5 Transportation and Circulation

The City of Turlock is located in the heart of the Central Valley in Stanislaus County, California. The City belongs to a series of communities in the California Central Valley that are located adjacent to State Route 99 (SR 99). The City is also the northern terminus of State Route 165 that connects the City to State Route 152 and Interstate 5 to the south. Located on these regional corridors, Turlock serves as an important regional connection point for both passenger travel and agricultural and industrial goods movement. With Amtrak, Union Pacific Railroad (UPRR) and Burlington Northern Santa Fe either passing through or near the City, Turlock is located on a multi-modal corridor important to the City to continue to thrive socially and economically into the future.

5.1 INTRODUCTION

This chapter summarizes the current transportation facilities and circulation system in the City. The City's roadway facilities are described in the context of a regional setting and existing service levels are included on critical City facilities. Daily and peak hour traffic volumes are presented and facilities with surplus or deficit capacity are identified. Existing pedestrian facilities and bicycle routes will also be discussed. This chapter will look at the City's local transit facilities and linkages to regional transit routes. Lastly, this chapter will examine rail and air transportation access within and/or in the immediate vicinity of City Limits. The chapter is subdivided into the following sections:

- Commute Trends in the City of Turlock
- Streets and Highways
- Pedestrian and Bicycle Routes
- Public Transportation
- Railroads
- Airports

5.2 COMMUTE TRENDS IN THE CITY OF TURLOCK

Prior to examining the various transportation modes in the City, the following sub-section will examine some recent trends and current facts concerning commuter mode-choice and travel times in the City. Data from the United States Census Bureau's 2005-2007 American Community Survey, Census 2000, and 1990 Census have been included.

Table 5-1 presents the various means of transportation reported in the City of Turlock in 2007, 2000, and 1990. As presented in Table 5-1, the number of workers has steadily increased since the 1990 census data. The proportional share of those workers staying at home has also increased steadily, and notably between the 2000 data and 2007 data. These statistics indicate a decrease in workers choosing to drive alone, take public transportation, motorcycle, or bicycle, while indicating an increasing number of workers choosing to walk, carpool, or work from home.

The 2005-2007 American Community Survey data indicates that currently about 77 percent of Turlock's workers commute alone, just under 15 percent carpool, under five percent work at home, under three percent walk, and less than one percent each take public transportation, taxicab or motorcycle, or bicycle.

Table 5-1 Means of Transportation and Carpooling Statistics

Means of Transportation and Carpooling	*2007* [1]		*2000* [2]		*1990* [3]	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Workers 16 and over:	30,874	100.0%	21,764	100.0%	17,456	100.0%
Car, truck, or van	28342	91.8%	19,989	91.8%	16,116	92.3%
Drove alone	23835	77.2%	17,275	79.4%	13,876	79.5%
Carpooled	4508	14.6%	2,714	12.5%	2,240	12.8%
In 2-person carpool	3026	9.8%	1,903	8.7%		
In 3-person carpool	370	1.2%	487	2.2%		
In 4-or-more person carpool	1111	3.6%	324	1.5%		
Public transportation	93	0.3%	110	0.5%	80	0.5%
Taxicab, motorcycle, or other means	93	0.3%	175	0.8%	122	0.7%
Bicycle	185	0.6%	232	1.1%	221	1.3%
Walked	772	2.5%	660	3.0%	580	3.3%
Worked at home	1389	4.5%	598	2.7%	337	1.9%

Sources:
1. U.S. Census Bureau, 2005-2007 American Community Survey
2. U.S. Census Bureau, Census 2000 Summary File 3, Matrices P30, P31, P33, P34, and P35.
3. U.S. Bureau of the Census, 1990 Census of Population and Housing

- Within the commuting segment of workers, the number of those commuters driving alone has increased every year, but proportionally decreased to the number of citywide workers. Some commuters' choices seem to be shifting towards car-pools, as evidenced in the net and proportional increases in carpooling commuters since 1990. The number of workers commuting by public transportation, taxicab, motorcycle, and bicycle decreased from 2000 to 2007. From 1990 to 2000, these commuters increased in net numbers, although the proportion of workers choosing these travel modes has decreased consistently from 1990 to 2000 to 2007.

- Table 5-2 presents commute travel time survey results for 2007, 2000, and 1990. Mean travel time to work increased by about three minutes from 1990 to 2000, but has since decreased about a minute from 2000 to 2007. About 41 percent of commuters currently travel less than 15 minutes to work. About 75 percent of workers commute under 30 minutes. Average commute times over all are shorter in 2007 than in 2000, down to 21.5 minutes from 22.2. Average commute times were slightly lower in 1990 at 19 minutes. Relatively short commute times indicate that most employment is localized within the City. The spike in commutes between 30 and 35 minutes likely indicates commutes to regional employment hubs in Merced, Modesto, or Stockton.

- As discussed in Chapter 2, much of Turlock's employment is in local services. Figure 5-1 shows the location of eight of the top Turlock employers. The two high schools are used to represent the Turlock Unified School District, which is the largest employer in the city. Figure 5-2 illustrates the travel patterns to each of the destinations shown in Figure 5-1. Each colored pixel represents 100 trips during the PM peak hour, so thicker the line, the more trips.

Table 5-2 Travel Time to Work

Travel Time to Work	*2007* [1]		*2000* [2]		*1990* [3]	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Workers who did not work at home:	29,485	100.0%	21,166	100.0%	17,119	100.0%
Less than 10 minutes	6,546	22.2%	5,176	24.5%	5,065	29.6%
10 to 14 minutes	5,661	19.2%	4,040	19.1%	3,317	19.4%
15 to 19 minutes	4,393	14.9%	2,682	12.7%	2,102	12.3%
20 to 24 minutes	3,450	11.7%	2,975	14.1%	2,184	12.8%
25 to 29 minutes	2,182	7.4%	1,333	6.3%	806	4.7%
30 to 34 minutes	3,273	11.1%	2,040	9.6%	1,717	10.0%
35 to 44 minutes	1,091	3.7%	671	3.2%	478	2.8%
45 to 59 minutes	1,327	4.5%	862	4.1%	701	4.1%
60 or more minutes	1,533	5.2%	1,387	6.6%	749	4.4%
Mean travel time to work (minutes)	21.5		22.2		19.0	

Sources: 1. U.S. Census Bureau, 2005-2007 American Community Survey
2. U.S. Census Bureau, Census 2000 Summary File 3, Matrices P30, P31, P33, P34, and P35.
3. U.S. Bureau of the Census, 1990 Census of Population and Housing

