-use path is proposed to be constructed parallel to Covell Boulevard along the project's south limits. It would extend from the Covell Boulevard/J Street/Road B intersection westerly and connect with the existing north-south Class I path that extends under the Covell Boulevard bridge, connecting to the system of Class I and II facilities located near the Little League fields, F Street, and H Street. .

EXISTING PLUS PROJECT TRAFFIC IMPACTS

Traffic Forecasts

Project trips were assigned to the study intersections in accordance with the trip generation estimates and distribution percentages described in Section 3.14.3. Those trips were then added to the existing volumes to yield "existing plus project" conditions. Refer to Figure 3.14-5 for the existing plus project volumes.

Table 3.14-6 compares the change in AM and PM peak hour traffic volumes on key roadway segments under existing and existing plus project conditions. This data shows the following:

- The project adds the greatest increase in traffic to Covell Boulevard west of J Street. This represents a 22 to 24 percent increase in traffic over the existing volume.
- Among north-south street segments south of Covell Boulevard, the project adds the most traffic to J Street (about 130 peak hour trips), followed by Pole Line Road (about 90 peak hour trips), F Street (about 75 peak hour trips), Anderson Road (about 40 peak hour trips), and L Street (about 30 peak hour trips).

Table 3.14-6
Roadway Segment Peak Hour Volumes – Existing Plus Project Conditions

Roadway Segment	Existing Conditions		Project-Added Trips		Existing Plus Project Conditions	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Covell Boulevard west of J Street	1,710	1,881	405	414	2,115 (23.7%)	2,295 (22.0%)
Covell Boulevard east of J Street	1,670	1,846	276	282	1,946 (16.5%)	2,128 (15.3%)
F Street south of Covell Boulevard	834	1,027	73	74	907 (8.8%)	1,101 (7.2%)
J Street south of Covell Boulevard	253	323	130	132	383 (51.4%)	455 (40.9%)
L Street south of Covell Boulevard	250	319	32	33	282 (12.8%)	352 (10.3%)
Pole Line Road south of Covell Blvd.	773	942	89	91	862 (11.5%)	1,033 (9.7%)
Pole Line Road north of Covell Blvd.	1,073	1,331	56	58	1,129 (5.2%)	1,389 (4.4%)

Note: Volume includes both directions of travel.
(x.x%) = Percent increase in traffic due to project.

Intersection Operations

The study intersections were re-analyzed under existing plus project conditions. The results are shown in Table 3.14-7. The data in this table indicates the following:

- The project would worsen operations at the Covell Boulevard/J Street intersection from LOS A to D during the AM peak hour, and LOS A to C during the PM peak hour. Operations would remain at an acceptable level.
- The project would worsen AM peak hour operations at the 8th Street/J Street intersection from LOS C to D. Operations would remain at an acceptable level.
- The project would further increase side-street delays (at an LOS F condition) at the Covell Boulevard/L Street, Covell Boulevard/Oak Tree Plaza Driveway, and Pole Line Road/Picasso Avenue intersections.

Table 3.14-7
Peak Hour Intersection Level of Service – Existing Plus Project Conditions

Intersection	Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
1. Covell Blvd/Shasta Dr./Risling Ct.	Traffic Signal	35	C	30	C	34	C	30	C
2. Covell Blvd/John Jones Rd	Traffic Signal	11	B	15	B	11	B	15	B
3. Covell Blvd/Sycamore Ln	Traffic Signal	24	C	25	C	25	C	26	C
4. Covell Blvd/Anderson Rd	Traffic Signal	24	C	26	C	24	C	27	C
5. Covell Blvd/Oak Ave	Traffic Signal	22	C	14	B	23	C	15	B
6. Covell Blvd/Catalina Dr	Traffic Signal	13	B	11	B	14	B	13	B
7. Covell Blvd/F St	Traffic Signal	25	C	27	C	27	C	29	C
8. Covell Blvd/J St/Road B [3]	Traffic Signal	8	A	7	A	44	D	34	C
9. 14th St/Oak Ave	All-Way Stop	14	B	10	B	14	B	10	B
10. 14th St/B St	All-Way Stop	17	C	9	A	17	C	9	A
11. 14th St/F St	Traffic Signal	12	B	10	A	12	B	10	B
12. Drexel Dr/J St	All-Way Stop	8	A	8	A	8	A	9	A
13. 8th St/Oak Ave	Traffic Signal	11	B	10	A	11	B	10	A
14. 8th St/B St	Traffic Signal	12	B	11	B	12	B	11	B
15. 8th St/F St	Traffic Signal	19	B	20	B	20	B	21	C
16. 8th St/J St	All-Way Stop	22	C	19	C	27	D	23	C
17. 5th St/F St	Traffic Signal	21	C	37	D	27	C	42	D
18. 5th St/G St	Traffic Signal	18	B	28	C	18	B	28	C
19. Covell Blvd/L St	Side-Street Stop	3 (90)	A (F)	4 (93)	A (F)	3 (95)	A (F)	5 (122)	A (F)
20. Covell Blvd/Oak Tree Plaza Dwy.	Side-Street Stop	6 (167)	A (F)	32 (414) [2]	D (F)	13 (349)	B (F)	53 (716) [2]	F (F)
21. Covell Blvd/Pole Line Rd	Traffic Signal	28	C	35	D	33	C	38	D
22. Covell Blvd/Birch Ln	Traffic Signal	17	B	7	A	18	B	7	A
23. Covell Blvd/Wright Blvd	Traffic Signal	13	B	11	B	13	B	11	B
24. Covell Blvd/Monarch Ln	Side-Street Stop	1 (14)	A (B)	2 (19)	A (C)	1 (14)	A (B)	2 (20)	A (C)
25. Covell Blvd/Alhambra Dr	Traffic Signal	8	A	6	A	9	A	6	A
26. Covell Blvd/Harper JR HS Access	Traffic Signal	4	A	4	A	4	A	4	A
27. Alhambra Dr/Mace Blvd	Traffic Signal	12	B	12	B	13	B	12	B

Table 3.14-7
Peak Hour Intersection Level of Service – Existing Plus Project Conditions

Intersection	Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS	Delay[1]	LOS
28. 2nd St/Mace Blvd	Traffic Signal	36	D	24	C	37	D	25	C
29. Chiles Rd/Mace Blvd	Traffic Signal	32	C	31	C	32	C	31	C
30. Donner Ave/Pole Line Rd	Side-Street Stop	2 (20)	A (C)	1 (24)	A (C)	2 (22)	A (C)	2 (26)	A (D)
31. Picasso Ave/Pole Line Rd	Side-Street Stop	2 (24)	A (C)	7 (61)	A (F)	3 (27)	A (D)	9 (79)	A (F)
32. Moore Blvd/Pole Line Rd	Side-Street Stop	8 (33)	A (D)	5 (32)	A (D)	9 (40)	A (E)	6 (37)	A (E)
33. Oak Tree Plaza Dwy./Pole Line Rd	Side-Street Stop	2 (14)	A (B)	3 (18)	A (C)	2 (15)	A (C)	3 (20)	A (C)
34. Loyola Dr/Pole Line Rd	Traffic Signal	13	B	14	B	15	B	15	B
35. 8th St/Pole Line Rd	Traffic Signal	12	B	15	B	12	B	16	B
36. 5th St/Pole Line Rd	Traffic Signal	26	C	29	C	27	C	30	C
37. Drexel Dr/L St	All-Way Stop	8	A	8	A	9	A	9	A
38. 8th St/L St	Traffic Signal	12	B	11	B	12	B	11	B
39. 5th St/L St	Traffic Signal	18	B	22	C	19	B	22	C
40. Covell Blvd / Road A	Side-Street Stop	N/A[4]				1 (11)	A (B)	1 (10)	A (B)

Notes:

1. For signalized and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses next to the average intersection delay and LOS. All results are rounded to the nearest second.
2. When side-street traffic volumes are near the boundary of the traffic software's input range, delay estimates can become imprecise (e.g., Intersection 20 has side-street LOS F, although it is unlikely that the average delay is 7 minutes per vehicle as model estimated)
3. Results shown in table are for Scenario 1 (Frontage Improvements). Results for Scenario 2 (Full Improvements) would be: LOS D (40 sec/veh) during AM peak hour, and LOS C (34 sec/veh) during PM peak hour.
4. Intersection does not exist under this scenario.

The 12 unsignalized study intersections were re-evaluated to determine if they satisfy the Peak Hour warrant for consideration of a traffic signal with the addition of project trips. The full-access Covell Boulevard/Oak Tree Plaza Driveway intersection (#20) satisfied the peak hour volume warrant under existing PM peak hour conditions, and would continue to do so under existing plus project conditions.

No other unsignalized study intersections would satisfy the Peak Hour Volume signal warrant with the addition of project traffic.

Impact 3.14-1: Project implementation would result in a significant impact at the unsignalized Covell Boulevard/Oak Tree Plaza Driveway Intersection (#20) (Significant and Unavoidable).

This intersection currently operates at LOS F during the PM peak hour on the side-street approach and satisfies the peak hour volume signal warrant. The addition of project traffic would exacerbate LOS F conditions and increase the overall intersection's volume from 1,976 to 2,225 during the PM peak hour, which is a 12.6 percent increase. Since operations are unacceptable, the peak hour signal warrant is met, and the project causes a greater than one percent increase in traffic, this is a **significant impact**.

MITIGATION MEASURES

Several potential measures are available as potential mitigations for this impact. Each measure is described below, followed by an evaluation of its effectiveness:

- *MM 3.14-1A: Prohibit outbound left-turns from the Oak Tree Plaza driveway via construction of a raised median (that maintains westbound left-turn ingress).*
- *MM 3.14-1B: Construct a refuge island within the median of Covell Boulevard at the Oak Tree Plaza driveway to enable outbound left-turns to merge onto westbound Covell Boulevard more easily (via a two stage gap acceptance configuration).*
- *MM 3.14-1C: Install a traffic signal at the Covell Boulevard/Oak Tree Plaza driveway.*
- *MM 3.14-1D: Install a traffic signal at the Covell Boulevard/L Street intersection and operate the Covell Boulevard/L Street and Covell Boulevard/Pole Line Road traffic signals as a coordinated system as a means to create more gaps in traffic on Covell Boulevard for outbound left-turns from the Oak Tree Plaza driveway.*
- *MM 3.14-1E: Modify the permitted turn movements at the driveways serving Oak Tree Plaza as follows:*
    - *Westerly Driveway – Permit westbound left-turn ingress in addition to right-turns.*
    - *Central Driveway – Convert from full-access to right-turns only.*
    - *Easterly Driveway - Convert from right-turn only to permit outbound left-turns (with a median refuge island).*
- *MM 3.14-1F: Accept LOS F in accordance with General Plan MOB Policy 1.1, part c.*

The following evaluates the effectiveness of each mitigation measure strategy.

MM 3.14-1A: Prohibit outbound left-turns from the Oak Tree Plaza driveway via construction of a raised median (that maintains westbound left-turn ingress).

This measure would divert 65 AM peak hour trips and 128 PM peak hour vehicles that turn left from this driveway onto westbound Covell Boulevard to other routes. Since u-turns are prohibited on eastbound Covell Boulevard at Pole Line Road, these diverted motorists would likely reroute to the full-access driveway on Pole Line Road to then either travel south on Pole Line Road or north (to make a left-turn onto westbound Covell Boulevard). Table 3.14-8 shows the resulting change in operations with this mitigation in place. As shown, the elimination of this movement would result in LOS B operations at the Covell Boulevard/Oak Tree Plaza Driveway intersection. Diverted traffic to the Covell Boulevard/Pole Line Road and Pole Line Road/Oak Tree Plaza driveway intersections would cause additional delays, though operations would remain acceptable. Therefore, project impacts at this intersection would be **less than significant** after mitigation.

MM 3.14-1B: Construct a refuge island within the median of Covell Boulevard at the Oak Tree Plaza driveway to enable outbound left-turns to merge onto westbound Covell Boulevard more easily (via a two stage gap acceptance configuration).

This measure would enable outbound left-turns from Oak Tree Plaza to turn onto westbound Covell Boulevard more easily by virtue of a refuge island being constructed within the raised median. As a result, motorists would merge onto westbound Covell Boulevard in two stages. Stage one would require that they find a gap in traffic in the eastbound through movement and westbound left-turn to enter the refuge island. Stage two would require that they find a gap in westbound through traffic to merge onto westbound Covell Boulevard. Table 3.14-8 shows the resulting change in operations with this mitigation in place. As shown, this mitigation would improve operations at the Covell Boulevard/Oak Tree Plaza Driveway intersection to LOS E. Therefore, project impacts at this intersection would be **less than significant** after mitigation. This alternative would require removal of several trees within the median to accommodate the refuge island.

MM 3.14-1C: Install a traffic signal at the Covell Boulevard/Oak Tree Plaza driveway.

As noted above, this intersection currently satisfies the peak hour volume warrant for consideration of a traffic signal. As shown in Table 3.14-8, operations at the intersection would improve to LOS A during the PM peak hour. Therefore, project impacts at this intersection would be **less than significant** after mitigation. However, its location (750 feet west of existing Covell Boulevard/Pole Line Road traffic signal, and 560 feet east of potential future Covell Boulevard/L Street traffic signal) is not ideal from a signalized intersection spacing perspective. When intersections are spaced close together, queue spillbacks between intersections can occur, lane changing becomes difficult, and effective traffic signal coordination can be difficult to achieve. Thus, if a traffic signal were to be considered as mitigation for this intersection, it is recommended

that the signal be accompanied by signal interconnect along Covell Boulevard that extends from a future traffic signal at Covell Boulevard/L Street to the Covell Boulevard/Pole Line Road intersection. The placement of signal interconnect will enable these three signals to be operated as a coordinated system, which would be desirable given their spacing.

MM 3.14-1D: Install a traffic signal at the Covell Boulevard/L Street intersection and operate the Covell Boulevard/L Street and Covell Boulevard/Pole Line Road traffic signals as a coordinated system as a means to create more gaps in traffic on Covell Boulevard for outbound left-turns from the Oak Tree Plaza driveway.

This mitigation would cause a greater number of available gaps in traffic on Covell Boulevard at the Oak Tree Plaza driveway, which would reduce the average delay for outbound left-turns. The increase in gaps would be caused by a signal timing plan that operates the two signals in coordination to facilitate the flow of through traffic between each intersection. Periods of sustained travel on Covell Boulevard would be followed by periods in which north-south travel occurs at L Street and Pole Line Road, thereby allowing motorists to turn out of Oak Tree Plaza onto Covell Boulevard. However, the effectiveness of this mitigation cannot be analyzed in detail at this time due to the uncertainty of the type of signal coordination (and improvements at Covell Boulevard/L Street) that would be implemented. Therefore, project impacts at this intersection would remain **significant and unavoidable.**

MM 3.14-1E: Modify the permitted turn movements at the driveways serving Oak Tree Plaza by permitting westbound left-turn ingress at the westerly driveway, right-turns only at the central (currently full-access) driveway, and right-turns and outbound left-turns (via a median refuge island) at the easterly driveway.

Review of aerial imagery reveals that the location of the three Oak Tree Plaza driveways is sufficient to enable implementation of this mitigation measure. The main benefit of this strategy is the separation of left-turn movements into and out of Oak Tree Plaza from Covell Boulevard. As shown in Table 3.14-8, this mitigation strategy would result in LOS B operations at the Covell Boulevard/Oak Tree Plaza Driveway intersection. This mitigation measure not only achieves acceptable operations, but it also preserves the same level of ingress and egress to the center. Employees, patrons, and delivery vehicles will need to become accustomed to the modified access provisions. The change in left-turn movement locations will also require that certain areas within the median that have landscaping be eliminated. Conversely, the turn lane into the central driveway can be reused as a landscaped median. Lastly, this alternative does not preclude the potential for future lengthening of the eastbound left-turn lane from Covell Boulevard onto northbound Pole Line Road. This 130-foot lane could be lengthened to a maximum of about 300 feet if required. Therefore, project impacts at this intersection would be **less than significant** after mitigation.

MM 3.14-1F: Accept LOS F in accordance with General Plan MOB Policy 1.1, part c.

This is the "do nothing" mitigation measure in which operations would remain at LOS F at the Covell Boulevard/Oak Tree Plaza driveway. The City of Davis could select this mitigation in accordance with General Plan MOB Policy 1.1, part c, which allows the City Council to accept LOS F at the peak times as part of the adoption of a neighborhood or corridor plan. However, since the corridor plan for Covell Boulevard would not likely be heard or adopted by the City Council prior to Council taking action on this environmental document, it is not possible to reach a conclusion of less than significant. Therefore, project impacts at this intersection would remain **significant and unavoidable.**

Table 3.14-8
Effect of Mitigation Measures at Covell Boulevard/Oak Tree Plaza Driveway Intersection – Existing Plus Project Conditions

Intersection	Delay – LOS During PM Peak Hour						
	Existing Conditions	Existing Plus Project Conditions					
		No Mitigation	With Mitigation 3.14-1A	With Mitigation 3.14-1B	With Mitigation 3.14-1C	With Mitigation 3.14-1D	With Mitigation 3.14-1E
20. Covell Blvd/Oak Tree Plaza Dwy.	32 (414) – D (F)	53 (716) – F (F)	1 (14) – A(B)	6 (49) – A(E)	7 – A	Unknown	1 (14) – A(B)
21. Covell Blvd/Pole Line Rd	35 – D	38 - D	40 – D	No Change	No Change	Unknown	No Change
33. Oak Tree Plaza Dwy./Pole Line Rd	3 (18) – A (C)	3 (20) – A (C)	10 (43) – A(E)	No Change	No Change	No Change	No Change

Notes:

- Impact occurs during PM peak hour.
- Refer to previous page(s) for description of mitigations.
- For signalized intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses next to the average intersection delay and LOS. All results are rounded to the nearest second.
- When side-street traffic volumes are near the boundary of the traffic software's input range, delay estimates can become imprecise.
- Mitigation Measure 3.14-1F does not cause any changes in operating conditions. Therefore, results are not shown here.
- As noted in prior text, the effectiveness of Mitigation Measure 3.14-1D is unknown due to the uncertainty of the type of signal coordination that would be implemented.

CUMULATIVE CONDITIONS TRAFFIC IMPACTS

As noted in section 3.14.2, two separate cumulative "no project" scenarios were analyzed in recognition of the uncertainty of what may be developed, if anything, on the adjacent Covell Village property. One scenario assumes that site is developed with 1,200 single-family dwelling units. The other scenario assumes the site is developed with 4.6 million square feet of light industrial space, which was calculated based on a 25 percent floor-to-area ratio for the 422-acre property. Trips associated with Cannery Park were then added to each of these no project scenarios to yield two "cumulative plus project" scenarios.

The residential development scenario for Covell Village would generate about 1,210 AM peak hour trips and 1,250 PM peak hour trips prior to any adjustments for external trips made by walking, bicycle, or transit. The light industrial development scenario for Covell Village would generate 1,740 AM peak hour trips and 1,610 PM peak hour trips. This suggests that the cumulative scenario assuming light industrial for Covell Village will generate greater levels of traffic on surrounding streets, and potentially degrade intersection operations compared to the residential scenario.

The *Covell Village Draft EIR* (2004) analyzed a mixed-use project that was estimated to generate approximately 1,750 AM peak hour trips and 2,200 external PM peak hour trips. Thus, the Residential and Light Industrial scenarios for Covell Village generate less traffic than was analyzed in the 2004 EIR.

Traffic Forecasting

Traffic forecasts for the two cumulative no project scenarios were developed using the City of Davis travel demand model. For each scenario, land uses for Covell Village were added into the traffic analysis zone (TAZ) representing the project area. Peak hour intersection turning movement forecasts were then developed using the difference method procedure, which adds the growth in traffic between the base year and future year models to existing volumes. This method is commonly used in forecasting because it accounts for errors in the base year model, which could also translate to the cumulative forecasts if not accounted for by this method.

Both scenarios assume three points of access to the Covell Village site: Covell Boulevard opposite L Street, Pole Line Road opposite Picasso Avenue, and Pole Line Road opposite Moore Road. The *Covell Village Draft EIR* (2004) identified mitigations at the project accesses to accommodate that project. However, because the project analyzed in that document was different than either of the two assumed land use scenarios in this study and because the City's Capital Improvement Program (CIP) does not include any of these improvements, no changes in traffic control or lanes were assumed at these locations for analysis purposes.

Both no project scenarios assume no development of the Cannery Park site.

The City's CIP includes implementation of the Fifth Street Corridor Improvements project, which will modify the Fifth Street/F Street and Fifth Street/G Street intersections by converting a four-lane undivided section into a three-lane divided section with bike lanes and protected left-turn signal phasing. All cumulative scenarios assume these improvements. No other modifications to any of the study intersections were assumed for cumulative conditions aside from the proposed project improvements at the Covell Boulevard/J Street intersection, which are assumed in place for the "plus project" scenarios.

The distribution of proposed project trips would be slightly different under cumulative conditions (versus existing conditions) due to additional land use growth and development of the adjacent Covell Village project. Specifically, Covell Village would produce and/or attract some trips generated by the proposed project. However, the combined effect of adding Covell Village and the proposed project will be a net increase in traffic because only a small percentage of trips between the two projects can reasonably be expected to be internalized. Figure 3.14-6 shows the distribution of project trips under cumulative conditions.

Project trips were assigned to the study intersections in accordance with the trip generation estimates and cumulative traffic distribution percentages. Trips from the proposed project were not assumed to be able to travel through Covell Village to access Pole Line Road since connectivity between the two sites has not been established or confirmed. This assumption ensures a conservative analysis of project impacts because trips between the two projects would need to use public streets. This assumption is not intended to represent a recommended access plan between the two properties, but rather a reasonably conservative analysis assumption that is based on available information.

Project trips were added to the cumulative no project volumes to yield "cumulative plus project" conditions for both land use scenarios for Covell Village. These forecasts are shown on Figures 3.14-7 through 3.14-10.

Intersection Operations

The study intersections were analyzed under the four cumulative scenarios. Table 3.14-9 compares cumulative operations assuming Covell Village is developed with 1,200 residential units, without and with the proposed project. The data in this table indicates the following:

- Background land use growth including Covell Village would cause several intersections to have degraded operations including notably:
    - 8^{TH} Street/J Street – LOS C (existing) to LOS F during both peak hours.
    - Unsignalized side-street stop-controlled Covell Boulevard/L Street, Covell Boulevard/Oak Tree Plaza Driveway, Pole Line Road/Picasso Avenue, Pole Line Road/Donner Avenue, and Pole Line Road/Moore Boulevard intersections – further degraded side-street operations and delays.
- Implementation of the proposed project would worsen the Covell Boulevard/J Street/Road B intersection from LOS B or better to LOS D during the AM and PM peak hours assuming

the frontage improvements. However, operations would remain acceptable. Implementation of the full intersection improvements would cause PM peak hour operations to degrade to LOS E, which is acceptable.

- Implementation of the proposed project would worsen the Covell Boulevard/Pole Line Road intersection from LOS D to E during the AM peak hour. PM peak hour operations would remain at LOS D.

Table 3.14-10 compares cumulative operations assuming Covell Village is developed with 4.6 million square feet of light industrial, without and with the proposed project. The data in this table indicates the following:

- The change in land use on Covell Village (from residential to Light Industrial) worsens some intersections, but improves others (due to differences in inbound/outbound and directional flows).
- Implementation of the proposed project would exacerbate LOS F operations at seven stop-controlled intersections during one or both peak hours.
- Implementation of the proposed project would worsen the Covell Boulevard/J Street/Road B intersection from LOS A or B to LOS D during the AM and PM peak hours assuming the frontage improvements. However, operations would remain acceptable. Implementation of the full intersection improvements would cause PM peak hour operations to degrade to LOS E, which is acceptable.
- Implementation of the proposed project would maintain LOS D operations at the Covell Boulevard/Pole Line Road intersection during the AM and PM peak hours.

Both scenarios result in LOS F operations on the side-street Donner Avenue approach to Pole Line Road. This was not identified as an impact because the volumes at the intersection do not satisfy a Peak Hour signal warrant. The analysis assumes that Covell Village access is provided from Picasso Avenue versus Donner Avenue. If the reverse turns out to be case, then conclusions at each intersection are also likely to be reversed.

Table 3.14-11 provides a side-by-side comparison of all intersections operating at LOS E or F under cumulative plus project operations under either the Residential or Light Industrial Covell scenarios.

Table 3.14-9
Intersection Level of Service – Cumulative Conditions with Covell Village as Residential

Intersection	Control	No Project				Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Covell Blvd/Shasta Drive	Traffic Signal	41	D	34	C	42	D	34	C
2. Covell Blvd/John Jones Rd	Traffic Signal	12	B	15	B	12	B	15	B
3. Covell Blvd/Sycamore Ln	Traffic Signal	28	C	31	C	28	C	33	C
4. Covell Blvd/Anderson Rd	Traffic Signal	26	C	30	C	26	C	31	C
5. Covell Blvd/Oak Ave	Traffic Signal	25	C	27	C	27	C	35	C
6. Covell Blvd/Catalina Dr	Traffic Signal	15	B	14	B	15	B	15	B
7. Covell Blvd/F St	Traffic Signal	29	C	39	D	32	C	45	D
8. Covell Blvd/J St/Road B[3]	Traffic Signal	14	B	11	B	47	D	44	D
9. 14th St/Oak Ave	All-Way Stop	28	D	25	C	30	D	25	D
10. 14th St/B St	All-Way Stop	27	D	13	B	27	D	13	B
11. 14th St/F St	Traffic Signal	14	B	13	B	15	B	12	B
12. Drexel Dr/J St	All-Way Stop	8	A	10	B	9	A	12	B
13. 8th St/Oak Ave	Traffic Signal	33	C	12	B	38	D	12	B
14. 8th St/B St	Traffic Signal	14	B	14	B	14	B	14	B
15. 8th St/F St	Traffic Signal	31	C	31	C	32	C	33	C
16. 8th St/J St	All-Way Stop	138	F	114	F	154	F	128	F
17. 5th St/F St	Traffic Signal	39	D	53	D	45	D	50	D
18. 5th St/G St	Traffic Signal	24	C	25	C	24	C	29	C
19. Covell Blvd/L St	Side-Street Stop	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)
20. Covell Blvd/Oak Tree Plaza Driveway	Side-Street Stop	15 (456)	B (F)	671 (>1000)	F (F)	31 (964)	D (F)	650 (>1000)	F (F)
21. Covell Blvd/Pole Line Rd	Traffic Signal	48	D	49	D	58	E	53	D
22. Covell Blvd/Birch Ln	Traffic Signal	21	C	7	A	21	C	8	A
23. Covell Blvd/Wright Blvd	Traffic Signal	14	B	14	B	15	B	14	B
24. Covell Blvd/Monarch Ln	Side-Street Stop	2 (23)	A (C)	3 (34)	A (D)	2 (24)	A (C)	3 (36)	A (E)
25. Covell Blvd/Alhambra Dr	Traffic Signal	11	B	8	A	12	B	9	A
26. Covell Blvd/Harper JR HS Access	Traffic Signal	11	B	11	B	11	B	11	B
27. Alhambra Dr/Mace Blvd	Traffic Signal	19	B	17	B	19	B	17	B
28. 2nd St/Mace Blvd	Traffic Signal	45	D	62	E	47	D	64	E
29. Chiles Rd/Mace Blvd	Traffic Signal	71	E	47	D	75	E	47	D
30. Donner Ave/Pole Line Rd	Side-Street Stop	4 (47)	A (E)	4 (96)	A (F)	4 (55)	A (F)	5 (120)	A (F)

Table 3.14-9
Intersection Level of Service – Cumulative Conditions with Covell Village as Residential

Intersection	Control	No Project				Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
31. Picasso Ave/Pole Line Rd	Side-Street Stop	496 (>1000)	F (F)	608 (>1000)	F (F)	504 (<1000)	F (F)	613 (>1000)	F (F)
32. Moore Blvd/Pole Line Rd	Side-Street Stop	>1000 (>1000)	F (F)	751 (>1000)	F (F)	>1000 (>1000)	F (F)	785 (>1000)	F (F)
33. Oak Tree Plaza Driveway/Pole Line Rd	Side-Street Stop	2 (21)	A (C)	3 (22)	A (C)	2 (24)	A (C)	4 (24)	A (C)
34. Loyola Dr/Pole Line Rd	Traffic Signal	16	B	23	C	17	B	26	C
35. 8th St/Pole Line Rd	Traffic Signal	17	B	19	B	18	B	20	B
36. 5th St/Pole Line Rd	Traffic Signal	33	C	36	D	34	C	36	D
37. Drexel Dr/L St	All-Way Stop	11	B	13	B	12	B	14	B
38. 8th St/L St	Traffic Signal	16	B	12	B	16	B	12	B
39. 5th St/L St	Traffic Signal	24	C	28	C	24	C	29	C
40. Covell Blvd / Road A	Side-Street Stop	N/A[4]				0 (12)	A (B)	0 (11)	A (B)

Notes:

1. For signalized and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses next to the average intersection delay and LOS. All results are rounded to the nearest second.
2. When side-street traffic volumes are near the edge of the traffic software's input range, delay estimates can become imprecise. In these situations, delay is reported as "> 1,000". Because a more precise estimate is not available.
3. Results shown in table are for Scenario 1 (Frontage Improvements). Results for Scenario 2 (Full Improvements) would be: LOS D (45 sec/veh) during AM peak hour, and LOS E (63 sec/veh) during PM peak hour.
4. Intersection does not exist under this scenario.

Source: Fehr & Peers, 2012

Table 3.14-10
Intersection Level of Service – Cumulative Conditions with Covell Village as Light Industrial

Intersection	Control	No Project				Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Covell Blvd/Shasta Drive	Traffic Signal	44	D	33	C	44	D	33	C
2. Covell Blvd/John Jones Rd	Traffic Signal	11	B	15	B	12	B	16	B
3. Covell Blvd/Sycamore Ln	Traffic Signal	25	C	34	C	25	C	36	D
4. Covell Blvd/Anderson Rd	Traffic Signal	26	C	30	C	27	C	31	C
5. Covell Blvd/Oak Ave	Traffic Signal	22	C	29	C	23	C	33	C
6. Covell Blvd/Catalina Dr	Traffic Signal	14	B	14	B	15	B	15	B
7. Covell Blvd/F St	Traffic Signal	34	C	33	C	38	D	38	D
8. Covell Blvd/J St/Road B[3]	Traffic Signal	8	A	10	B	48	D	53	D
9. 14th St/Oak Ave	All-Way Stop	30	D	71	F	31	D	73	F
10. 14th St/B St	All-Way Stop	34	D	17	C	34	D	17	C
11. 14th St/F St	Traffic Signal	13	B	13	B	13	B	12	B
12. Drexel Dr/J St	All-Way Stop	8	A	10	B	9	A	12	B
13. 8th St/Oak Ave	Traffic Signal	17	B	12	B	19	B	13	B
14. 8th St/B St	Traffic Signal	14	B	13	B	14	B	13	B
15. 8th St/F St	Traffic Signal	34	C	40	D	37	D	44	D
16. 8th St/J St	All-Way Stop	113	F	61	F	127	F	76	F
17. 5th St/F St	Traffic Signal	31	C	47	D	29	C	52	D
18. 5th St/G St	Traffic Signal	20	C	28	C	26	C	28	C
19. Covell Blvd/L St	Side-Street Stop	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)
20. Covell Blvd/Oak Tree Plaza Driveway	Side-Street Stop	11 (342)	B (F)	665 (>1000)	F (F)	26 (798)	D (F)	644 (>1000)	F (F)
21. Covell Blvd/Pole Line Rd	Traffic Signal	41	D	43	D	50	D	46	D
22. Covell Blvd/Birch Ln	Traffic Signal	21	C	10	A	21	C	10	A
23. Covell Blvd/Wright Blvd	Traffic Signal	15	B	13	B	15	B	14	B
24. Covell Blvd/Monarch Ln	Side-Street Stop	3 (25)	A (C)	4 (41)	A (E)	3 (26)	A (D)	4 (44)	A (E)
25. Covell Blvd/Alhambra Dr	Traffic Signal	12	B	8	A	12	B	8	A
26. Covell Blvd/Harper JR HS Access	Traffic Signal	12	B	14	B	12	B	14	B
27. Alhambra Dr/Mace Blvd	Traffic Signal	18	B	17	B	18	B	17	B
28. 2nd St/Mace Blvd	Traffic Signal	48	D	68	E	50	D	70	E
29. Chiles Rd/Mace Blvd	Traffic Signal	84	F	53	D	86	F	52	D
30. Donner Ave/Pole Line Rd	Side-Street Stop	3 (41)	A (E)	4 (78)	A (F)	4 (48)	A (E)	5 (97)	A (F)

Table 3.14-10
Intersection Level of Service – Cumulative Conditions with Covell Village as Light Industrial

Intersection	Control	No Project				Plus Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
31. Picasso Ave/Pole Line Rd	Side-Street Stop	42 (708)	E (F)	649 (>1000)	F (F)	52 (875)	F (F)	655 (>1000)	F (F)
32. Moore Blvd/Pole Line Rd	Side-Street Stop	66 (538)	F (F)	>1000 (>1000)	F (F)	78 (625)	F (F)	>1000 (>1000)	F (F)
33. Oak Tree Plaza Driveway/Pole Line Rd	Side-Street Stop	2 (15)	A (C)	3 (21)	A (C)	2 (17)	A (C)	4 (23)	A (C)
34. Loyola Dr/Pole Line Rd	Traffic Signal	16	B	23	C	17	B	26	C
35. 8th St/Pole Line Rd	Traffic Signal	15	B	18	B	17	B	20	B
36. 5th St/Pole Line Rd	Traffic Signal	30	C	35	C	31	C	35	D
37. Drexel Dr/L St	All-Way Stop	13	B	20	C	13	B	22	C
38. 8th St/L St	Traffic Signal	12	B	12	B	12	B	12	B
39. 5th St/L St	Traffic Signal	21	C	33	C	21	C	33	C
40. Covell Blvd / Road A	Side-Street Stop	N/A[4]				0 (11)	A (B)	0 (12)	A (B)

Notes:
1. For signalized and all-way stop controlled intersections, average intersection delay is reported in seconds per vehicle for all approaches. For side-street stop controlled intersections, the delay and LOS for the most-delayed individual movement is shown in parentheses next to the average intersection delay and LOS. All results are rounded to the nearest second.
2. When side-street traffic volumes are near the edge of the traffic software's input range, delay estimates can become imprecise. In these situations, delay is reported as "> 1,000". Because a more precise estimate is not available.
3. Results shown in table are for Scenario 1 (Frontage Improvements). Results for Scenario 2 (Full Improvements) would be: LOS D (51 sec/veh) during AM peak hour, and LOS E (59 sec/veh) during PM peak hour.
3.
4. Intersection does not exist under this scenario.

Source: Fehr & Peers, 2012

The unsignalized study intersections were re-evaluated under cumulative conditions to determine if they would satisfy the Peak Hour warrant for consideration of a traffic signal. The following intersections satisfied the warrant during one or both peak hours. These findings apply to both the Covell Village as Residential and Covell Village as Light Industrial scenarios.

Cumulative No Project

- Covell Boulevard/L Street
- Covell Boulevard/Oak Tree Plaza Driveway
- Covell Boulevard/Monarch Lane
- Pole Line Road/Picasso Avenue
- Pole Line Road/Moore Boulevard

Cumulative Plus Project

- 8th Street/J Street, in addition to those listed above.

Table 3.14-11
Comparison of LOS E or F Intersections – Cumulative Plus Project Conditions

Intersection	Control	Plus Project with Covell Village as Residential				Plus Project with Covell Village as Light Industrial			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
14th St/Oak Ave	All-Way Stop	30	D	25	D	31	D	73	F
8th St/J St	All-Way Stop	154	F	128	F	127	F	76	F
Covell Blvd/L St	Side-Street Stop	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)	>1000 (>1000)	F (F)
Covell Blvd/Oak Tree Plaza Dwy.	Side-Street Stop	31 (964)	D (F)	650 (>1000)	F (F)	26 (798)	D (F)	644 (>1000)	F (F)
Covell Blvd/Pole Line Rd	Traffic Signal	58	E	53	D	50	D	46	D
Covell Blvd/Monarch Ln	Side-Street Stop	2 (24)	A (C)	3 (36)	A (E)	3 (26)	A (D)	4 (44)	A (E)
2nd St/Mace Blvd	Traffic Signal	47	D	64	E	50	D	70	E
Chiles Rd/Mace Blvd	Traffic Signal	75	E	47	D	86	F	52	D
Donner Ave/Pole Line Rd	Side-Street Stop	4 (55)	A (F)	5 (120)	A (F)	4 (48)	A (E)	5 (97)	A (F)
Picasso Ave/Pole Line Rd	Side-Street Stop	504 (<1000)	F (F)	613 (>1000)	F (F)	52 (875)	F (F)	655 (>1000)	F (F)
Moore Blvd/Pole Line Rd	Side-Street Stop	>1000 (>1000)	F (F)	785 (>1000)	F (F)	78 (625)	F (F)	>1000 (>1000)	F (F)

Notes:
1. When side-street traffic volumes are near the edge of the traffic software's input range, delay estimates can become imprecise. In these situations, delay is reported as "> 1,000". Because a more precise estimate is not available.
2. Refer to Tables 3.14-9 and 3.14-10 for comparison of no project versus plus project operations.

Source: Fehr & Peers, 2012

Certain intersections are listed in Table 3.14-11 as operating at LOS F for a particular scenario but do not show up as significant impacts. This includes the unsignalized 14th Street/Oak Avenue and Donner Avenue/Pole Line Road intersections, which do not meet the Peak Hour signal warrant. Similarly, impacts are less than significant at the Chiles Road/Mace Boulevard intersection because operations are at LOS F under cumulative no project conditions and the project does not cause a five-second or more delay increase.

Table 3.14-12 shows the 95th percentile vehicle queue lengths at the Covell Boulevard/J Street intersection assuming the applicant's full intersection improvements. Results are shown for cumulative plus project conditions (Covell Village as Light Industrial) during each peak hour based on output from the SimTraffic micro-simulation program. Data regarding turn lane storage to be provided with this design was not available. Therefore, the data in Table 3.14-12 is intended to help the project team appropriately size the project's main access.

Table 3.14-12
Covell Boulevard/J Street/Road B Intersection Storage Requirements – Cumulative Plus Project Conditions

Existing Storage	95th Percentile Vehicle Queue	
	AM Peak Hour	PM Peak Hour
Eastbound Covell Boulevard left-turn lane	255 ft.	250 ft.
Westbound Covell Boulevard left-turn lane	130 ft.	130 ft.
Northbound J Street left-turn lane	135 ft.	245 ft.
Northbound J Street through/right lane	205 ft.	280 ft.
Southbound Road B left-turn lane	250 ft.	250 ft.
Southbound Road B through/right lane	300 ft.	245 ft.

Notes:
1. 95th percentile vehicle queue represents the length of queue that has a 5% or less probability of being exceeded during the peak hour.
2. Results rounded to the nearest five feet based on SimTraffic modeling of the Cumulative Plus Project (Covell as Light Industrial) scenario.
3. Vehicle queues reported in Covell Boulevard left-turn lanes incorporate u-turning vehicles.