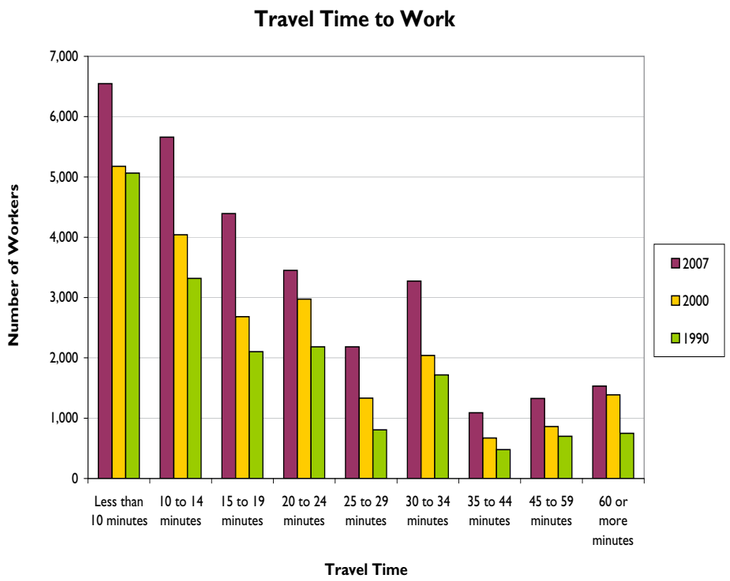


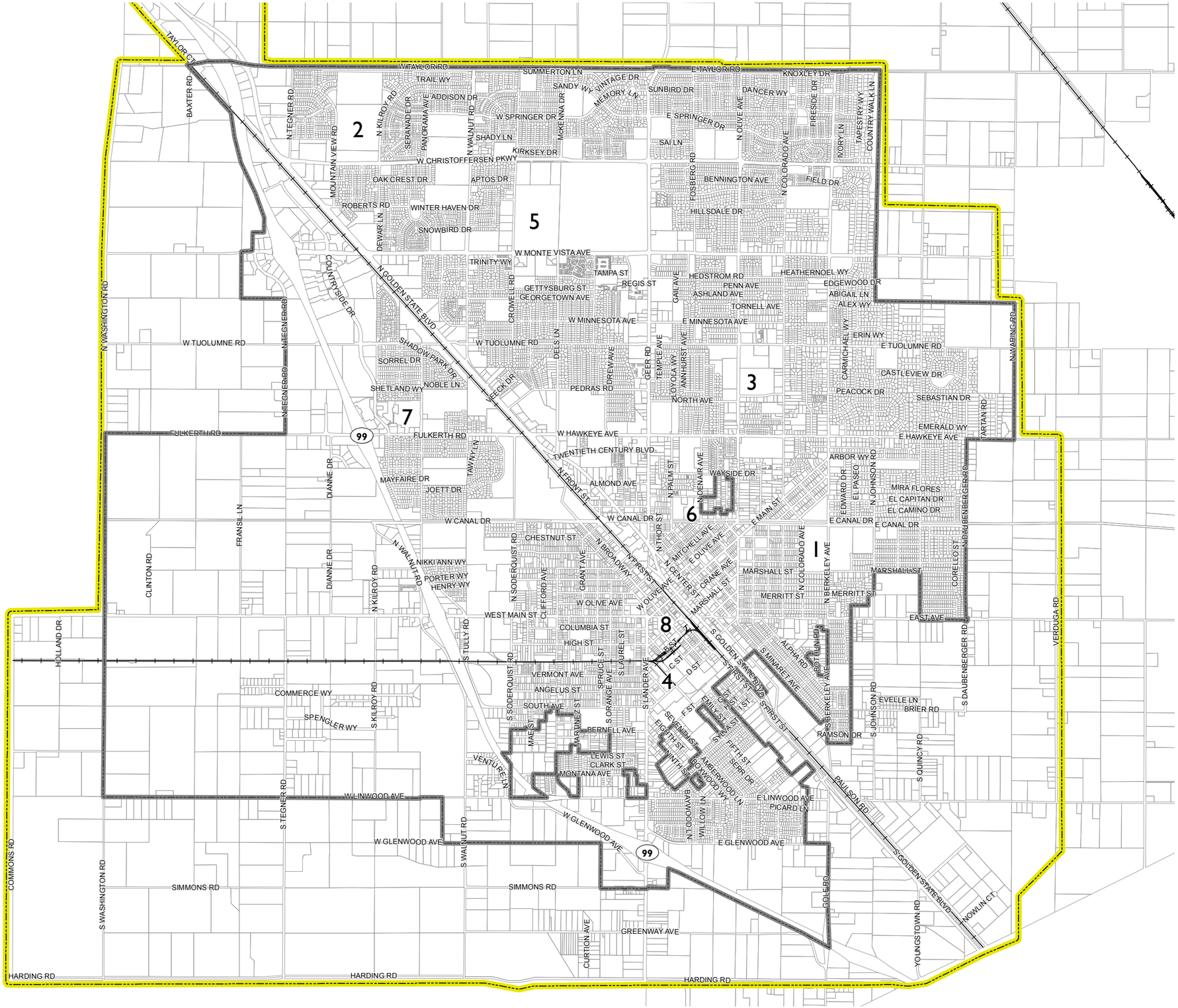
Table 5-3 presents City of Turlock commuter choices and statistics against averages for the State of California. City commuters chose to carpool slightly less, on average, than the State mean. Public transportation use, however, is significantly lower than the State mean. This is not surprising considering the relatively limited transit services in the city. Travel times for commuters are also shorter on average than the State mean, despite there being more workers commuting out of County for jobs than on a statewide basis.