The applicant's proposed improvements for the Covell Boulevard/J Street/Road B intersection have not been developed to a level of detail that can facilitate a focused review by the City of Davis. Accordingly, the above analyses were prepared to quantify expected operating conditions (including LOS, delays, and queuing) should these or similar improvements be implemented. The City of Davis will review the proposed improvements in detail as part of a set of frontage improvement exhibits to be prepared by the applicant. The review process will include (but not be limited to): u-turn provisions on Covell Boulevard, turn lane storage, on-street parking on J Street, bicycle facilities (including Class II lanes and bike boxes), sidewalks/crosswalks, and the need for acceleration/deceleration lanes.

Impact 3.14-2: Under cumulative conditions, project implementation would worsen already unacceptable levels of service at study intersections. (Less Than Significant after Mitigation)

(Covell Village Residential and Light Industrial Scenarios)

Based on the results in Table 3.14-9 and the signal warrant evaluations, project implementation would worsen already unacceptable (i.e., LOS F) cumulative operations to a significant degree at the following intersections:

- 8th Street/J Street – project traffic would cause the Peak Hour Signal warrant to be met;

- Covell Boulevard/L Street – The Peak Hour Signal warrant would already have been met, and project traffic would increase the volume by more than one percent (10% during the AM peak hour and 9% during the PM peak hour);
- Covell Boulevard/Oak Tree Plaza Driveway – The Peak Hour Signal warrant would already have been met, and project traffic would increase the volume by more than one percent (10% during the AM peak hour and 9% during the PM peak hour);
- Pole Line Road/Picasso Avenue– The Peak Hour Signal warrant would already have been met, and project traffic would increase the volume by more than one percent (3% during the AM and PM peak hours); and
- Pole Line Road/Moore Boulevard – The Peak Hour Signal warrant would already have been met, and project traffic would increase the volume by more than one percent (2% during the AM and PM peak hours).

This is a **significant impact**.

MITIGATION MEASURES

Mitigation Measure 3.14-2*: The project applicant(s) should contribute fair share funding to cover their proportionate cost of the following intersection improvements:*

- *8th Street/J Street (Covell Village as Residential or Light Industrial) – Install a traffic signal along with a dedicated westbound left-turn pocket. Operations would improve to LOS E or better with this mitigation measure in place. The City's Capital Improvement Program (CIP) includes the installation of a traffic signal at this intersection.*

- *Pole Line Road/Picasso Avenue (Covell Village as Residential or Light Industrial) – install a traffic signal along with lane configurations shown on Figure 3.14-9B. Operations would improve to LOS E or better with this mitigation measure in place.*

- *Pole Line Road/Moore Boulevard (Covell Village as Residential or Light Industrial) – install a traffic signal along with lane configurations shown on Figure 3.14-9B. Operations would improve to LOS E or better with this mitigation measure in place.*

- *Covell Boulevard/L Street (Covell Village as Residential) – install a traffic signal along with lane configurations shown on Figure 3.14-9B, plus a dedicated westbound right-turn lane. Operations would improve to LOS E or better with this mitigation measure in place under the cumulative plus project with Covell Village as Residential scenario.*

The cumulative plus project with Light Industrial scenario consists of a large volume of eastbound left-turns (650 AM peak hour vehicles). To avoid safety and operational problems (i.e., LOS F during the AM peak hour), a second left-turn lane would be warranted and is supported by General Plan Policy MOB 1.1 Thus, the following mitigation measure applies for the Light Industrial Scenario:

- *Covell Boulevard/L Street (Covell Village as Light Industrial) – install a traffic signal along with lane configurations shown on Figure 3.14-9B, plus a dedicated westbound right-turn lane, and a second eastbound left-turn lane. Operations would improve to LOS E or better with this mitigation measure in place under the cumulative plus project with Covell Village as Light Industrial scenario.*

Mitigation Measures 3.14-1A through 1F describe several potential mitigation strategies for the Covell Boulevard/Oak Tree Plaza Driveway intersection. These same mitigation options may be considered for cumulative conditions. However, increases in through traffic on Covell Boulevard under cumulative conditions will cause greater delays to the Oak Tree Plaza driveway approach. This would cause Mitigation Measure 3.14-1B (median refuge island) to result in LOS F conditions, whereas operations were at LOS E under existing plus project conditions.

The City may wish to consider roundabouts on Pole Line Road at either Picasso Avenue or Moore Boulevard. As noted in the *Covell Village Draft EIR* (2004), roundabouts may require right-of-way acquisition. Analysis of roundabouts at these locations would result in LOS E or better operations at the Pole Line Road/Picasso Avenue intersection. The Pole Line Road/Moore Boulevard roundabout (with a single circulating lane) would operate at an unacceptable LOS F.

SIGNIFICANCE AFTER MITIGATION

All improvements (potentially excluding roundabouts) can either be constructed within the existing right-of-way or can be completed by widening along the frontage of the Covell Village property. Furthermore, all above improvements would result in an acceptable LOS. Finally, the proposed project and Covell Village are the two major planned projects that contribute to the need for these improvements. As such, fair share contributions by both projects are a viable mitigation strategy. Alternatively, the City may condition these projects to construct certain improvements with a reimbursement mechanism to be put in place from other parties that benefit from the improvements. This is considered a **less than significant** impact after mitigation.

TRANSIT, BICYCLE, PEDESTRIAN, AND ADDITIONAL IMPACTS

Impact 3.14-3: The project may conflict with existing / planned transit services, or create a demand for transit above that which is provided or planned (Less than Significant)

The proposed project would introduce new residential, office, and retail land uses that are situated within close proximity to the current transit stops (at Covell Boulevard/J Street and Covell Boulevard and F Street) for the P, Q, and E bus routes operated by Unitrans. As noted previously, these routes serve a variety of retail, employment, medical, institutional, and recreational destinations throughout the City, and operate with frequent headways, and long service hours. The Unitrans General Manager Report Fiscal Year 2010-2011 (Unitrans, January 2012) indicates that Unitrans experiences "crush load" (i.e., at-capacity buses) on certain routes, particularly during inclement weather. The report does not specify exactly which routes experience recurring

crush loading. However, it is apparent from other statistics such as the Farebox Recovery Ratio and passenger trips per vehicle revenue hour, that the P and Q routes are not as busy as other routes such as the J, W, and G lines.

Additionally, Yolobus currently operates both intercity and express bus service in the City of Davis including 3 routes along Covell Boulevard near the project site. Routes 42A and 42B provide intercity bus service between downtown Sacramento, West Sacramento, Davis, Woodland and Sacramento International Airport and Route 43 provides express bus service between Davis and downtown Sacramento. Each of the routes has a bus stop close to the project site (within 500 ft). Currently all three routes are experiencing relatively high ridership volumes, with Route 42A reporting standing room only on two evening trips, Route 42B reporting standing room on two morning trips and Route 43 reporting standing room only on three of the five morning trips and two of the four evening trips.

The Unitrans P, Q, and E routes each provide four AM peak hour and four PM peak hour stops in the project vicinity during the weekdays. The Yolobus 42A and 42B routes each provide two AM peak hour stops and two PM peak hour stops in the project vicinity during the weekdays, and the 43 route provides four AM peak hour stops and four PM peak hour stops in the project vicinity during the weekdays. In total, there are 20 AM peak hour and 20 PM peak hour bus route stops (headways) serving the project area during the weekdays.

According to Tables 3.14-4 and 3.14-5, the project would generate 20 outbound and 17 inbound transit riders during the AM peak hour (37 total AM peak hour transit riders), and 19 inbound and 19 outbound transit riders during the PM peak hour (38 total PM peak hour transit riders). This equates to an average project contribution of slightly less than 2 transit riders on each bus headway during the AM and PM peak hours.

In summary, while the project is expected to increases transit ridership on Unitrans and Yolobus, given the expected number of project transit riders and existing transit patronage, the project would not cause a demand for transit above that which is provided or planned. The addition of two transit riders on each of the existing bus headways would not cause the existing transit system to become overcrowded or exceed available capacity as a result of project implementation. Similarly, the project would not conflict or interfere with any existing or planned transit services. This is considered a **less than significant** impact.

MITIGATION MEASURES
None required.

Impact 3.14-4: The project may conflict with existing / planned bicycle and pedestrian facilities, and would provide connections to existing bicycle and pedestrian facilities. (Less than Significant)

The proposed project would not interfere with any existing pedestrian/bicycle facilities, and would not preclude construction of any future facilities. The project would construct improvements at

the Covell Bouelvard/J Street intersection that would benefit bicyclist and pedestrian travel. A new Class I multi-use path would be constructed along the project's southern boundary to connect other facilities. This is considered a **less than significant** impact.

MITIGATION MEASURES
None required.

Impact 3.14-5: The proposed site plan would provide inadequate emergency vehicle access. (Less Than Significant)

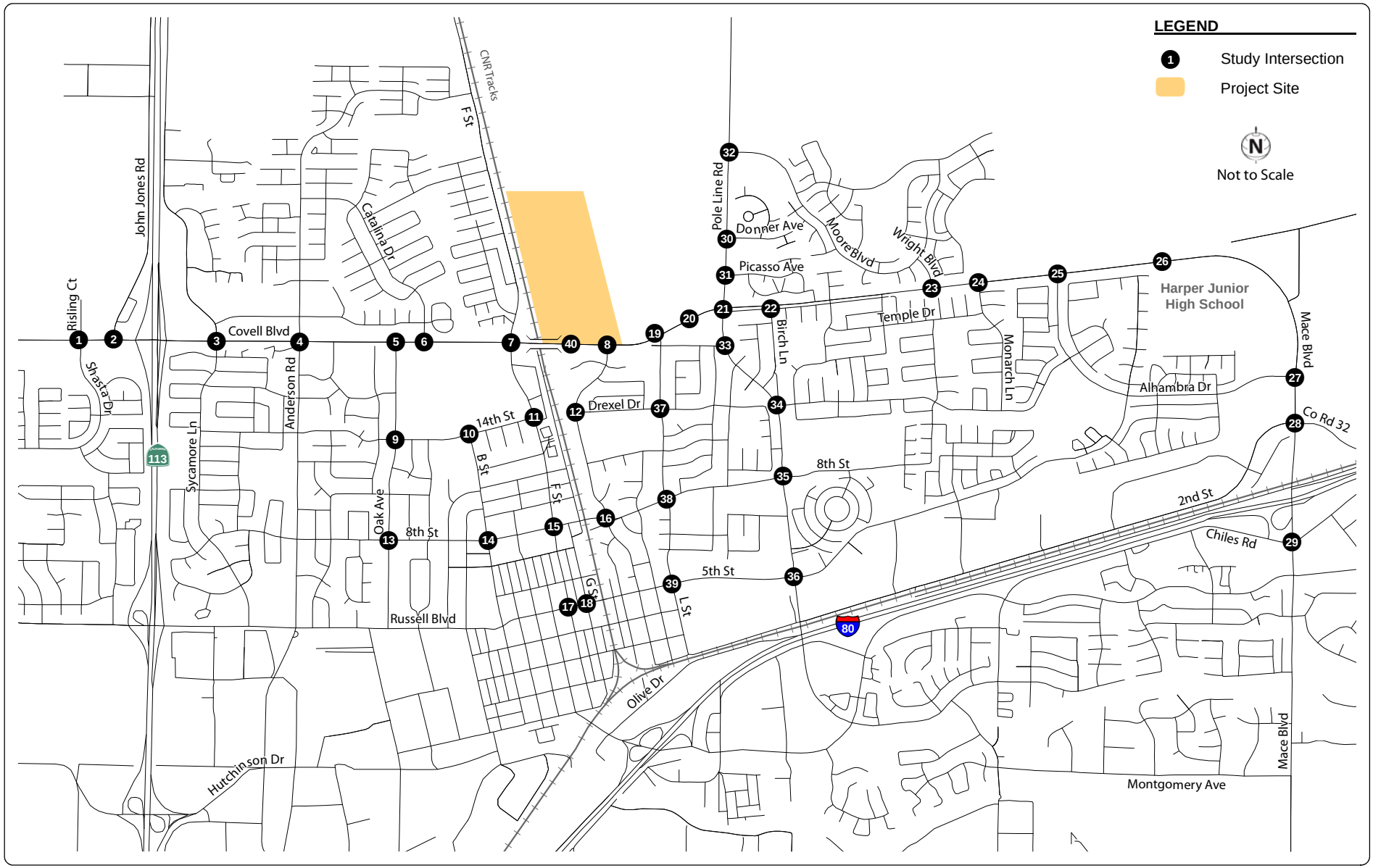
The project proposes an emergency vehicle access (EVA) in the northwest quadrant of the project site across the CNR railroad tracks and an adjacent, wooded drainage channel that would intersect with F Street opposite Faro Avenue. Because the project consists of two primary vehicular accesses on Covell Boulevard and this EVA in the northwest corner of the project, emergency vehicles can access the property from multiple directions. Therefore, adequate emergency vehicle access is proposed and this is considered a **less than significant** impact

MITIGATION MEASURES
None required.

Impact 3.14-6: Construction traffic may cause any significant intersection impacts. (Less than Significant)

This chapter demonstrated that project buildout under existing conditions would cause a significant impact at one study intersection. Construction of the project, including site preparation and construction, and delivery activities, would generate employee trips and a variety of construction-related vehicles. However, the volume of construction-related traffic would not come close to approaching the project's AM and PM peak hour trip generation (i.e., over 800 trips per hour). Therefore, construction traffic/activities would not cause any intersection impacts not already identified. The City of Davis should ensure that all construction staging and worker parking should occur within the project site. This is considered a **less than significant** impact.

MITIGATION MEASURES
None required.



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STUDY INTERSECTIONS

FIGURE 3.14-1

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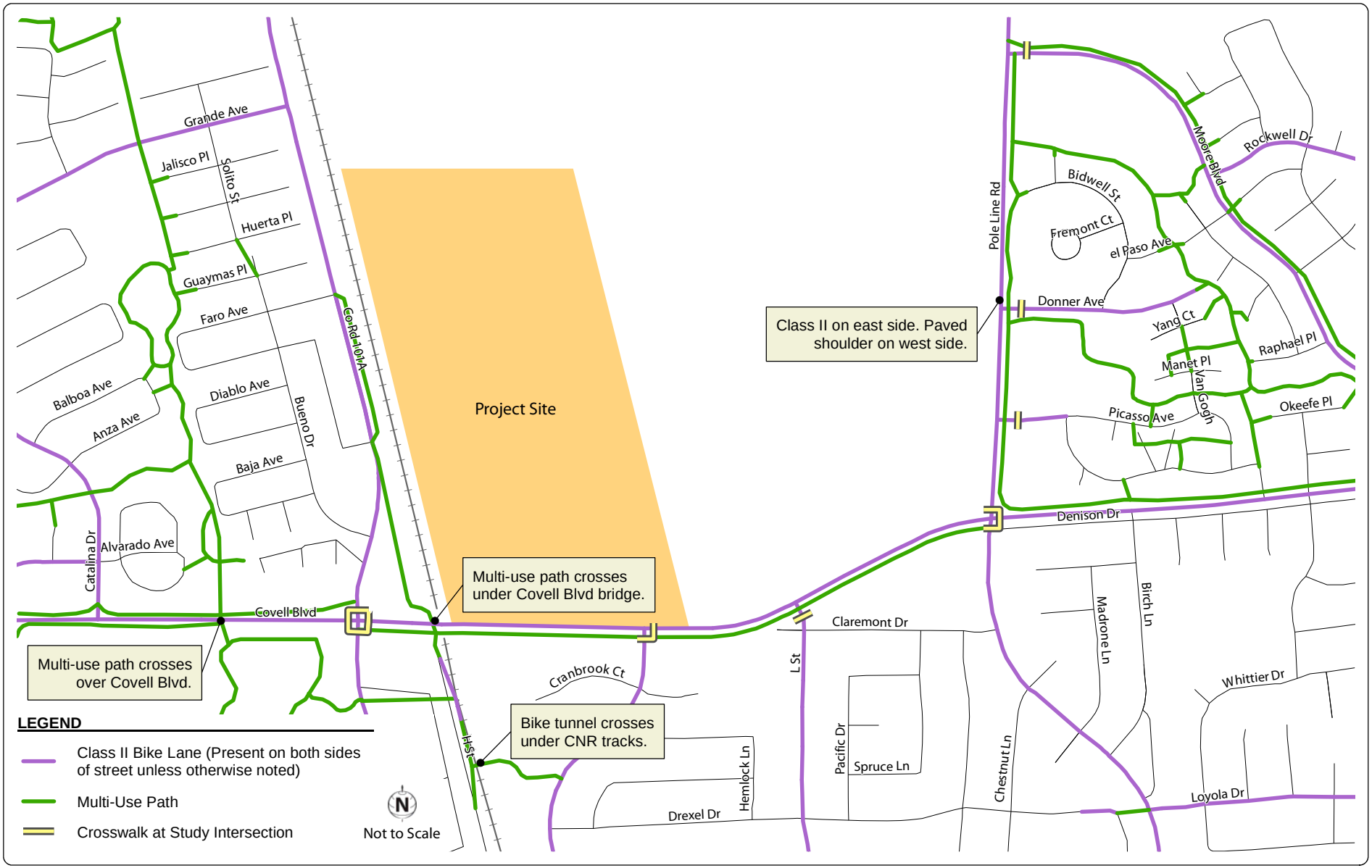

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EXISTING BICYCLE AND PEDESTRIAN FACILITIES

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FIGURE 3.14-2

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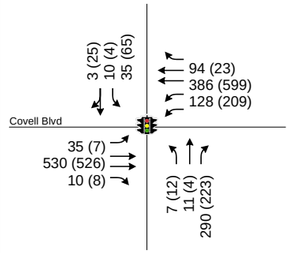
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