Table 5-3 City and State Commuter Statistics

Geographic Area	*Workers 16 Years and older*			
	Percent in carpools	*Percent using public transportation*	*Who did not work at home - Mean travel time to work (minutes)*	*Percent work outside cou of residenc*
California	14.5	5.1	27.7	17.1
Turlock City, Stanislaus County	12.5	0.7	22.2	18.1

Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrices P26, P30, P31, P33, P43, P45, and P46

Figure 5-1: Major Employment Centers



1. Turlock High School
2. Pitman High School
3. Emanuel Medical Center
4. Foster Farms
5. CSU, Stanislaus
6. Turlock Irrigation District
7. Wal-Mart
8. City of Turlock

Planning Area Boundary

City Limits & County Islands

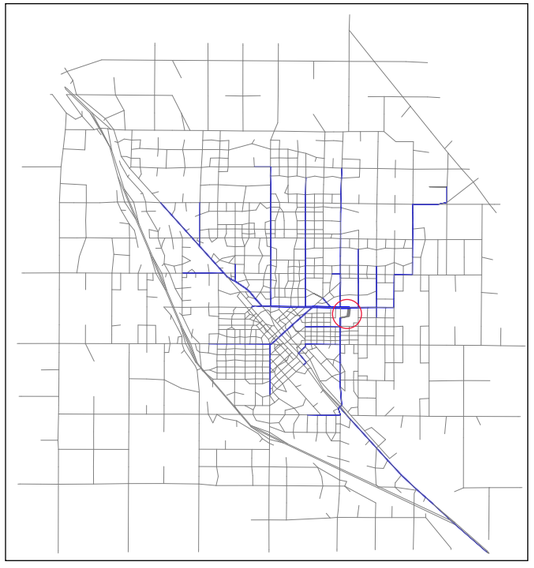
25
5
Acres

0 0.25 0.5 1 Miles

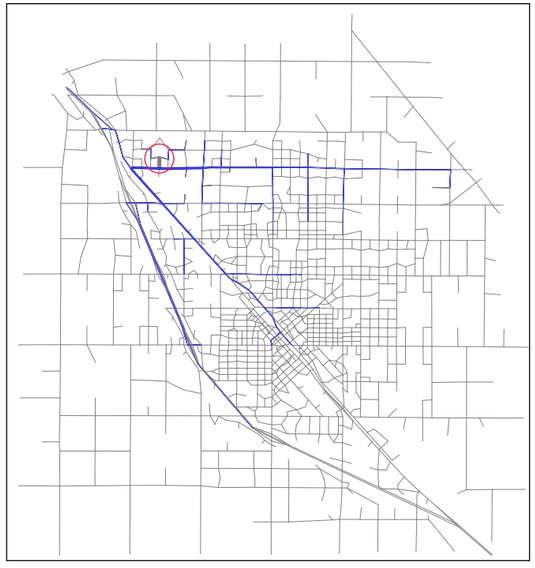
Source: Employment sites data, Dyett and Bhatia, 2009; Map base data, City of Turlock, 2008.

Figure 5-2: Travel Patterns to Employment Destinations

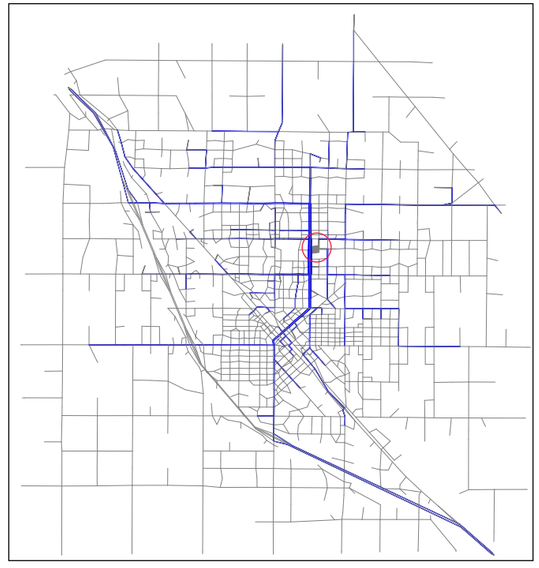
1. Turlock High School



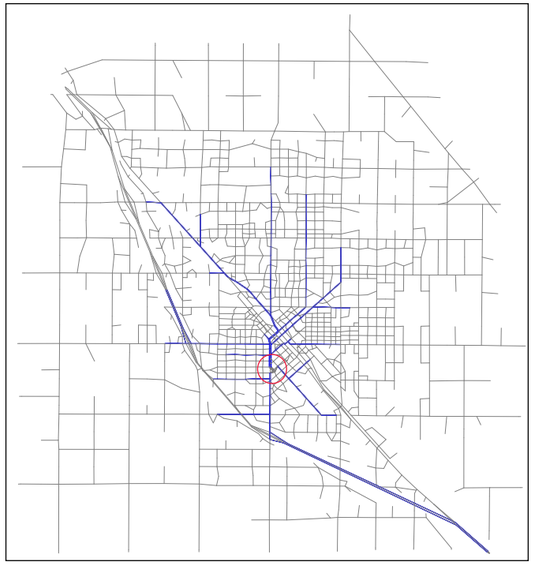
2. PItman High School



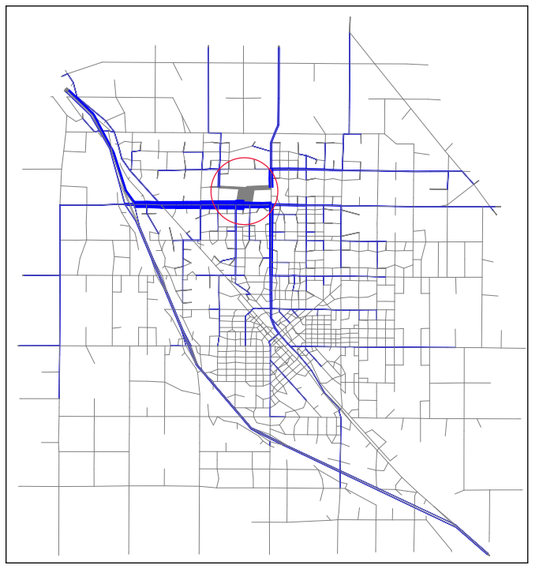
3. Emanuel Medical Center



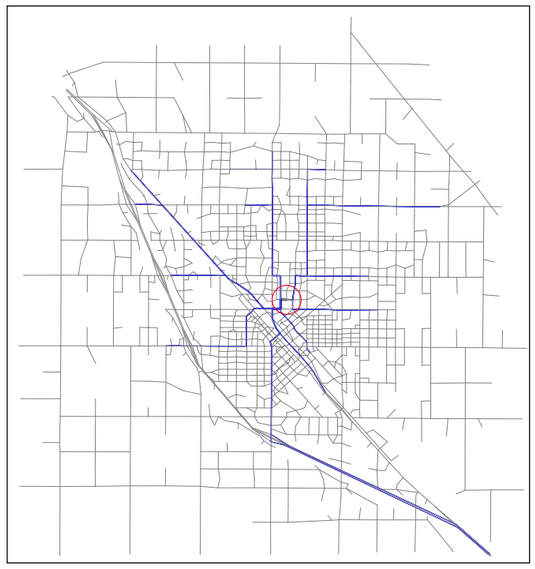
4. Foster Farms



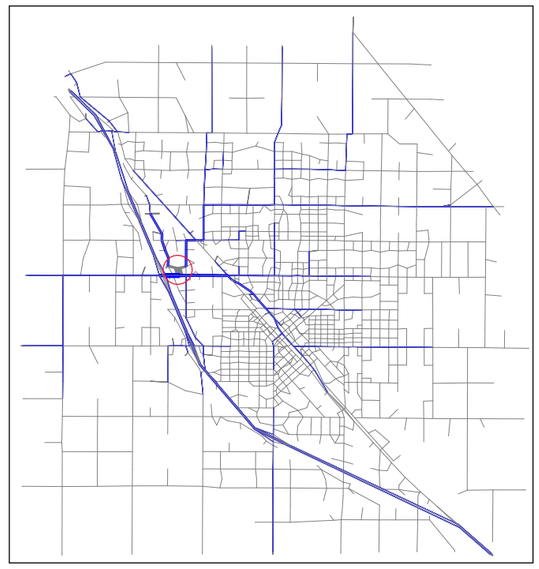
5. CSU, Stanislaus



6. Turlock Irrigation District



7. Wal-Mart



8. City of Turlock

5.3 STREET AND HIGHWAYS

The City of Turlock circulation system includes freeways, expressways, arterials, collectors and local streets. The following section describes the street classifications found in the city and includes a list of citywide facilities included under each classification.

Street Classifications

A hierarchy of variously sized streets provides access to and from residential, commercial, and industrial uses throughout the City and beyond. The Existing circulation system is presented in Figure 5-3. Most City roadways are developed to their General Plan designations. Figure 5-4 shows the existing General Plan circulation system. This map was first developed in the 1993 General Plan, but later updated in 2002. Most recently, the 2002 map was corrected by the City Engineer where roadway classifications from the 2002 update were found inconsistent with the City Engineering department classifications. A route's design, including number of lanes needed, is determined by both its classification and its projected traffic levels. All freeways identified in the General Plan are intended to have three lanes in each direction; all arterials and expressways are intended to have two lanes in each direction plus a turn median. However, there are streets in the City that are classified as arterials that have only one lane in each direction for some or all segments.

Freeways

Freeways provide intra- and inter-regional mobility. Freeway access is restricted to primary arterials via interchanges. State Route 99 (SR 99) is the only Freeway in the Planning Area.

SR 99 traverses the San Joaquin Valley and provides access to the Los Angeles metropolitan area, via Interstate 5 (I-5), and the Sacramento metropolitan area. Between Sacramento and Los Angeles, SR 99 connects the City with the Cities of Stockton, Modesto, Merced, Madera, Fresno, Visalia, and Bakersfield. The freeway is a major commuter and truck travel route. SR 99 has six total travel lanes within the City and forms interchanges with State Route 165/Lander Avenue, Main Street, Fulkerth Road, Monte Vista Avenue, and Taylor Road. South of the City, the freeway forms a unidirectional interchange with Golden State Boulevard that provides northbound off-ramp access and southbound on-ramp access.

Outside the Planning Area, Interstate 5 (I-5) provides further north-south inter-regional transportation. Access to I-5 from Turlock is limited. There are three routes to I-5 from Turlock, two via SR 165 and one via West Main Street. Take SR 165 about 30 miles south from Turlock leads to the City of Los Banos. From there, one can head due south another 9 miles to the Mercey Springs Road / I-5 diamond interchange. Alternatively, one can head west from Los Banos about 7.5 miles on State Route 152 (SR 152) to the SR 152 / I-5 full cloverleaf interchange. Lastly, from Turlock one can also take West Main Street (turns into Las Palmas Avenue) due west about 16 miles to the City of Patterson. From there, one can access the Del Puerto Canyon Road / I-5 diamond interchange.

Expressways

Expressways are located and designed to provide primarily for extended or cross-town travel. Expressway access is limited to abutting properties but vary according to its respective sub-classification. Expressway right-of-way typically varies from 100 to 110 feet. Table 5-4 describes the three sub-classifications for expressways were developed in coordination with Stanislaus County in an attempt to provide intermediate capacity between freeways and arterials. The classifications in Table 5-4 are consistent with the classifications adopted in the Stanislaus Council of Governments (StanCOG) *2001 Regional Transportation Plan*.