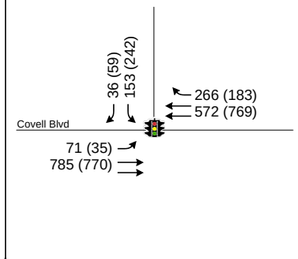
N

Not to Scale

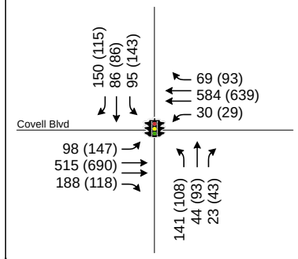
1.Covell Blvd/Risling Ct/Shasta Dr



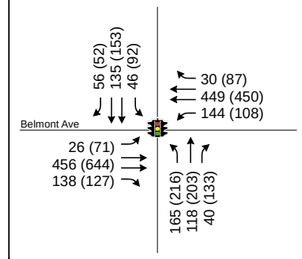
2. Covell Blvd/John Jones Rd



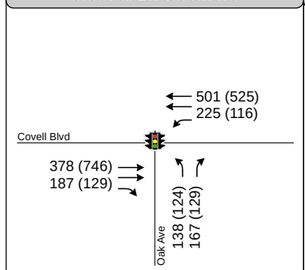
3. Covell Blvd/Sycamore Ln



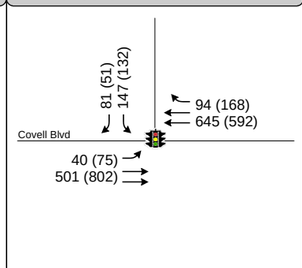
4. Covell Blvd/Anderson Rd



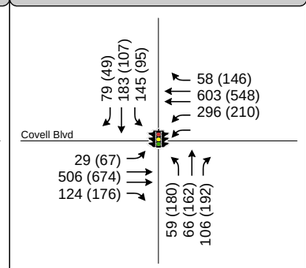
5.Covell Blvd/Oak Ave



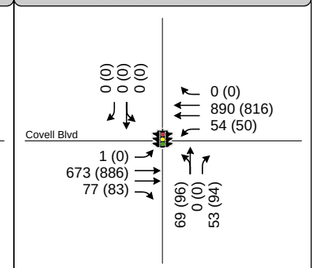
6. Covell Blvd/Catalina Dr



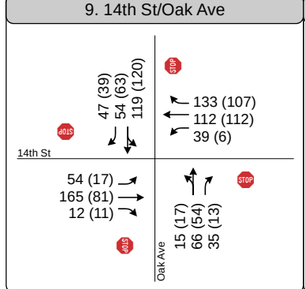
7. Covell Blvd/F St



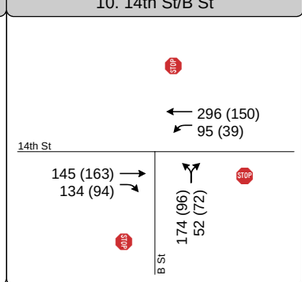
8. Covell Blvd/J St



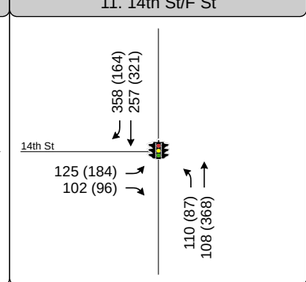
9. 14th St/Oak Ave



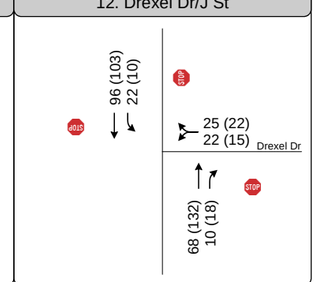
10. 14th St/B St



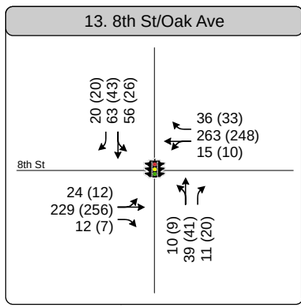
11. 14th St/F St



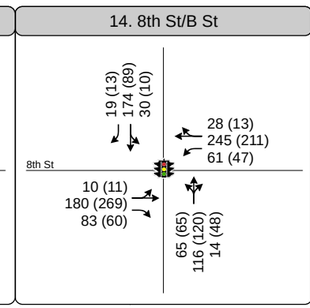
12. Drexel Dr/J St



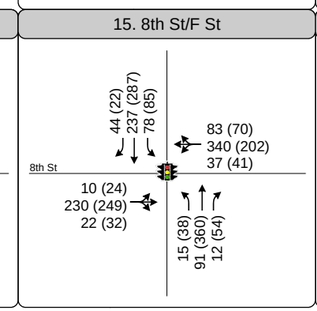
13. 8th St/Oak Ave



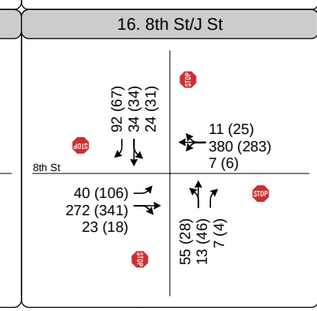
14. 8th St/B St



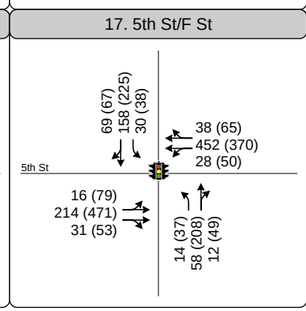
15. 8th St/F St



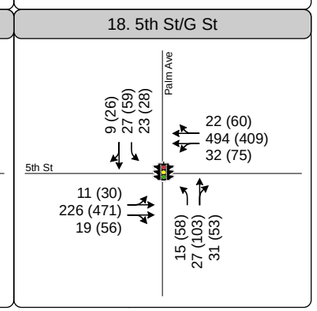
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

FIGURE 3.14-3A

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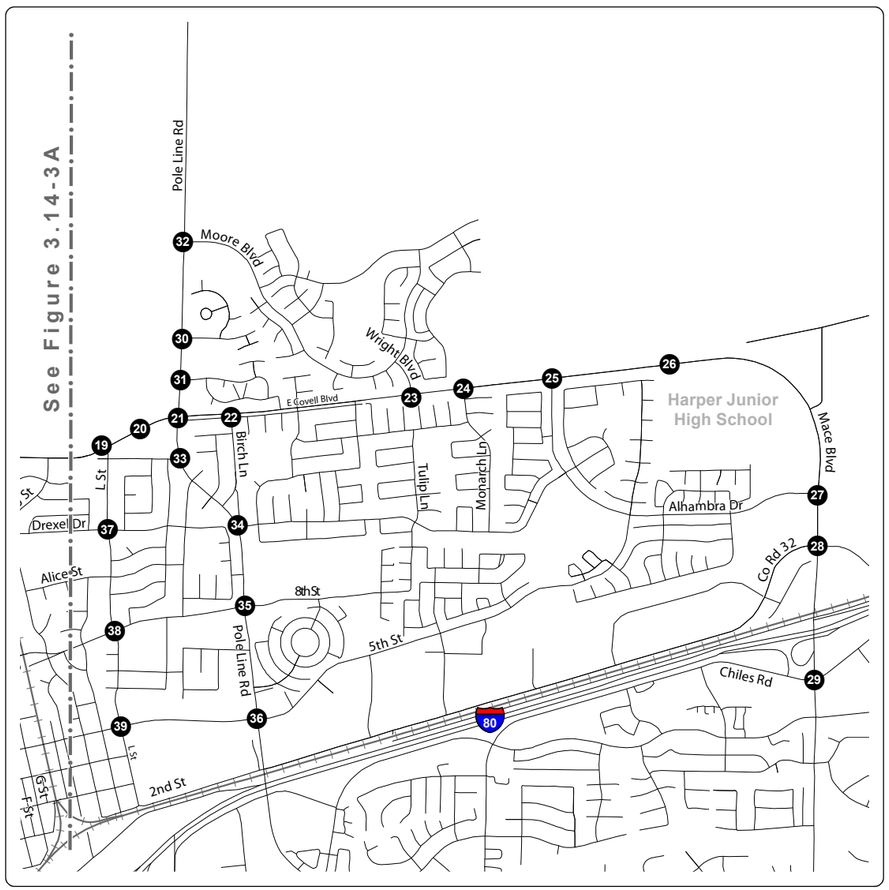
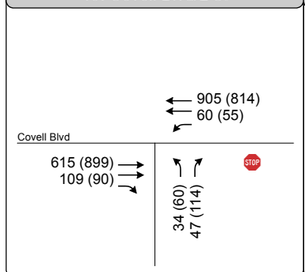


LEGEND

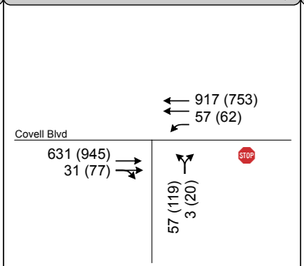
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

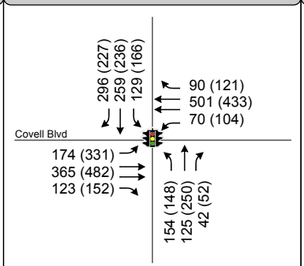
19. Covell Blvd/L St



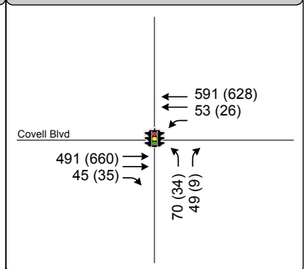
20. Covell Blvd/Oak Tree Plaza Dvwy



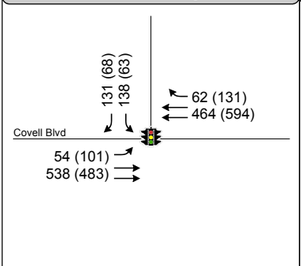
21. Covell Blvd/Pole Line Rd



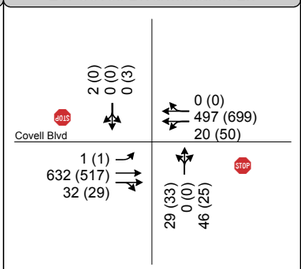
22. Covell Blvd/Birch Ln



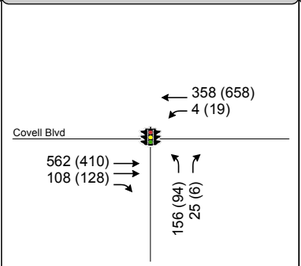
23. Covell Blvd/Wright Blvd



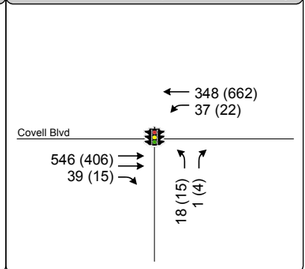
24. Covell Blvd/Monarch Ln



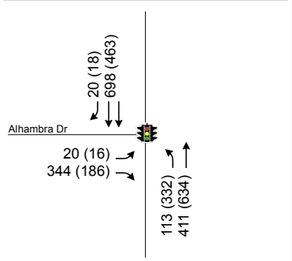
25. Covell Blvd/Alhambra Dr



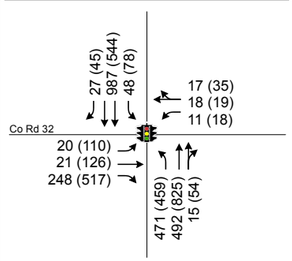
26. Covell Blvd/Harper JHS W. Dvwy



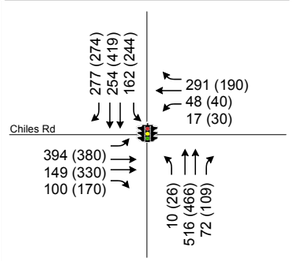
27. Alhambra Dr/Mace Blvd



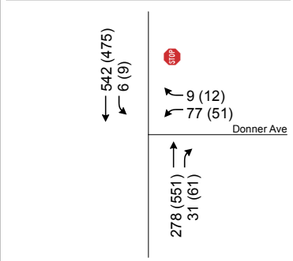
28. Co Rd 32/Mace Blvd/2nd St



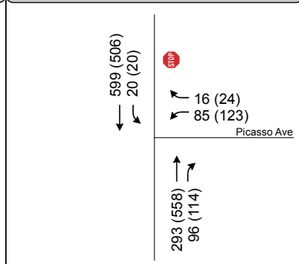
29. Chiles Rd/Mace Blvd



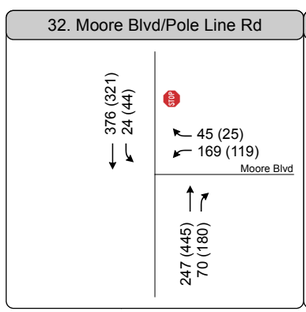
30. Donner Ave/Pole Line Rd



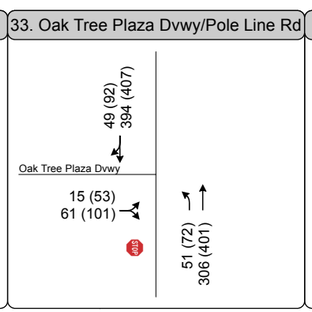
31. Picasso Ave/Pole Line Rd



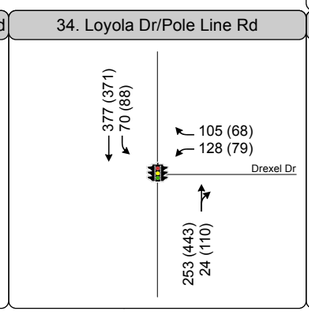
32. Moore Blvd/Pole Line Rd



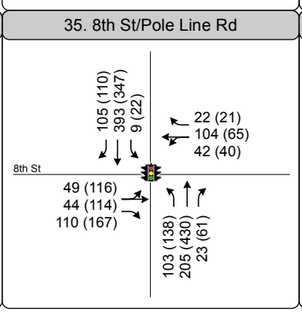
33. Oak Tree Plaza Dvwy/Pole Line Rd



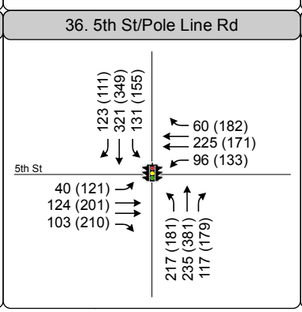
34. Loyola Dr/Pole Line Rd



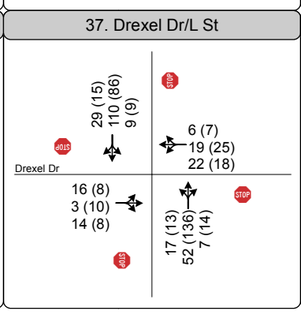
35. 8th St/Pole Line Rd



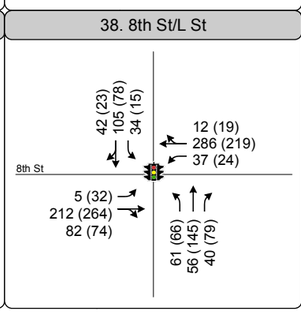
36. 5th St/Pole Line Rd



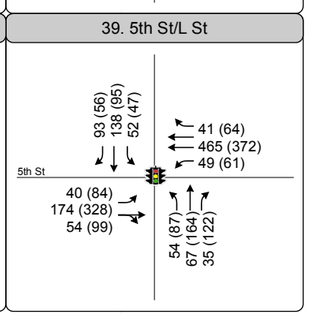
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

FIGURE 3.14-3B

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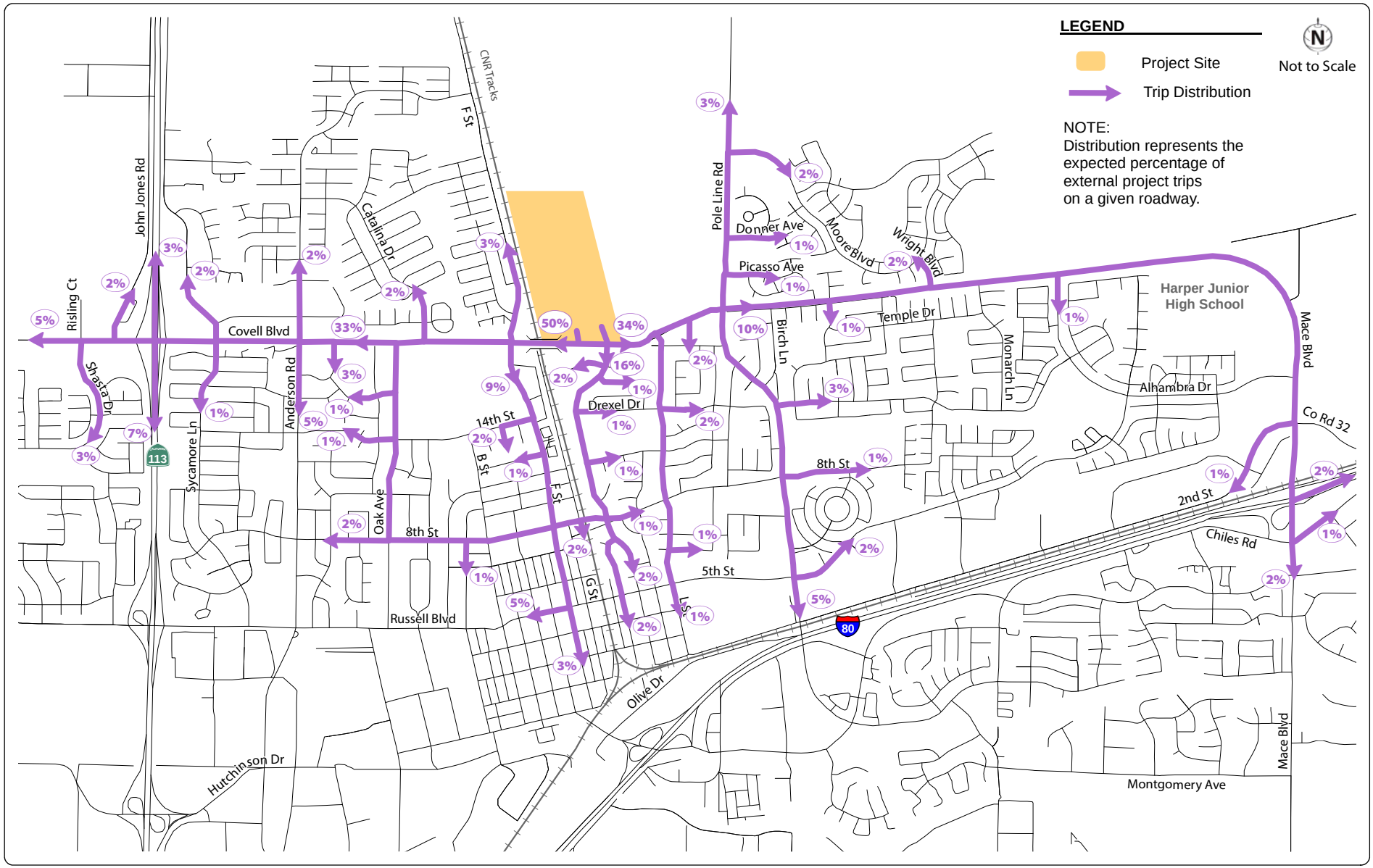

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EXPECTED DISTRIBUTION OF PROJECT TRIPS - EXISTING PLUS PROJECT CONDITIONS

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FIGURE 3.14-4

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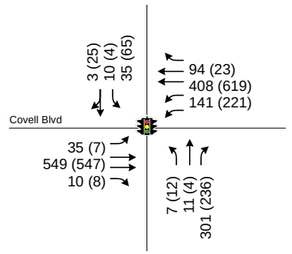
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