Table 5-4 Expressway Design and Access Standards

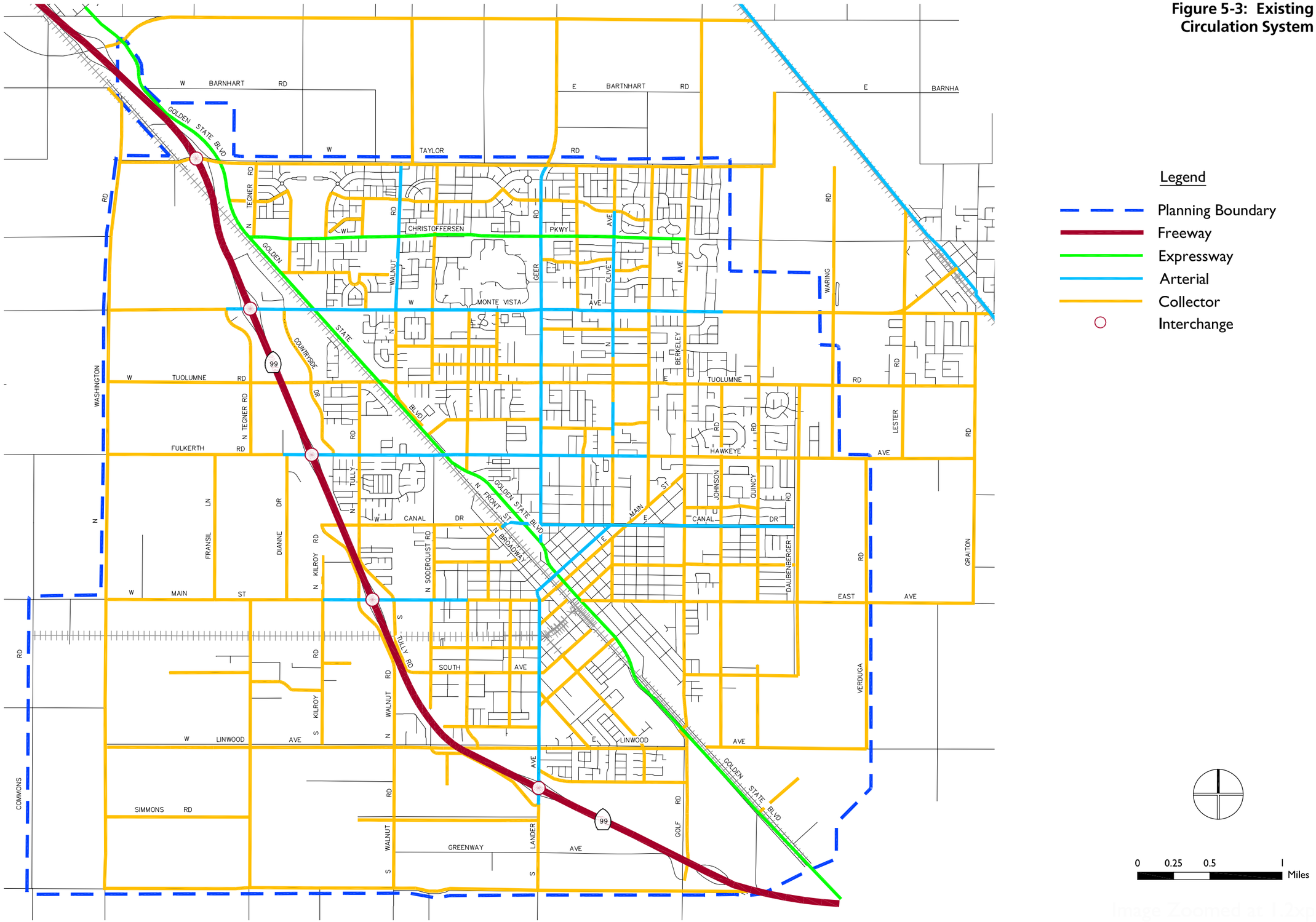
Classification	*Access Standards*	*Design Speeds (Miles per hour)*
Class A	Access to/from driveways and minor streets prohibited. Interchanges at major cross streets.	50 – 55 mph
Class B	Restricted access from driveways and minor streets. No interchanges. Major cross streets are signalized and the expressway receives 65 – 67 percent of the signal's green time.	45 – 50 mph
Class C	Minor access restrictions. Left turns to/from occastional collector streets allowed. At signalized intersections, the expressway will receive 55 – 65 percent of the signal's green time	45 – 50 mph

Source: Adapted from StanCOG, 1990

In the City of Turlock, only Class C expressways are featured. The following Class C expressways are identified within the planning area in the City's General Plan circulation system:

- Golden State Boulevard is a four- to six-lane expressway that runs parallel to SR 99 and the Union Pacific Railroad. Golden State Boulevard represents a major route within the City and connects to SR 99 at both ends. Golden State Boulevard was the original alignment for US Highway 99 prior to the construction of the State Route 99 freeway bypass in the 1970s.
- Christofferson Parkway is a four-lane east-west expressway that extends from Golden State Boulevard to east of the City Limits. This roadway provides