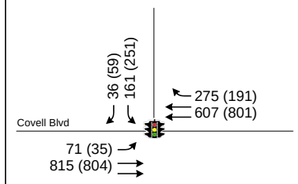
N

Not to Scale

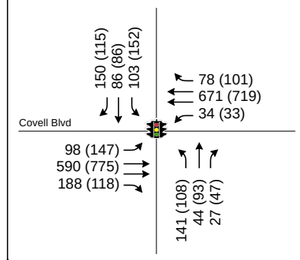
1.Covell Blvd/Risling Ct/Shasta Dr



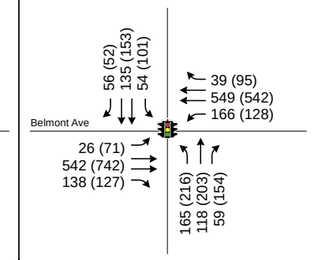
2. Covell Blvd/John Jones Rd



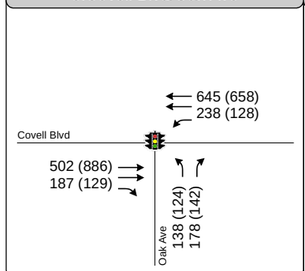
3. Covell Blvd/Sycamore Ln



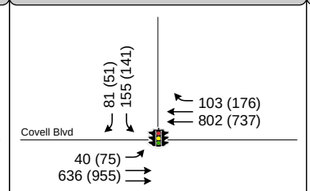
4. Covell Blvd/Anderson Rd



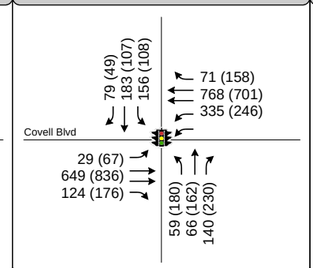
5.Covell Blvd/Oak Ave



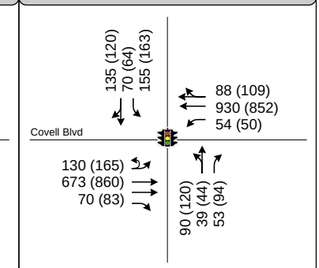
6. Covell Blvd/Catalina Dr



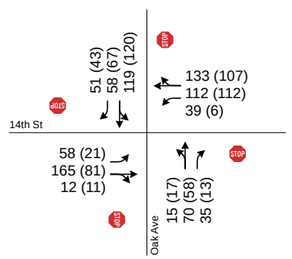
7. Covell Blvd/F St



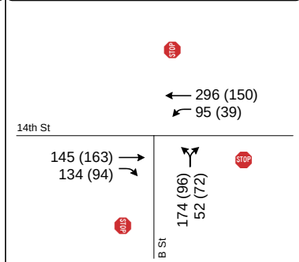
8. Covell Blvd/J St/Road B



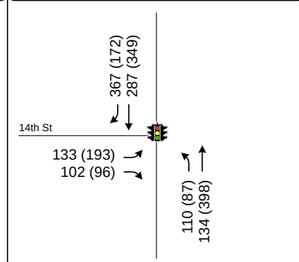
9. 14th St/Oak Ave



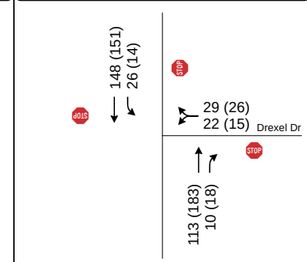
10. 14th St/B St



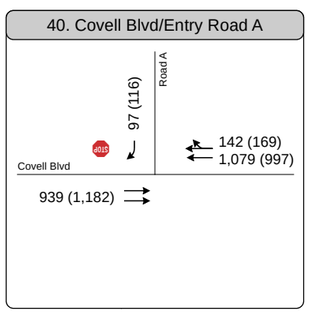
11. 14th St/F St



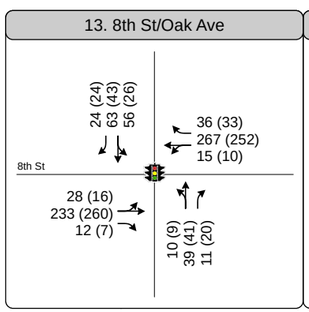
12. Drexel Dr/J St



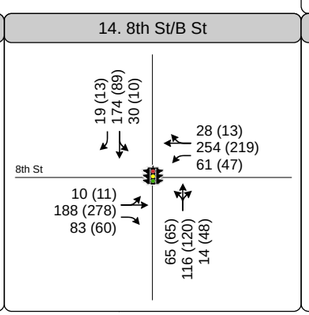
40. Covell Blvd/Entry Road A



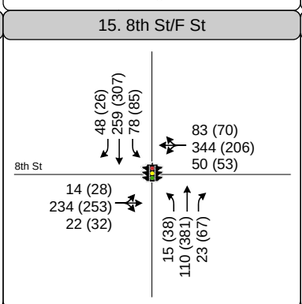
13. 8th St/Oak Ave



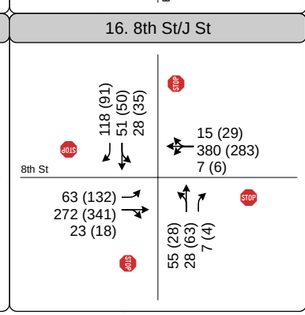
14. 8th St/B St



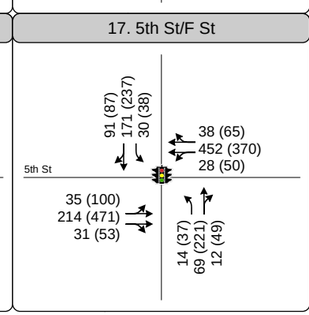
15. 8th St/F St



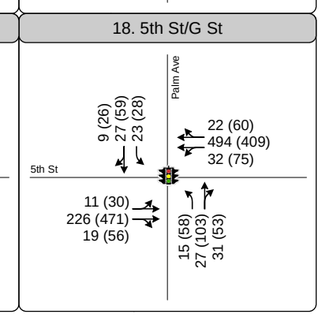
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS PROJECT CONDITIONS

FIGURE 3.14-5A

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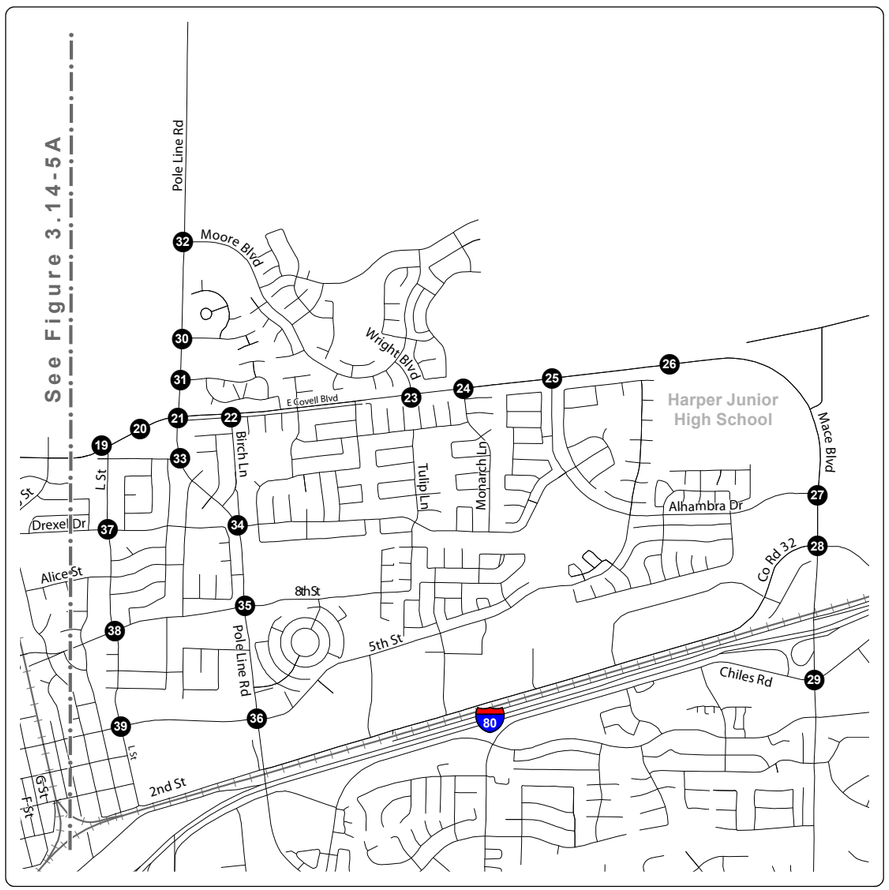
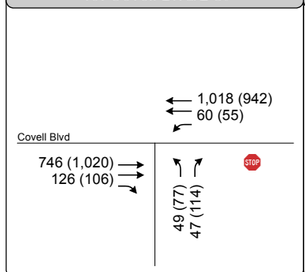


LEGEND

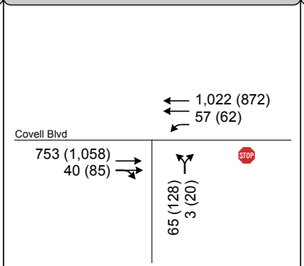
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

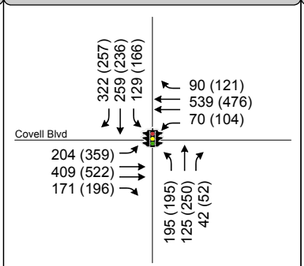
19. Covell Blvd/L St



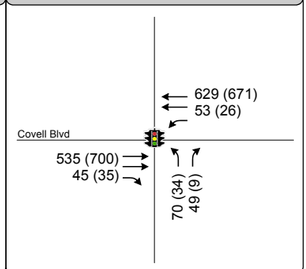
20. Covell Blvd/Oak Tree Plaza Dvwy



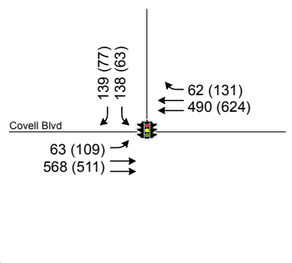
21. Covell Blvd/Pole Line Rd



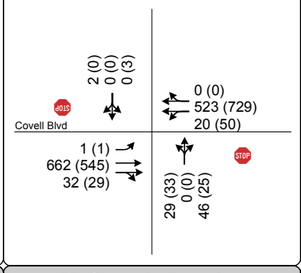
22. Covell Blvd/Birch Ln



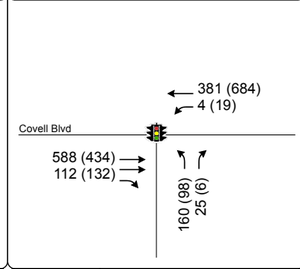
23. Covell Blvd/Wright Blvd



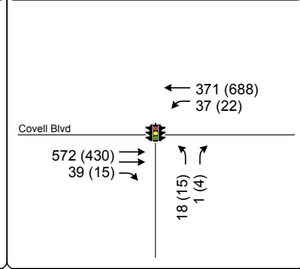
24. Covell Blvd/Monarch Ln



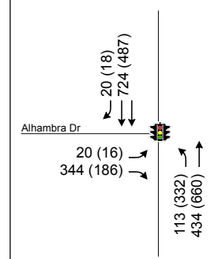
25. Covell Blvd/Alhambra Dr



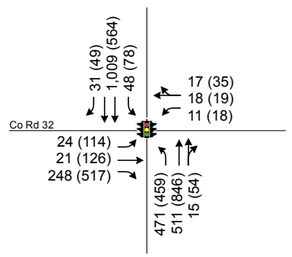
26. Covell Blvd/Harper JHS W. Dwvy



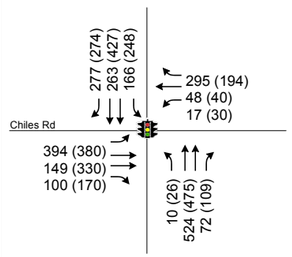
27. Alhambra Dr/Mace Blvd



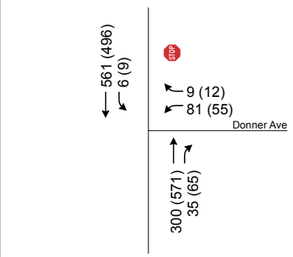
28. Co Rd 32/Mace Blvd/2nd St



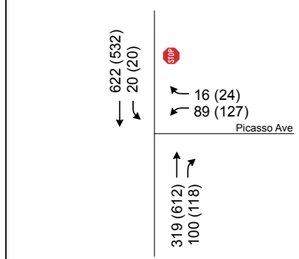
29. Chiles Rd/Mace Blvd



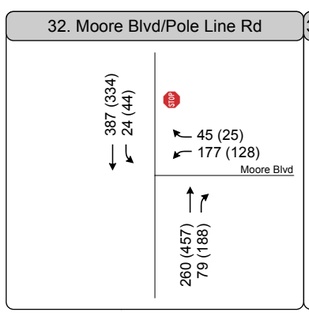
30. Donner Ave/Pole Line Rd



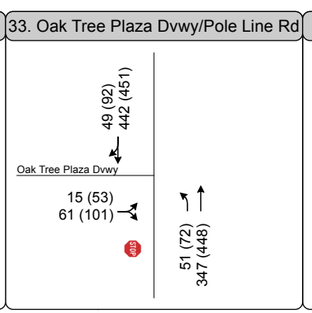
31. Picasso Ave/Pole Line Rd



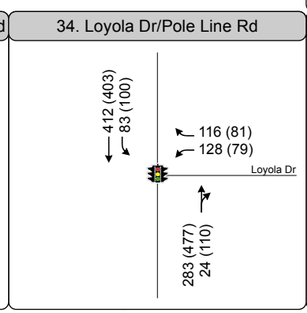
32. Moore Blvd/Pole Line Rd



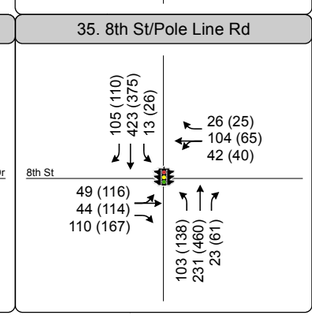
33. Oak Tree Plaza Dvwy/Pole Line Rd



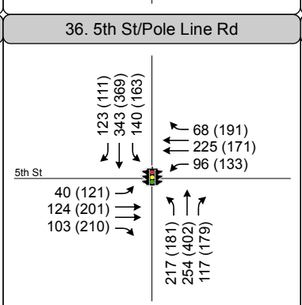
34. Loyola Dr/Pole Line Rd



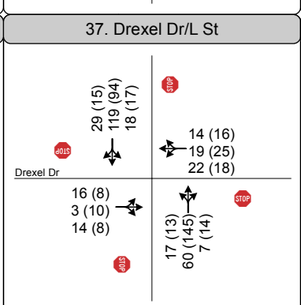
35. 8th St/Pole Line Rd



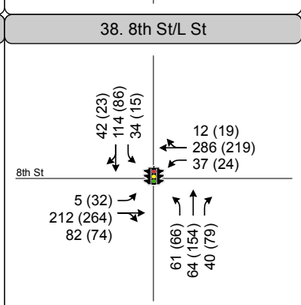
36. 5th St/Pole Line Rd



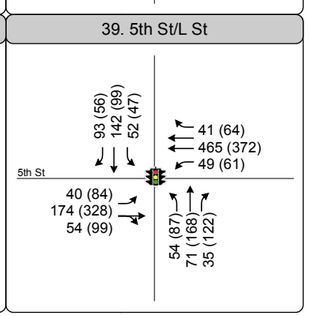
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS PROJECT CONDITIONS

FIGURE 3.14-5B

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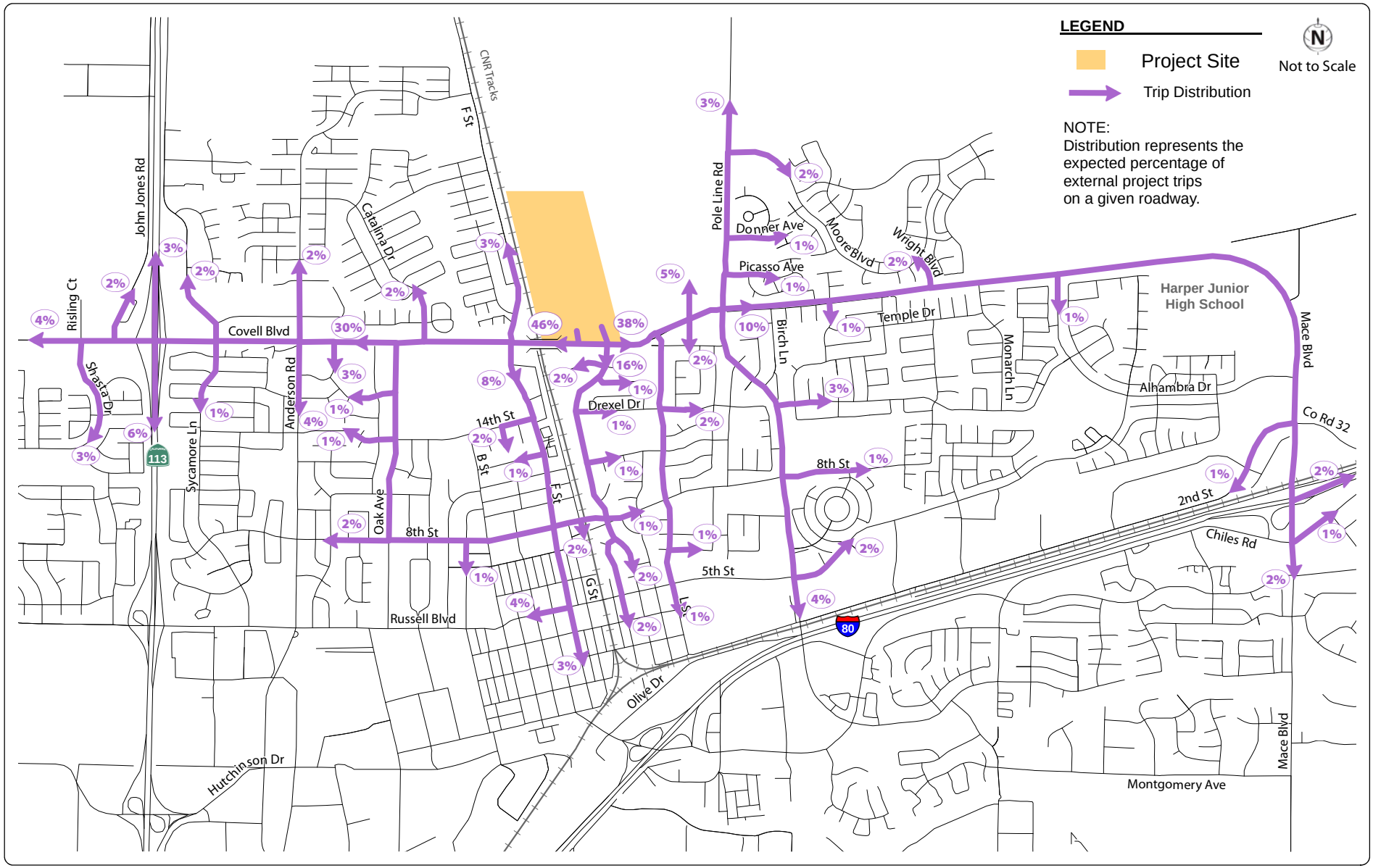

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EXPECTED DISTRIBUTION OF TRIPS - CUMULATIVE PLUS PROJECT CONDITIONS

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FIGURE 3.14-6

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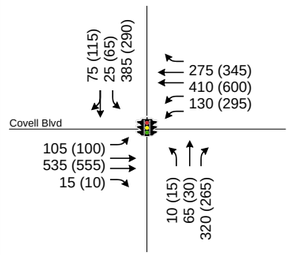
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

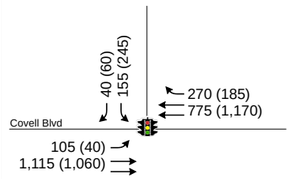
N

Not to Scale

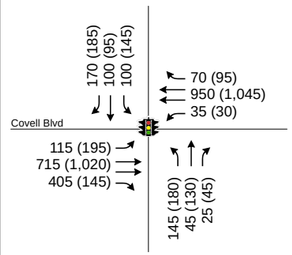
1.Covell Blvd/Risling Ct/Shasta Dr



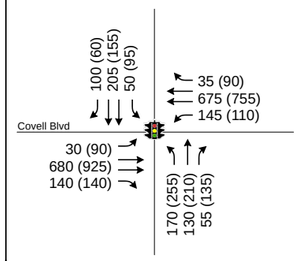
2. Covell Blvd/John Jones Rd



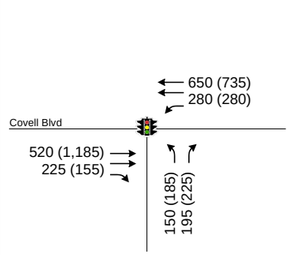
3. Covell Blvd/Sycamore Ln



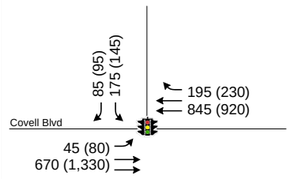
4. Covell Blvd/Anderson Rd



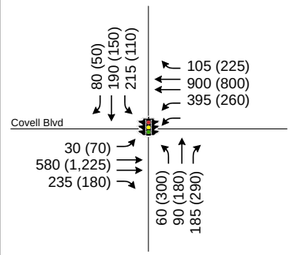
5.Covell Blvd/Oak Ave



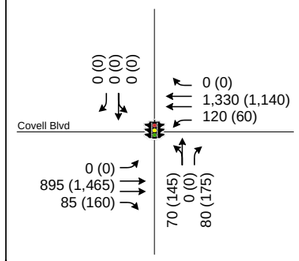
6. Covell Blvd/Catalina Dr



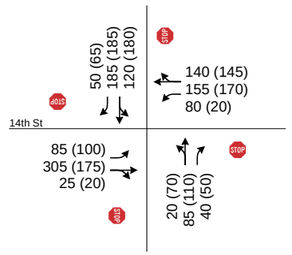
7. Covell Blvd/F St



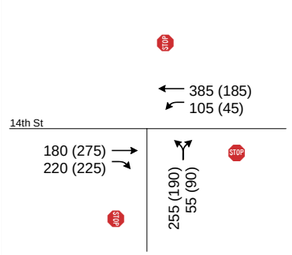
8. Covell Blvd/J St



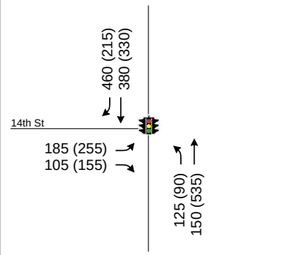
9. 14th St/Oak Ave



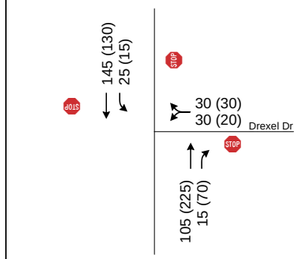
10. 14th St/B St



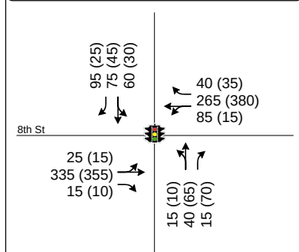
11. 14th St/F St



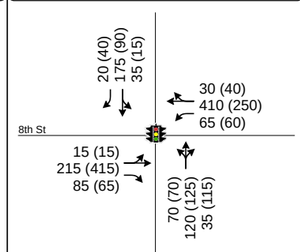
12. Drexel Dr/J St



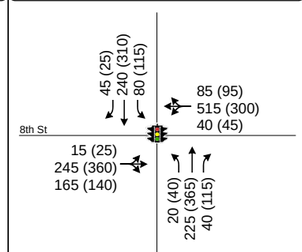
13. 8th St/Oak Ave



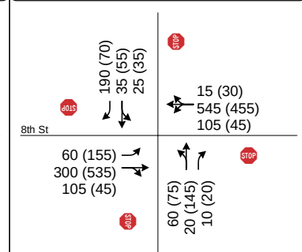
14. 8th St/B St



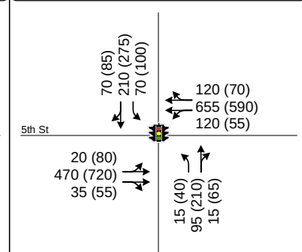
15. 8th St/F St



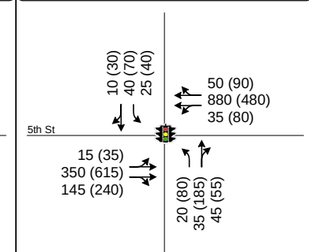
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS RESIDENTIAL)

FIGURE 3.14-7A

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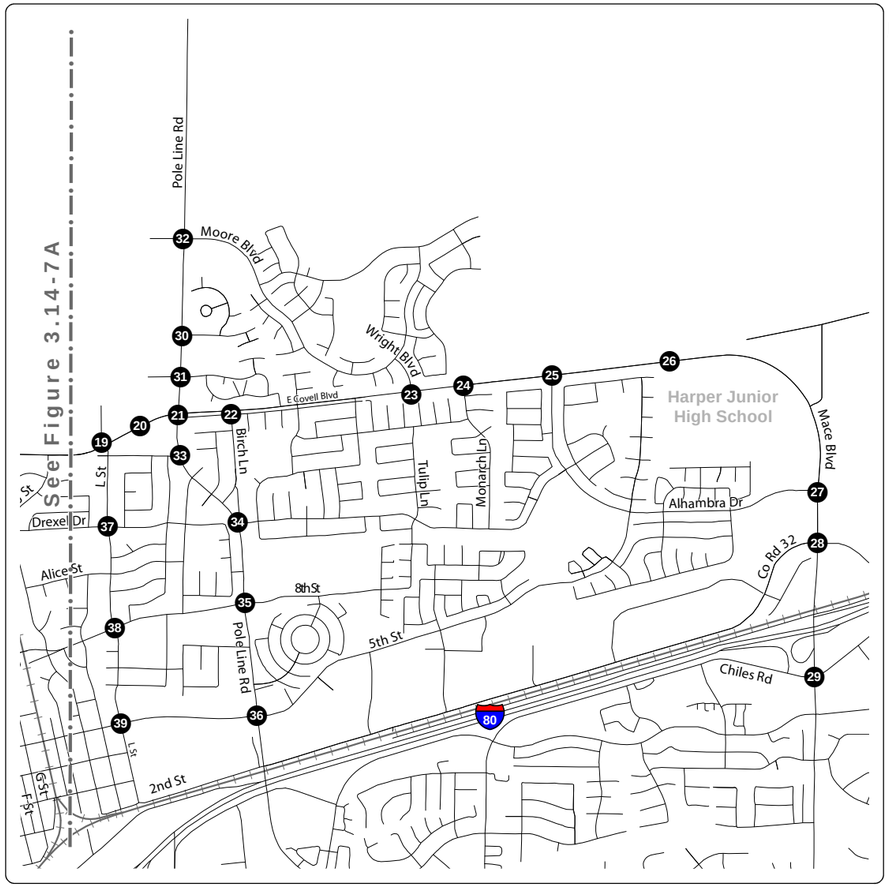
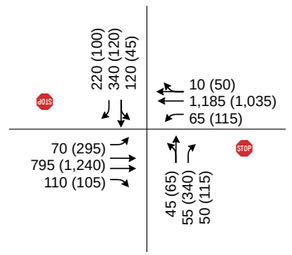


LEGEND

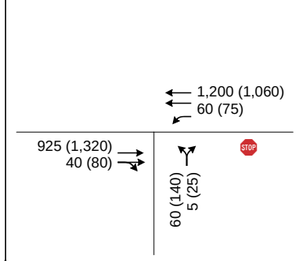
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

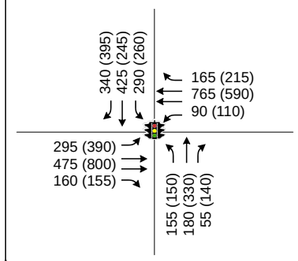
19. Covell Blvd/L St



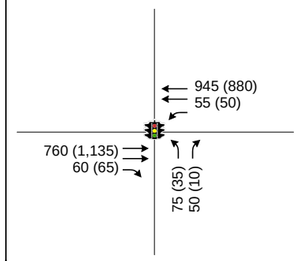
20. Covell Blvd/Oak Tree Plaza Dvwy



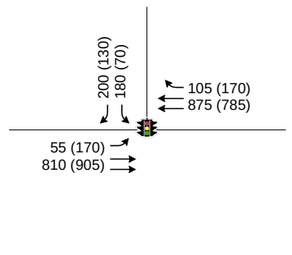
21. Covell Blvd/Pole Line Rd



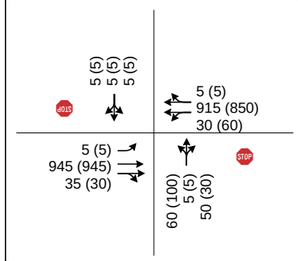
22. Covell Blvd/Birch Ln



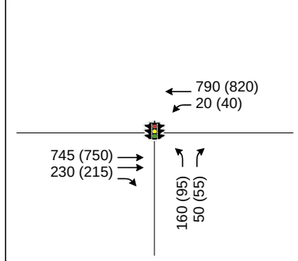
23. Covell Blvd/Wright Blvd



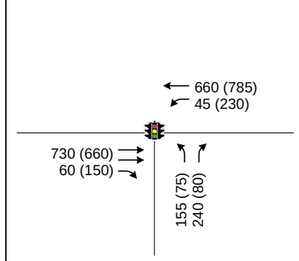
24. Covell Blvd/Monarch Ln



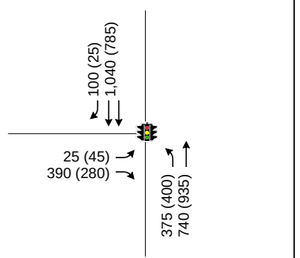
25. Covell Blvd/Alhambra Dr



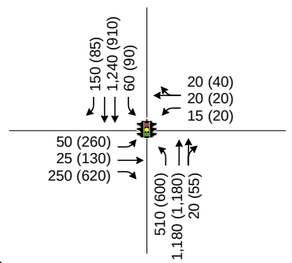
26. Covell Blvd/Harper JHS W. Dvwy



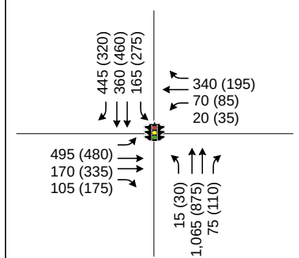
27. Alhambra Dr/Mace Blvd



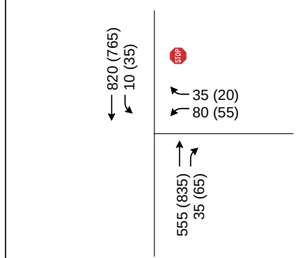
28. Co Rd 32/Mace Blvd/2nd St



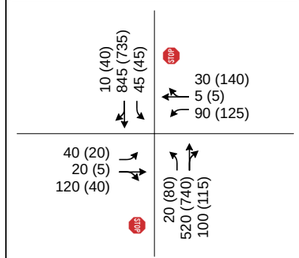
29. Chiles Rd/Mace Blvd



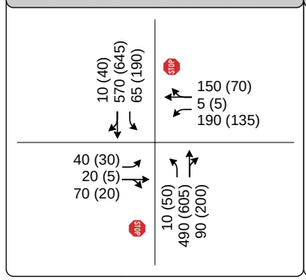
30. Donner Ave/Pole Line Rd



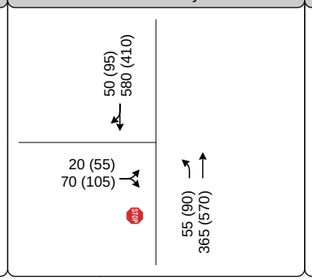
31. Picasso Ave/Pole Line Rd



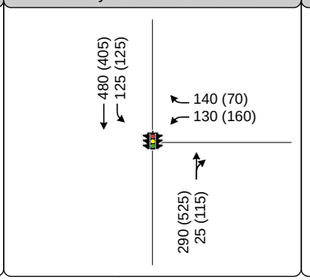
32. Moore Blvd/Pole Line Rd



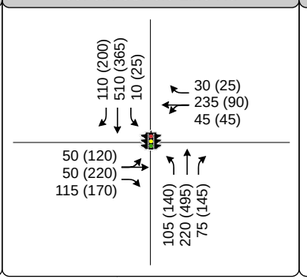
33. Oak Tree Plaza Dvwy/Pole Line Rd



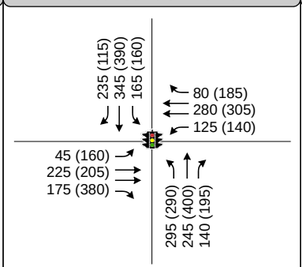
34. Loyola Dr/Pole Line Rd



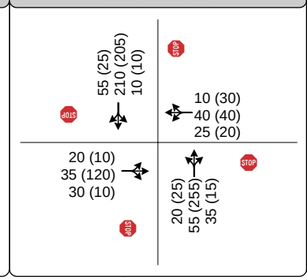
35. 8th St/Pole Line Rd



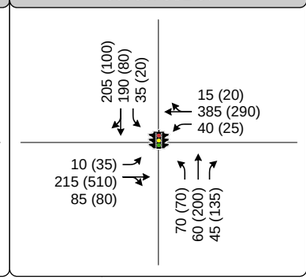
36. 5th St/Pole Line Rd



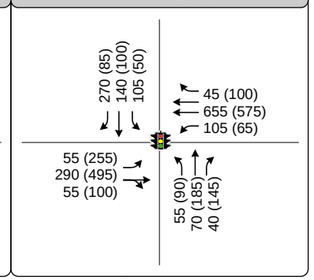
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS RESIDENTIAL)

FIGURE 3.14-7B

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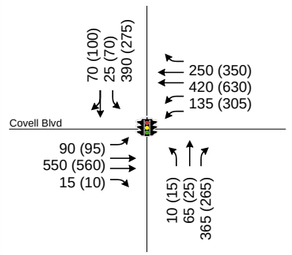
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

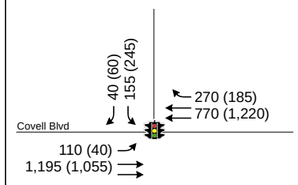
N

Not to Scale

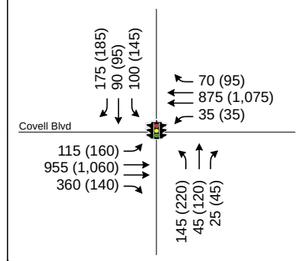
1.Covell Blvd/Risling Ct/Shasta Dr



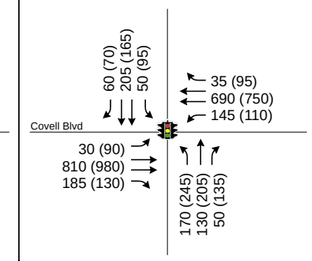
2. Covell Blvd/John Jones Rd



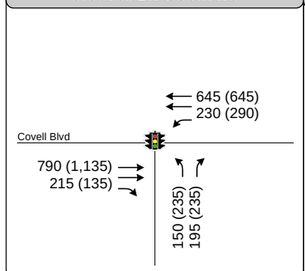
3. Covell Blvd/Sycamore Ln



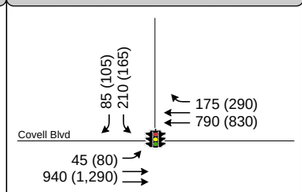
4. Covell Blvd/Anderson Rd



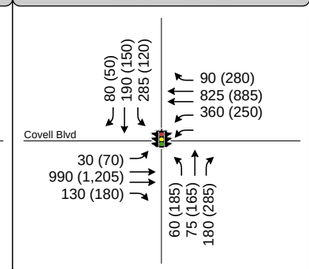
5.Covell Blvd/Oak Ave



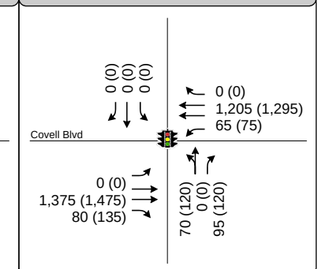
6. Covell Blvd/Catalina Dr



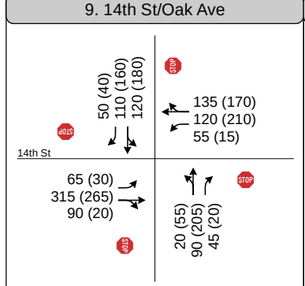
7. Covell Blvd/F St



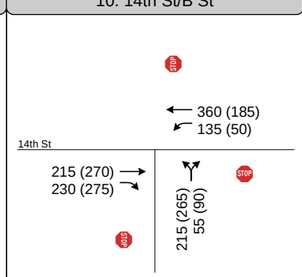
8. Covell Blvd/J St



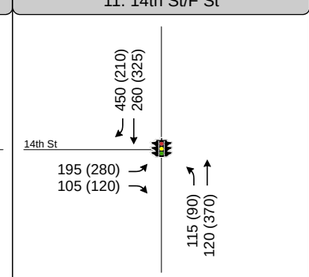
9. 14th St/Oak Ave



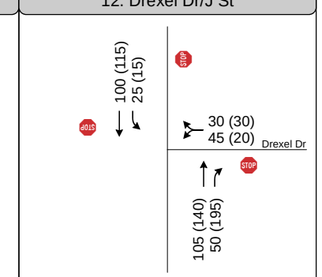
10. 14th St/B St



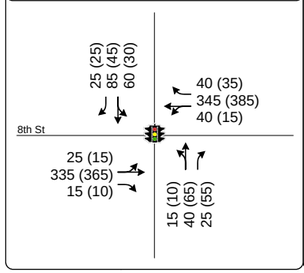
11. 14th St/F St



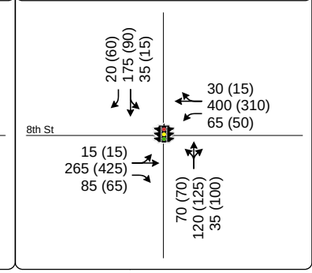
12. Drexel Dr/J St



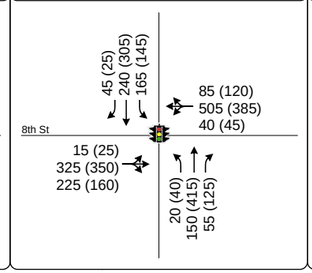
13. 8th St/Oak Ave



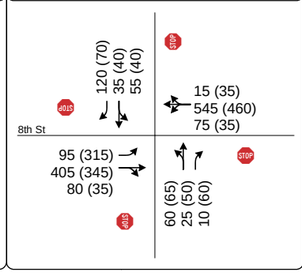
14. 8th St/B St



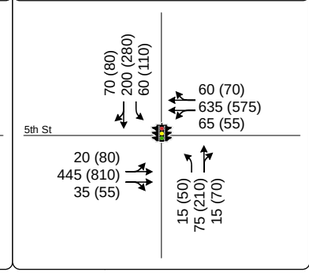
15. 8th St/F St



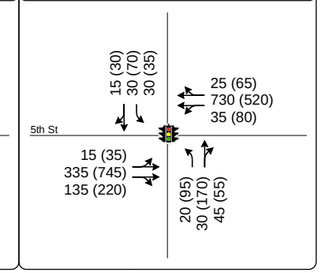
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS LIGHT INDUSTRIAL)