Figure 5-3: Existing Circulation System

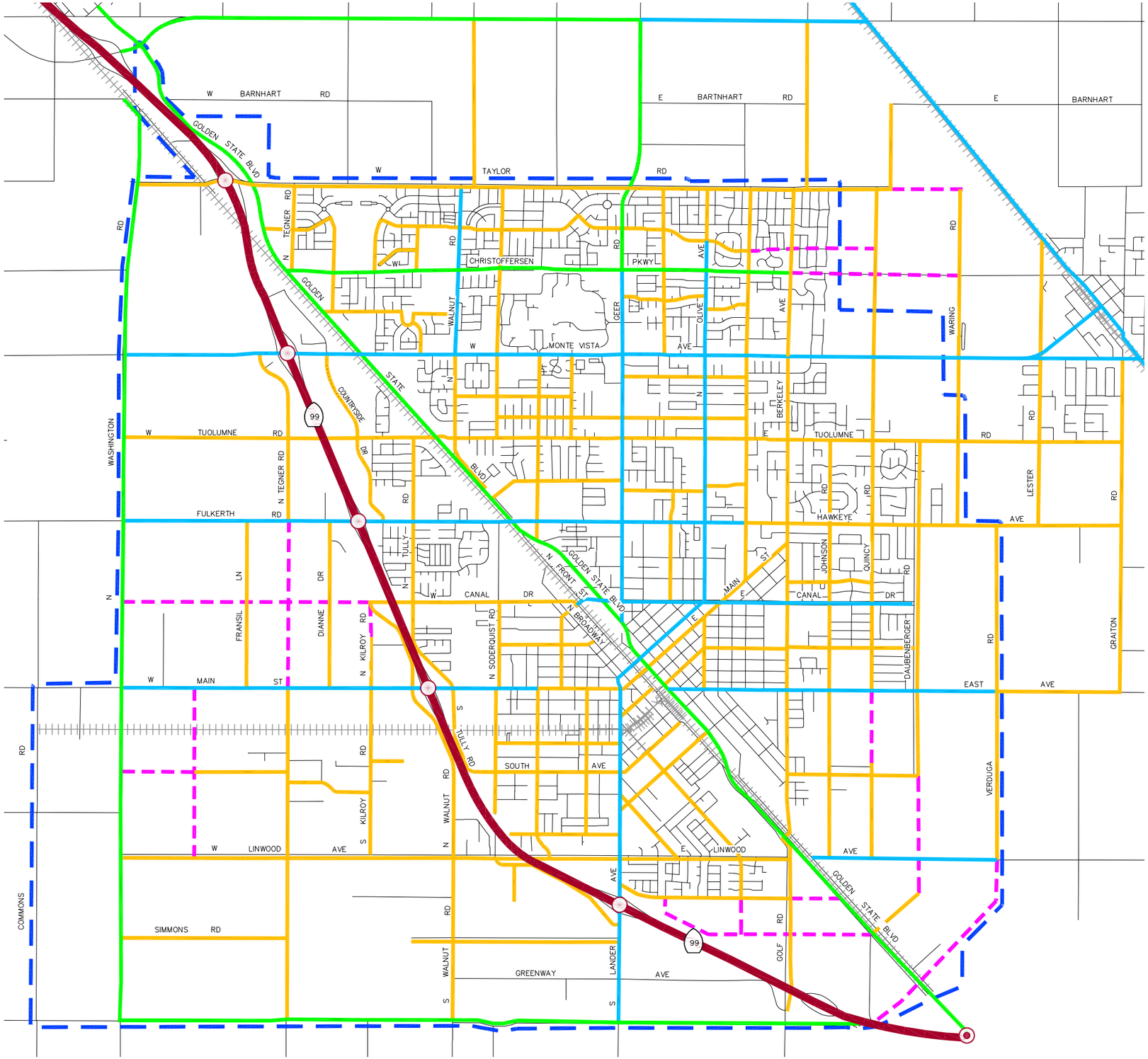


Legend

- Planning Boundary
- Freeway
- Expressway
- Arterial
- Collector
- Interchange

0 0.25 0.5 1 Miles

Figure 5-4: General Plan Circulation System



Legend

- Planning Boundary
- Freeway
- Expressway
- Arterial
- Collector
- Future Streets
- Interchange
- Future Interchange

0 0.25 0.5 1 Miles

access to residential areas and the California State University, Stanislaus campus.

- Geer Road is designated as an expressway north of Christofferson Parkway. Geer Road is four-lane roadway that provides north-south access through the City, beginning in Downtown and connecting to regions outside the City, east of the City of Modesto and to the City of Oakdale.
- Harding Road and Washington Road are both designated as expressways but are currently built as two-lane collector streets.

Arterials

Arterials collect and distribute traffic from freeways and expressways to collector streets and vice versa. On arterials, the optimum distance between intersections is approximately ¼ mile. Driveways to major traffic generators may be permitted within the ¼-mile spacing. Other intersections closer than ¼ mile should be restricted to right turn access. Major arterial right-of-way varies from 100 to 110 feet, featuring two to three lanes of traffic in each direction with a left-turn median. The following arterials are identified in the City's General Plan circulation system:

- Monte Vista Avenue is a four-lane arterial from Tegner Road to east of the City Limits. This roadway provides access to major commercial areas near SR 99 and the California State University, Stanislaus campus farther east.
- Fulkerth Road/Hawkeye Avenue is a four-lane east-west arterial that provides access to major commercial areas near SR 99 and residential areas east of Golden State Boulevard. East of Colorado Avenue, Hawkeye Avenue reverts to a two-lane collector designation.
- Canal Drive is a four-lane east-west arterial between Front Street and Daubenberger Road that provides access to Golden State Boulevard for residential communities east of the expressway. Canal Drive is a divided roadway with a canal running between the eastbound and westbound travel lanes.
- Main Street is a four-lane east-west arterial from Washington Road to West Avenue that connects rural communities and agricultural uses west of SR 99 to the freeway and on to Downtown Turlock. East of West Avenue, Main Street reverts to a collector designation.
- East Avenue is designated as an east-west arterial from Golden State Boulevard to Verduga Road connecting residential communities east of Golden State Boulevard to the expressway. East Avenue is currently built as a two-lane collector street.
- Linwood Avenue is designated as an east-west arterial from Paulson Road to Verduga Road. Linwood Avenue is currently built as a two-lane collector street.
- Tegner Road is designated as a north-south arterial west of SR 99 that connects the Monte Vista Avenue interchange to the southern boundary of the City planning Area at Harding Road. Tegner Road is currently built as a two-lane collector street.
- Countryside Drive is a north-south roadway connecting newly developed commercial areas in the vicinities of Monte Vista Avenue and Fulkerth Road between SR 99 and Golden State Boulevard. Countryside Drive is designated as an arterial just north of Fulkerth Road to about Shetland Way, but it is currently built as a four-lane collector street.
- Walnut Road is a four-lane north-south arterial from Monte Vista Avenue to Taylor Road providing mainly residential access to and from Monte Vista Avenue commercial destinations.
- Lander Avenue/State Route 165 (SR 165) is a two-lane arterial south of SR 99. SR 165 originates at Interstate 5 (I-5), south of Santa Nella in Merced County, and ends at SR-99 in the City of Turlock in Stanislaus County. SR 165 serves the communities of Los Banos, Stevinson, Hilmar, and Turlock and is widely used for commute traffic and agricultural traffic between these cities and communities. SR 165 is also a principal connection between SR 99 and I-5. Lander Avenue, north of SR 99, is a four-lane arterial providing north-south connectivity between SR 99 and Downtown Turlock.
- Geer Road is a four-lane north-south arterial between Golden State Boulevard and Christofferson Parkway providing connectivity between the two expressways.
- Olive Avenue is a four-lane arterial providing access from Lander Avenue and Main Street in Downtown Turlock to major east-west arterials such as Canal Drive, Hawkeye Avenue and Monte Vista Avenue. Between Canal Drive and Hawkeye Avenue, Olive Avenue is still built as a two-lane collector street.
- Berkeley Avenue is designated as a four-lane north-south arterial between Monte Vista Avenue and Taylor Road. Berkeley Avenue is designated as a collector street south of Monte Vista Avenue to Golden State Boulevard. Berkeley Avenue is currently built as a two-lane collector street from Taylor Raod to Golden State Boulevard.

Collectors

Collectors serve as connectors between local and arterial streets and provide direct access to parcels. At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection. Non-residential driveways and/or intersecting streets or collector streets should be no closer than 300 to 400 feet apart. Major collectors carry four lanes of traffic within an 84-foot right-of-way and two bicycle lanes within an additional 10 feet of right-of-way. Minor collectors carry two lanes of traffic within 60-foot right-of-way and two bicycle lanes within an additional 10 feet of right-of-way. The following are some of the critical collectors designated in the City's General Plan circulation system:

- East-west collector streets
  - Taylor Road
  - Tuolumne Road
  - Hawkeye Avenue, east of Colorado Avenue
  - Canal Drive, west of Front Street
  - Main Street, from West Avenue to Berkeley Avenue
  - Linwood Avenue, from Washington Road to Golf Road
- North-south collector streets
  - Kilroy Road
  - Countryside Drive
  - Walnut Road
  - Tully Road
  - Soderquist Road
  - Dels Lane
  - West Avenue
  - Colorado Avenue
  - Berkeley Avenue
  - Quincy Road
  - Daubenberger Road

Local Streets

Local streets provide access to parcels. Local streets represent the largest part of the City's circulation system. Access to local streets is unrestricted, and right-of-way widths vary between 50 and 54 feet. All roadways not identified in the General Plan circulation system map (Figure 5-1) as freeways, expressways, arterials, or collectors are designated local streets.