FIGURE 3.14-8A

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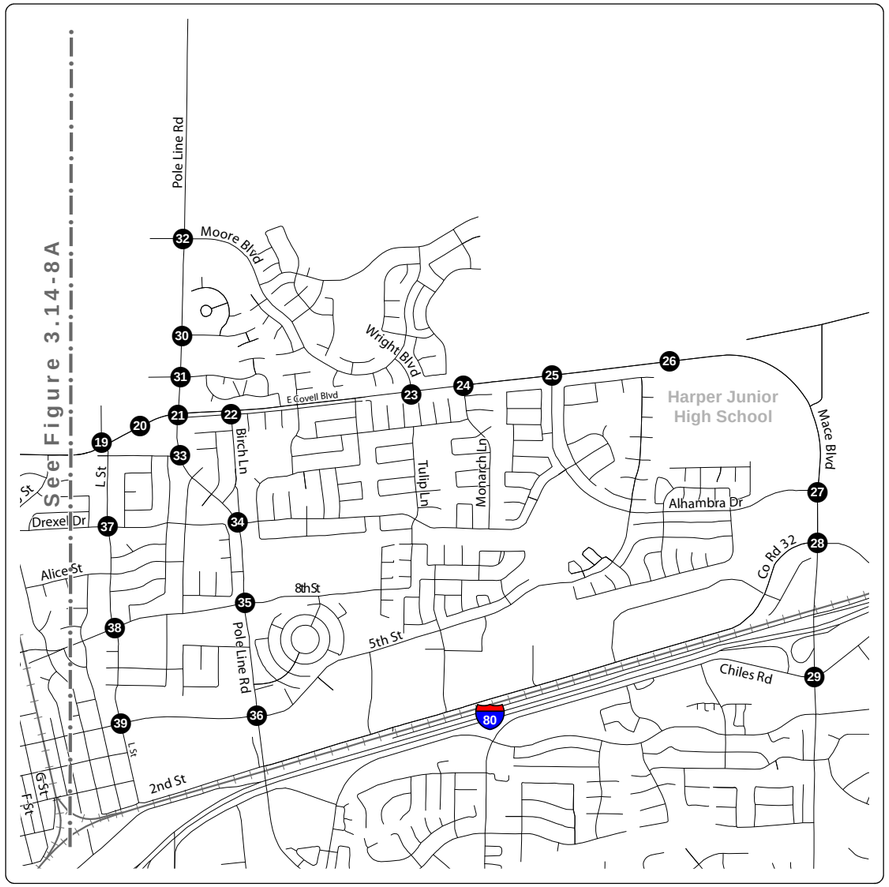
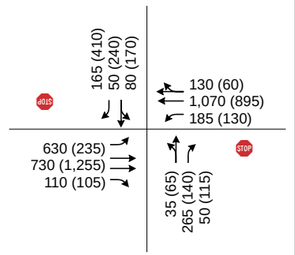


LEGEND

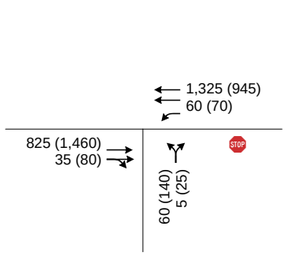
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

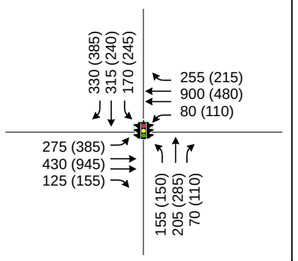
19. Covell Blvd/L St



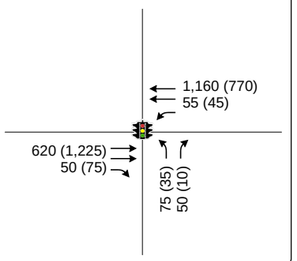
20. Covell Blvd/Oak Tree Plaza Dvwy



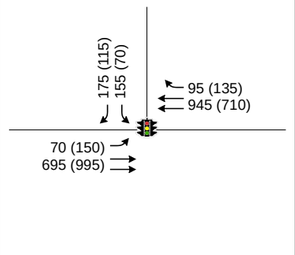
21. Covell Blvd/Pole Line Rd



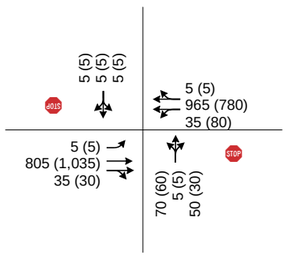
22. Covell Blvd/Birch Ln



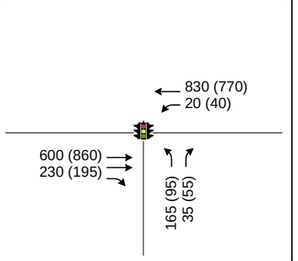
23. Covell Blvd/Wright Blvd



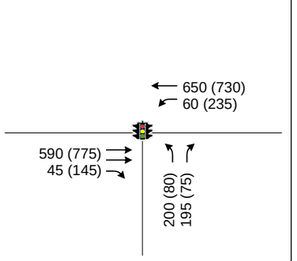
24. Covell Blvd/Monarch Ln



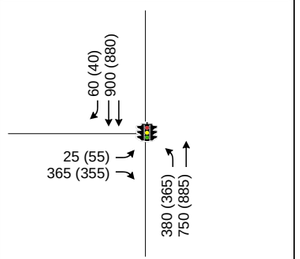
25. Covell Blvd/Alhambra Dr



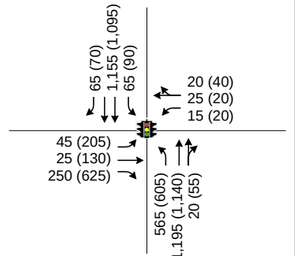
26. Covell Blvd/Harper JHS W. Dvwy



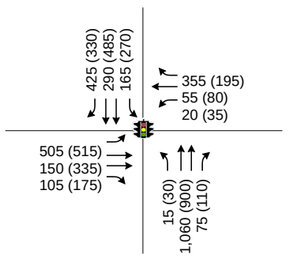
27. Alhambra Dr/Mace Blvd



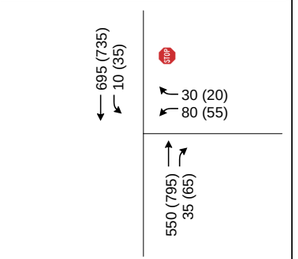
28. Co Rd 32/Mace Blvd/2nd St



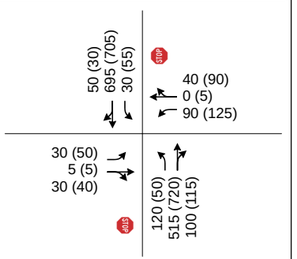
29. Chiles Rd/Mace Blvd



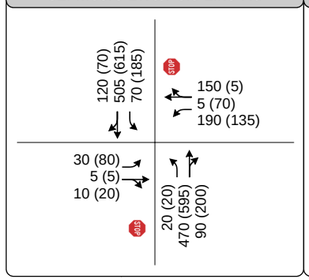
30. Donner Ave/Pole Line Rd



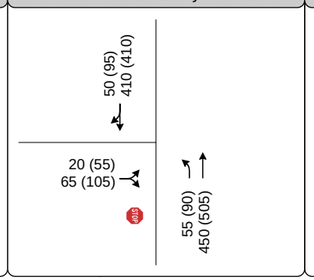
31. Picasso Ave/Pole Line Rd



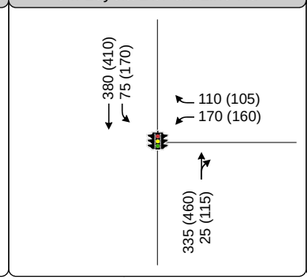
32. Moore Blvd/Pole Line Rd



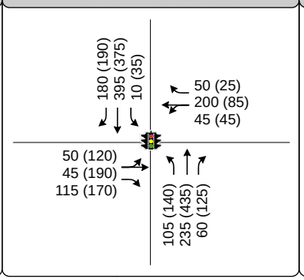
33. Oak Tree Plaza Dvwy/Pole Line Rd



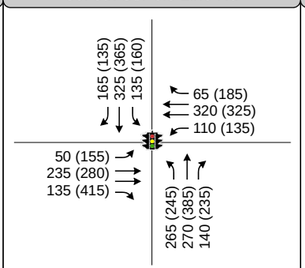
34. Loyola Dr/Pole Line Rd



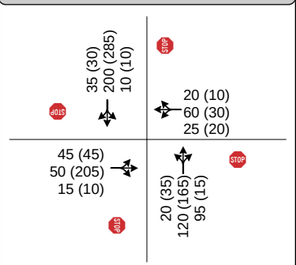
35. 8th St/Pole Line Rd



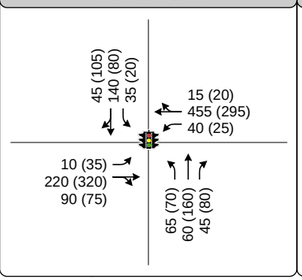
36. 5th St/Pole Line Rd



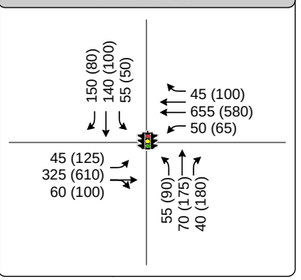
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS LIGHT INDUSTRIAL)

FIGURE 3.14-8B

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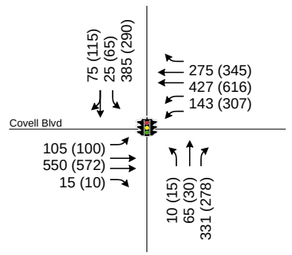
LEGEND

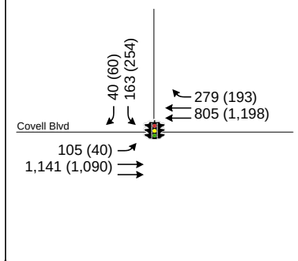
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

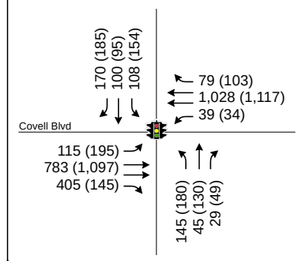
1.Covell Blvd/Risling Ct/Shasta Dr



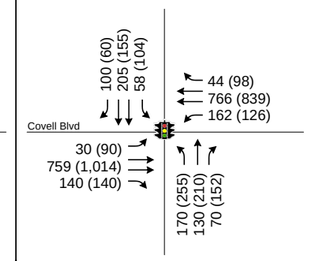
2. Covell Blvd/John Jones Rd



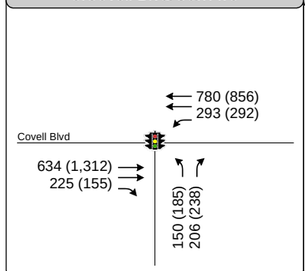
3. Covell Blvd/Sycamore Ln



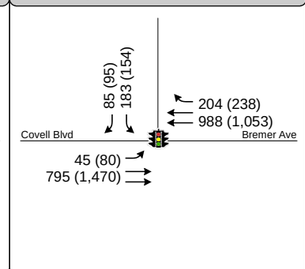
4. Covell Blvd/Anderson Rd



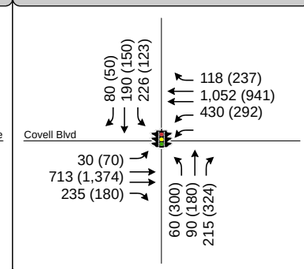
5.Covell Blvd/Oak Ave



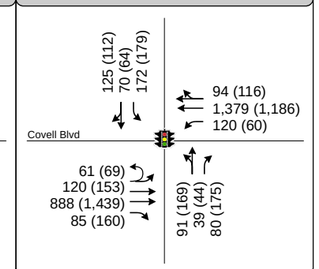
6. Covell Blvd/Catalina Dr



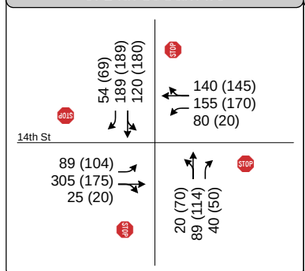
7. Covell Blvd/F St



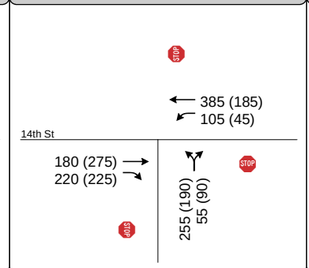
8. Covell Blvd/J St/Road B



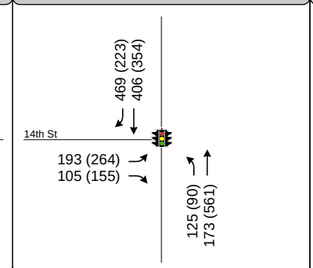
9. 14th St/Oak Ave



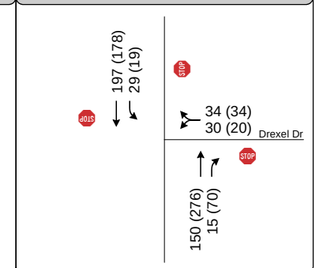
10. 14th St/B St



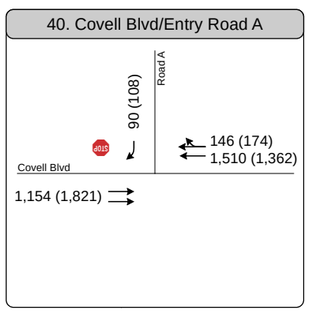
11. 14th St/F St



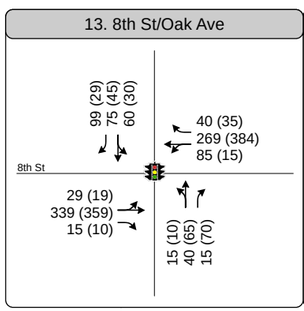
12. Drexel Dr/J St



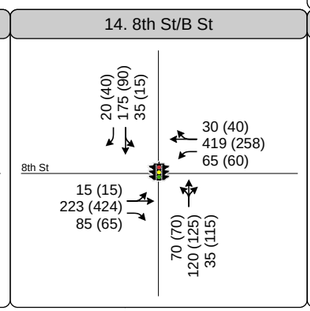
40. Covell Blvd/Entry Road A



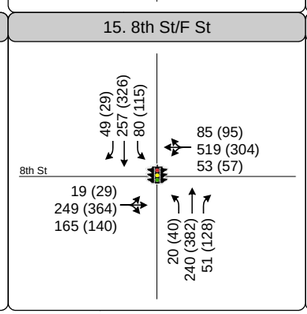
13. 8th St/Oak Ave



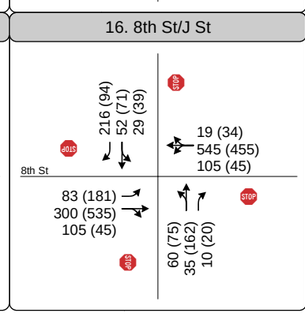
14. 8th St/B St



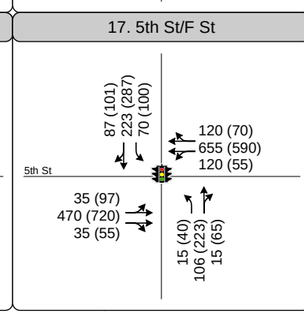
15. 8th St/F St



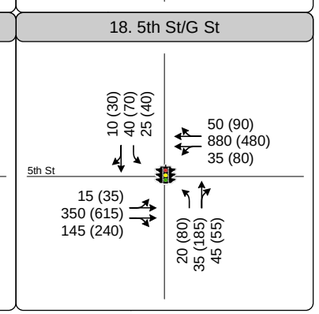
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS RESIDENTIAL)

FIGURE 3.14-9A

FEHR PEERS

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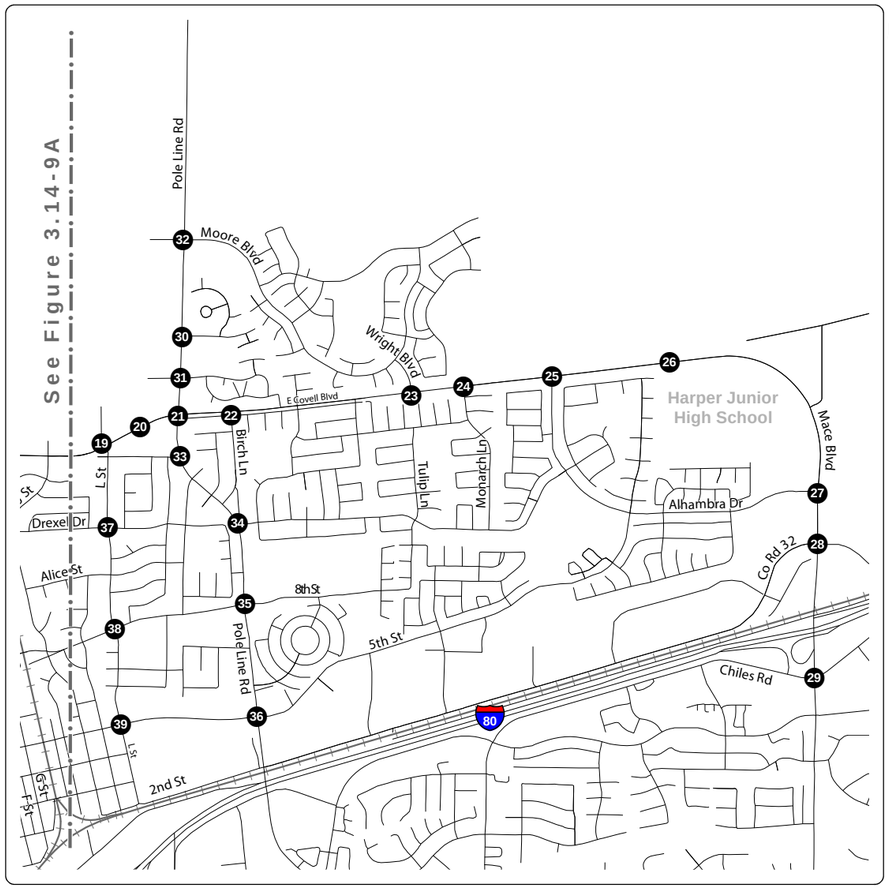


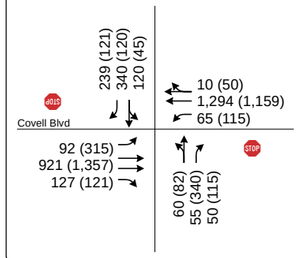
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