Remaining General Plan Circulation Improvements

The following projects are listed as "Major Circulation Improvements" in the existing General Plan and are currently not built or only partially complete. Projects that have been completed or are no longer applicable are omitted.

1. Improve Taylor Road between Washington and Golden State Boulevard to four-lane expressway status. Improve Taylor Road between Golden State Boulevard and Berkeley Avenue to a two-lane collector.
2. Widen Fulkerth Road between Tegner Road and Tully Road as a four-lane arterial.
3. Improve Main Street between Tegner Road and SR 99 to four-lane arterial status.
4. Develop minimum impact design and implement four-lane section for Main Street between West Avenue and Olive Avenue.
5. Develop one-way couplet of Minerva Street and East Avenue between Golden State Boulevard and Minaret Street as traffic volumes warrant.
6. Improve East Avenue to four-lane arterial status between Minaret Avenue and Johnson Road; develop minimum impact design through existing developed area as appropriate.
7. Extend Daubenberger Road as two-lane collector from Brier Road to Golden State Boulevard.
8. Improve and extend Olive Avenue from Canal Drive to Springer Drive to a four-lane arterial. Improve Olive Avenue north of Springer Drive to Taylor Road to a two-lane collector street.
9. Improve Tegner Road between Main Street and Monte Vista Avenue to two-lane Industrial collector status with bicycle lanes.
10. Connect Linwood Avenue across Golden State Boulevard; close existing Golf Road crossing of Golden State; close Palmer Road at Linwood Avenue; extend Johnson Road from Linwood Avenue to Palmer Road.

11. Develop Tuolumne Road from Golden State Boulevard to terminus near SR 99 as four-lane collector street in conjunction with new development.
12. Extend Quincy Road as two-lane collector from East Avenue to Brier Road in conjunction with new development.
13. Construct an east/west industrial collector street between Kilroy and Walnut just north of the City corporation yard.
14. Improve the State Route 99/State Route 165 (Lander Avenue) interchange. Support the implementation of regional transportation improvement at the State Route 99/State Route 165 interchange consistent with the 2001 Regional Transportation Plan.

Existing Conditions and Deficiencies

The City of Turlock roadway facilities were evaluated on a daily basis by use of 2007 and 2008 average daily traffic (ADT) counts. Intersection facilities were evaluated on an AM and PM peak-hour basis by use of 2007 and 2008 peak-hour turning movement counts. Conditions and deficiencies were identified by generating a level-of-service (LOS) determination.

General Plan LOS Policies

The *City of Turlock General Plan* (1992-2012), *Transportation Element, Traffic Analysis* Section contains policies pertaining to LOS standards and significance thresholds. The following are excerpts of the policies contained in that section:

5.1-c Strive to maintain LOS C for all freeways and expressways.

Level of Service shall be evaluated on the basis of either the Highway Capacity Manual, or other means approved by the City's Engineering Division of Municipal Services.

5.1-d Approve LOS D as an allowable standard for arterial and collector streets where existing conditions limit improvements.

The traffic forecast indicates that the following street segments may operate at Service Level D upon buildout of the General Plan: Monte Vista Avenue between SR 99 and Walnut Avenue; Hawkeye Avenue between SR 99 and Golden State Boulevard; and SR 99 between Main Street and Monte Vista Avenue.

The City's General Plan also enumerates certain locations where the prescribed LOS standards may be overridden in consideration of projected deficiencies and the causation of "unacceptable disruption":

5.1-e Recognize that the City's land use pattern, the limited number of continuous north-south streets, and the concentration of activity on the east side of the freeway will result in very poor service levels on a small number of streets where capacity cannot be increased because it would create unacceptable disruption.

The following locations are projected to operate at LOS E or F at General Plan buildout: Geer Road between Canal Drive and Tuolumne Road; Lander Avenue between Main Street and Linwood Avenue; Main Street between West Avenue and Lander Avenue; and Olive Avenue between Main Street and Canal Drive.

However, even given the allowance of LOS E or F at certain locations, the City's General Plan asserts that efforts should nonetheless be made to mitigate poor level-of-service conditions:

5.1-f On streets where poor service levels are anticipated, investigate and implement improvement projects which will improve traffic operations. To reduce demand at congested intersections on Geer Road and Lander Avenue, new development projects will be required to provide auto access from side streets wherever possible.

Measures such as parking restrictions turn prohibitions and minor widening will be evaluated on streets where existing development makes major widening projects unacceptable.

Level-of-Service Methodologies

Intersection level-of-service (LOS) has been calculated for all control types using the methods documented in the Transportation Research Board publications *Highway Capacity Manual, Fourth Edition, 2000*. Traffic operations have been quantified through the determination of LOS. LOS determinations are presented on a letter grade scale from "A" to "F", whereby LOS "A" represents free-flow operating conditions and LOS "F" represents over-capacity conditions. For a signalized or all-way stop-controlled (AWSC) intersection, an LOS determination is based on the calculated average delay for all approaches and movements. For a two-way stop-controlled (TWSC) intersection, an LOS determination is based upon the calculated average delay for all movements of the worst-performing approach. LOS definitions for different types of intersection controls are presented in Table 5-5.

Table 5-5 Intersection LOS Criteria and Definitions

Level-of-service	*Traffic Flow*	*Delay*	*Maneuverability*	*Stopped Delay / Vehicle*		
				Signalized	*Unsignalized*	*All-Way Stop*
A	Stable	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	<10.0	<10.0	<10.0
B	Stable	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10.0 and <20.0	>10.0 and <15.0	>10.0 and <15.0
C	Stable	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20.0 and <35.0	>15.0 and <25.0	>15.0 and <25.0
D	Approaching Unstable	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35.0 and <55.0	>25.0 and <35.0	>25.0 and <35.0
E	Unstable	Generally considered the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55.0 and <80.0	>35.0 and <50.0	>35.0 and <50.0
F	Unstable	Generally considered unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	>80.0	>50.0	>50.0

Roadway segment Level-of-Service (LOS) will be determined based on volume/capacity (v/c) ratios where capacity is determined by facility type, as presented in Table 5-6, and volume is based on average daily traffic (ADT).