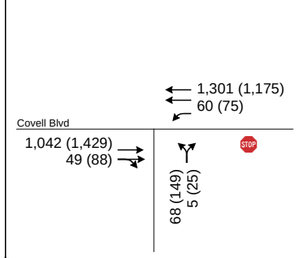
N

Not to Scale

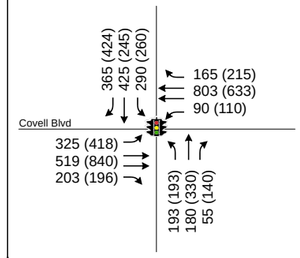
19. Covell Blvd/L St



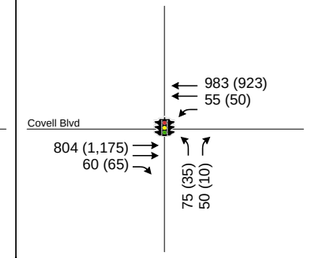
20. Covell Blvd/Oak Tree Plaza Dvwy



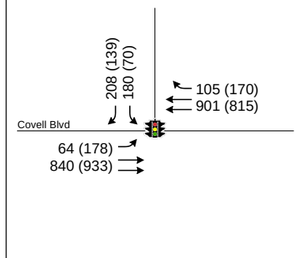
21. Covell Blvd/Pole Line Rd



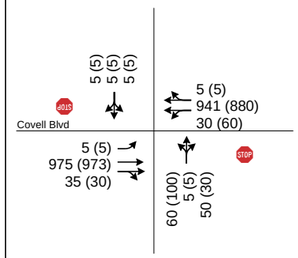
22. Covell Blvd/Birch Ln



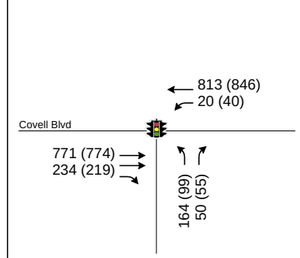
23. Covell Blvd/Wright Blvd



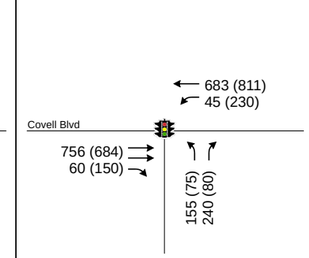
24. Covell Blvd/Monarch Ln



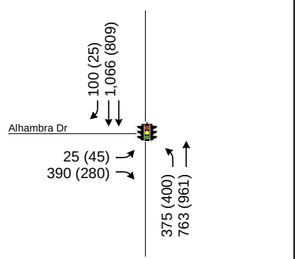
25. Covell Blvd/Alhambra Dr



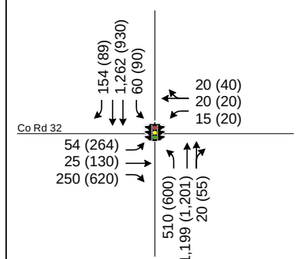
26. Covell Blvd/Harper JHS W. Dvwy



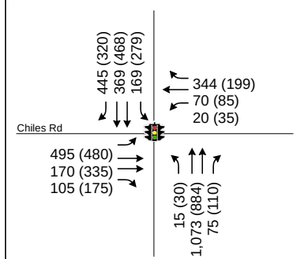
27. Alhambra Dr/Mace Blvd



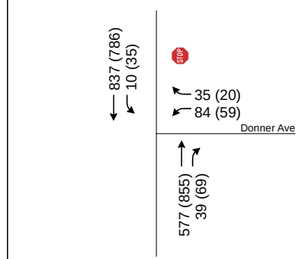
28. Co Rd 32/Mace Blvd



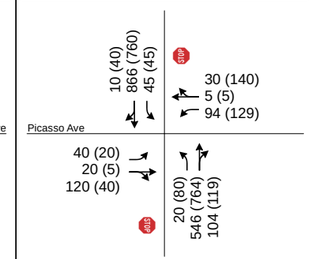
29. Chiles Rd/Mace Blvd/2nd St



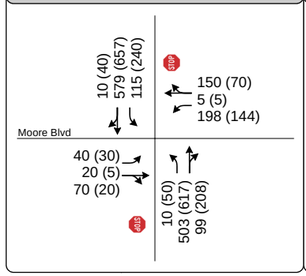
30. Donner Ave/Pole Line Rd



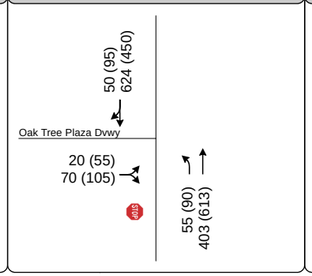
31. Picasso Ave/Pole Line Rd



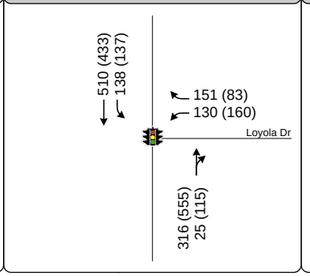
32. Moore Blvd/Pole Line Rd



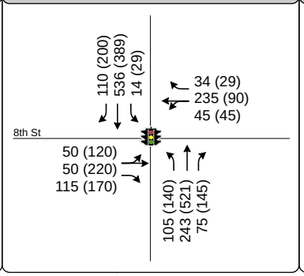
33. Oak Tree Plaza Dvwy/Pole Line Rd



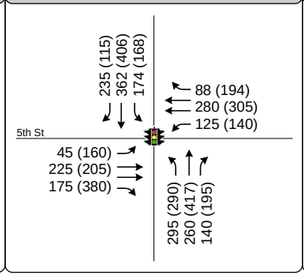
34. Loyola Dr/Pole Line Rd



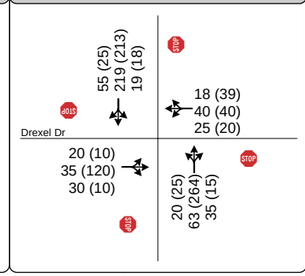
35. 8th St/Pole Line Rd



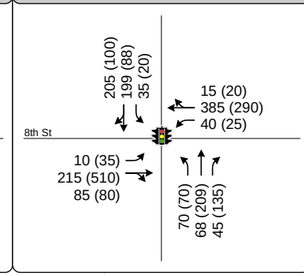
36. 5th St/Pole Line Rd



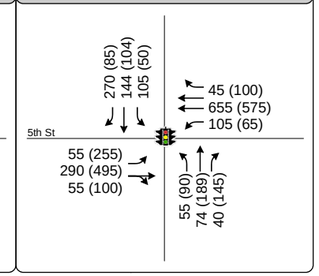
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS RESIDENTIAL)

FIGURE 3.14-9B

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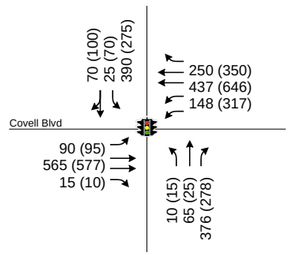
LEGEND

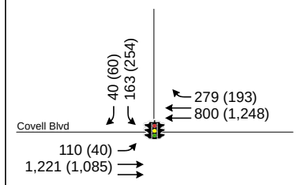
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- Study Intersection

Not to Scale

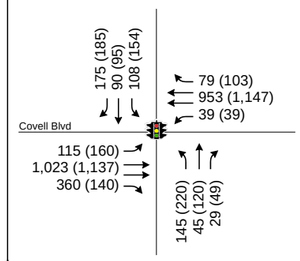
1.Covell Blvd/Risling Ct/Shasta Dr



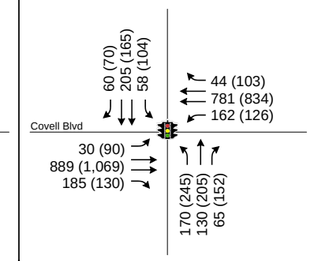
2. Covell Blvd/John Jones Rd



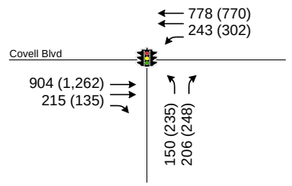
3. Covell Blvd/Sycamore Ln



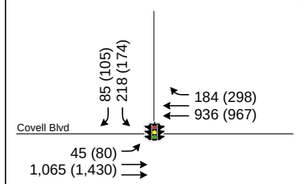
4. Covell Blvd/Anderson Rd



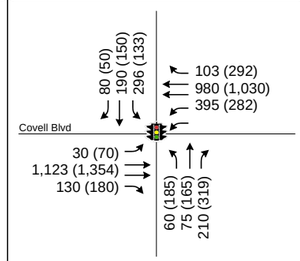
5.Covell Blvd/Oak Ave



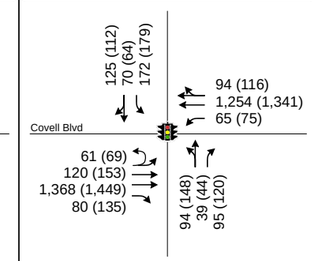
6. Covell Blvd/Catalina Dr



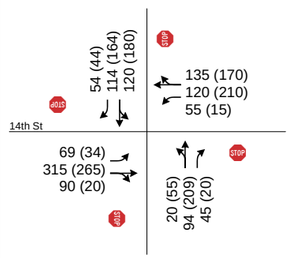
7. Covell Blvd/F St



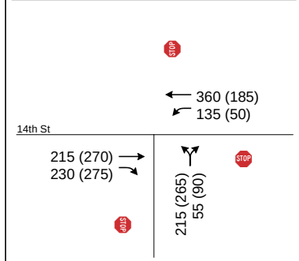
8. Covell Blvd/J St/Road B



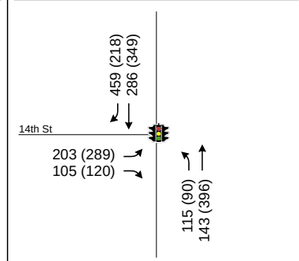
9. 14th St/Oak Ave



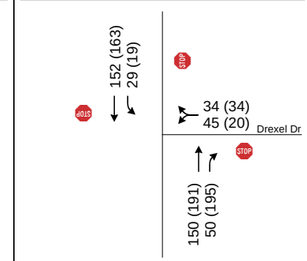
10. 14th St/B St



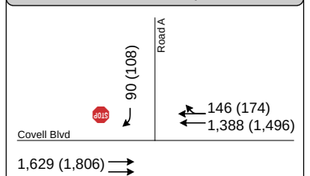
11. 14th St/F St



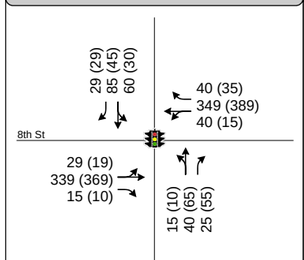
12. Drexel Dr/J St



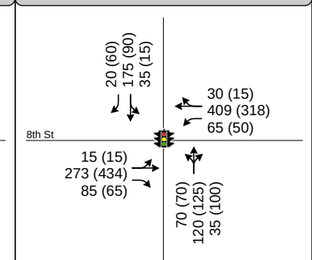
40. Covell Blvd/Entry Road A



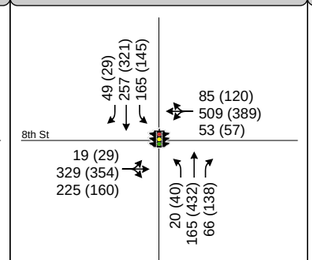
13. 8th St/Oak Ave



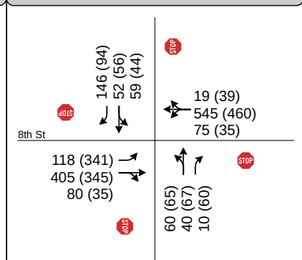
14. 8th St/B St



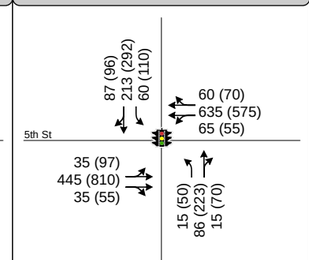
15. 8th St/F St



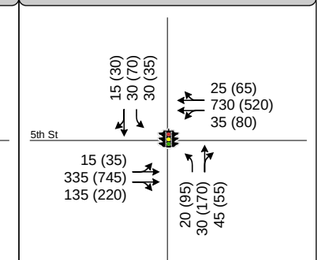
16. 8th St/J St



17. 5th St/F St



18. 5th St/G St



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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS LIGHT INDUSTRIAL)

FIGURE 3.14-10A

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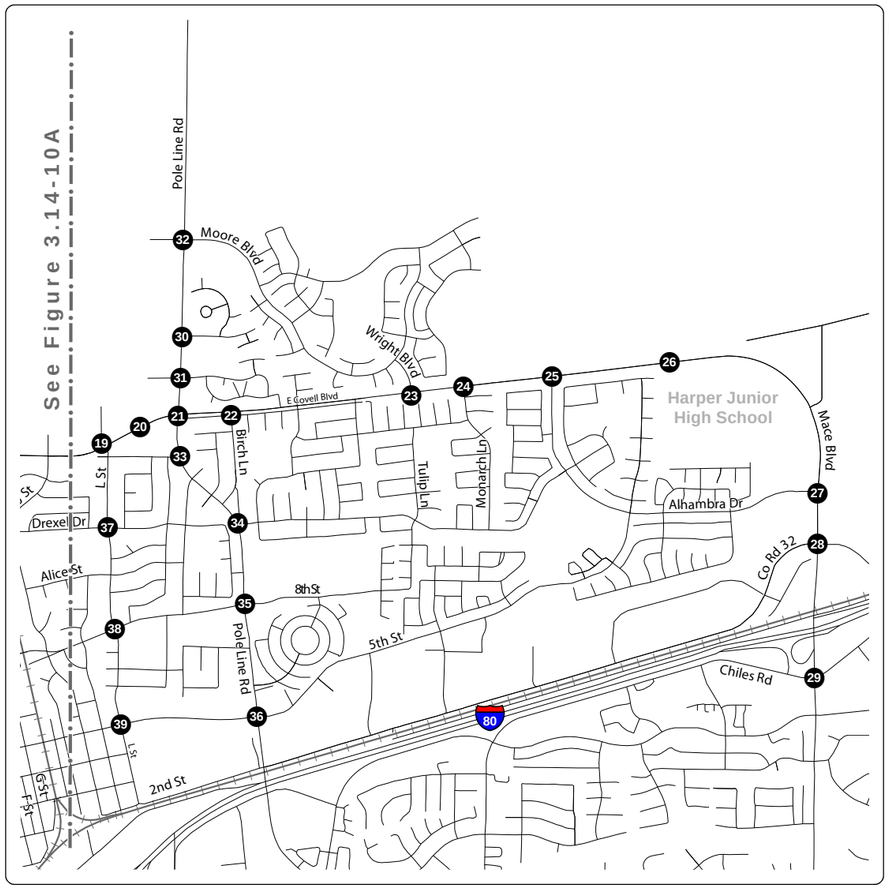
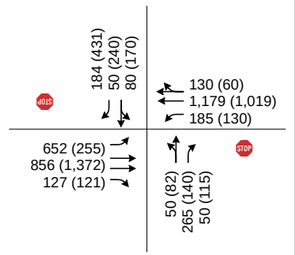


LEGEND

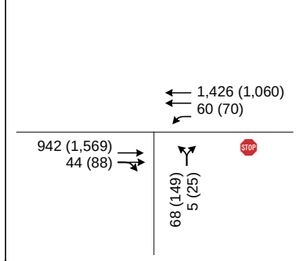
- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Traffic Signal
- Stop Sign
- 1 Study Intersection

Not to Scale

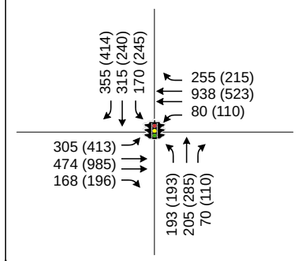
19. Covell Blvd/L St



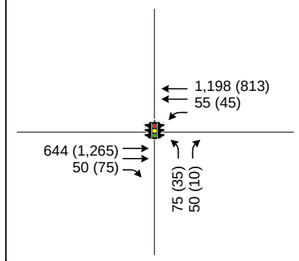
20. Covell Blvd/Oak Tree Plaza Dvwy



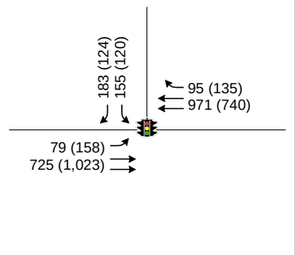
21. Covell Blvd/Pole Line Rd



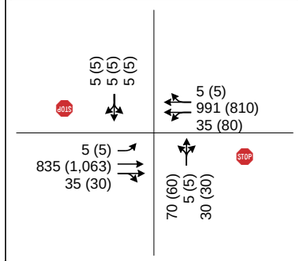
22. Covell Blvd/Birch Ln



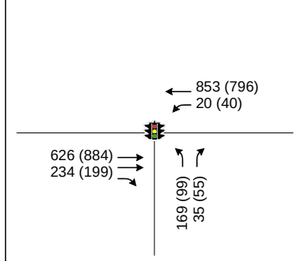
23. Covell Blvd/Wright Blvd



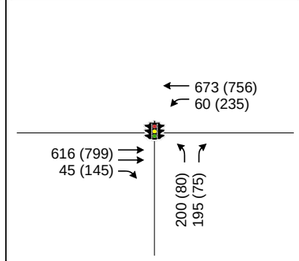
24. Covell Blvd/Monarch Ln



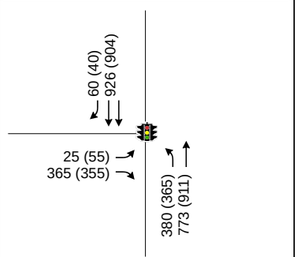
25. Covell Blvd/Alhambra Dr



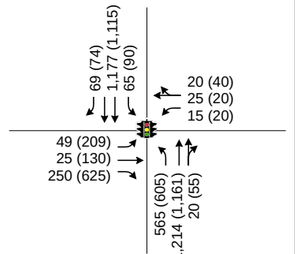
26. Covell Blvd/Harper JHS W. Dvwy



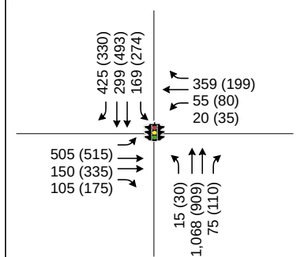
27. Alhambra Dr/Mace Blvd



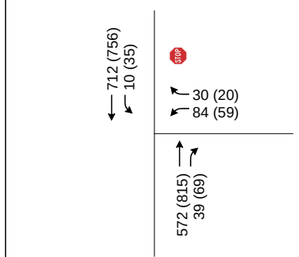
28. Co Rd 32/Mace Blvd



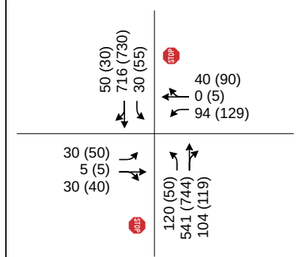
29. Chiles Rd/Mace Blvd/2nd St



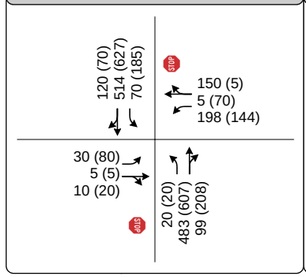
30. Donner Ave/Pole Line Rd



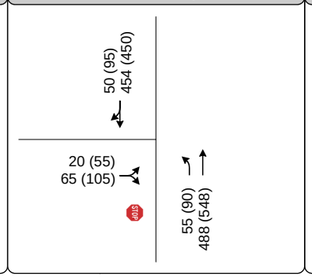
31. Picasso Ave/Pole Line Rd



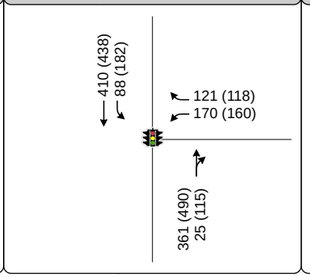
32. Moore Blvd/Pole Line Rd



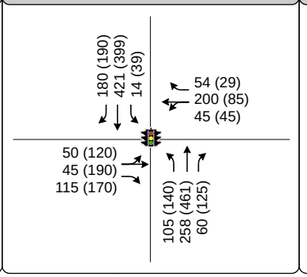
33. Oak Tree Plaza Dvwy/Pole Line Rd



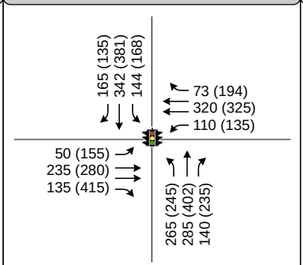
34. Loyola Dr/Pole Line Rd



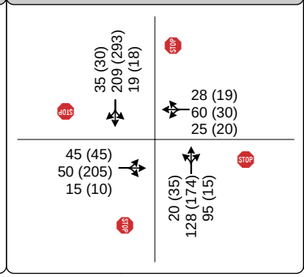
35. 8th St/Pole Line Rd



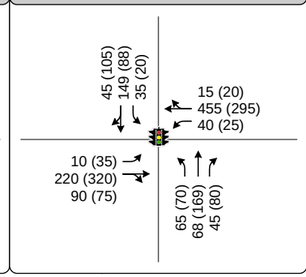
36. 5th St/Pole Line Rd



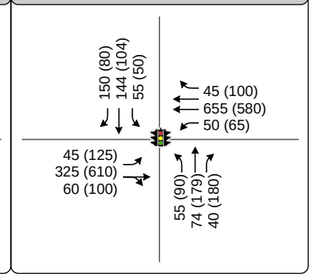
37. Drexel Dr/L St



38. 8th St/L St



39. 5th St/L St



FEHR PEERS

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PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS PROJECT CONDITIONS (WITH COVELL VILLAGE DEVELOPED AS LIGHT INDUSTRIAL)

FIGURE 3.14-10B

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