Table 5-6 Roadway LOS Criteria and Definitions

	LOS "A"	*LOS "B"*	*LOS "C"*	*LOS "D"*	*LOS "E"*	*LOS "F"*
All Facilities Volume-to-Capacity Ratio (V/C)	< 0.6	0.6-0.7	0.7-0.8	0.8-0.9	0.9-1.0	> 1.
	Two-way Average Daily Traffic (ADT) Threshold					
Roadway Segment Type	*LOS "A"*	*LOS "B"*	*LOS "C"*	*LOS "D"*	*LOS "E"*	*LOS "F"*
Six-Lane Freeway	72,000	84,000	96,000	108,000	120,000	>120,(
Four-Lane Freeway	48,000	56,000	64,000	72,000	80,000	>80,(
Six-Lane Expressway	29,000	34,000	39,000	44,000	48,000	>48,(
Four-Lane Expressway	20,000	23,000	26,000	29,000	32,000	>32,(
Four-Lane Arterial	17,000	20,000	23,000	26,000	28,000	>28,(
Two-Lane Arterial	9,000	10,000	12,000	13,000	14,000	>14,(
Four-Lane Collector	15,000	17,000	20,000	22,000	24,000	>24,(
Two-Lane Collector	8,000	9,000	10,000	11,000	12,000	>12,(

Notes: 1. Based on Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000.

Technical Analysis Parameters

The traffic analysis in this report provides a "planning level" evaluation of traffic conditions, which is considered sufficient for CEQA/NEPA clearance purposes. The "planning level" evaluation incorporates appropriate heavy vehicle adjustment factors, peak hour factors, and signal lost-time factors. LOS operations will be determined using HCM-2000 methodologies for determining intersection delay, incorporating the following factors.

A citywide peak-hour factor (PHF) of 0.92 is applied to all intersections. A minimum traffic signal cycle length of 90 seconds will be assumed at signalized intersection locations, with four seconds of "lost time" per critical signal phase. At all study intersections, a standard two percent heavy-vehicles adjustment was assumed.

Existing Intersection Service Levels

Existing intersection LOS was determined on an AM and PM peak-hour basis with turning movement counts taken between 2007 and 2008. Table 5-7 presents the intersection LOS results.

Table 5-7 Existing Intersection LOS Results

Intersection	*Control Type[1,2]*	*Target LOS*	*AM Peak Hour*		*PM Peak Hour*	
			Delay	*LOS*	*Delay*	*LOS*
Taylor Road/SR 99 SB Ramps	TWSC	D	***78.5***	***F***	***OVR***	***F***
Taylor Road/SR 99 NB Ramps	TWSC	D	13.7	B	***63.9***	***F***
Taylor Road/Golden State Boulevard	Signal	C	20.0	B	18.4	B
Taylor Road/Walnut Avenue	AWSC	C	***44.3***	***E***	18.7	C
Taylor Road/Geer Road	Signal	C	32.0	C	23.5	C
Springer Drive/Geer Road	Signal	C	13.2	B	13.0	B
Christoffersen Parkway/Golden State Boulevard	Signal	C	8.4	A	8.7	A
Christoffersen Parkway/Walnut Avenue	Signal	C	20.4	C	16.0	B
Christoffersen Parkway/Crowell Road	Signal	C	17.9	B	18.3	B
Christoffersen Parkway/Geer Road	Signal	C	17.5	B	17.4	B
Monte Vista Avenue/Tegner Road	Signal	C	12.8	B	17.5	B
Monte Vista Avenue/SR 99 SB Ramps	Signal	D	25.4	C	19.0	B
Monte Vista Avenue/SR 99 NB Ramps	Signal	D	3.4	A	8.9	A
Monte Vista Avenue/Countryside Drive	Signal	D	17.2	B	42.3	D
Monte Vista Avenue/Golden State Boulevard	Signal	D	18.8	B	24.3	C
Monte Vista Avenue/Walnut Avenue	Signal	D	23.8	C	23.5	C
Monte Vista Avenue/Crowell Road	Signal	C	27.8	C	***37.2***	***D***
Monte Vista Avenue/Geer Road	Signal	C	21.9	C	***62.2***	***E***
Tuolumne Road/Geer Road	Signal	C	17.8	B	32.0	C
Fulkerth Road/SR 99 SB Ramps	Signal	D	21.3	C	27.4	C
Fulkerth Road/SR 99 NB Ramps	TWSC	D	13.2	B	18.9	C
Fulkerth Road/Countryside Drive	Signal	D	18.0	B	24.4	C
Fulkerth Road/Tully Road	Signal	D	28.1	C	37.9	D
Fulkerth Road/Soderquist Road	TWSC	D	14.8	B	17.5	C
Fulkerth Road/Golden State Boulevard	Signal	D	30.0	C	***91.1***	***F***
Main Street/Kilroy Road	TWSC	C	***25.8***	***D***	***27.1***	***D***
Main Street/Walnut Road	Signal	C	22.1	C	22.5	C
Main Street/SR 99 SB Ramps	Signal	D	11.8	B	18.5	B
Main Street/SR 99 NB Ramps	Signal	D	10.0	A	10.5	B
Main Street/Tully Road	Signal	C	20.7	C	20.9	C
Main Street/Lander Avenue	Signal	C	17.5	B	20.7	C
Olive Avenue/Golden State Boulevard	Signal	C	17.6	B	25.9	C
Eastbound Golden State Blvd/Berkeley Avenue (Golf Rd.)	AWSC	C	14.6	B	13.8	B
Westbound Golden State Blvd/Berkeley Avenue (Golf Rd.)	AWSC	C	***26.5***	***D***	16.5	C
Linwood Avenue/Golf Road	TWSC	C	22.8	C	20.1	C
Glenwood Avenue/Golf Road	TWSC	C	15.0	B	11.4	B
Glenwood Avenue/Lander Avenue	Signal	C	23.5	C	21.4	C
SR 99 NB Ramps/Lander Avenue	Signal	D	19.9	B	17.4	B
SR 99 SB Ramps/Lander Avenue	Signal	D	11.3	B	13.1	B
Glenwood Avenue/Lander Avenue	TWSC	C	19.0	C	***29.8***	***D***
Greenway Avenue/Lander Avenue	TWSC	C	***68.3***	***F***	***90.9***	***F***
Eastbound Golden State Blvd/Griffith Road	TWSC	C	13.1	B	14.4	B
Westbound Golden State Blvd/Griffith Road	TWSC	C	14.6	B	10.4	B
Clausen Road/Lander Avenue	TWSC	C	***35.0***	***D***	***34.4***	***D***
Clausen Road/Golf Road	TWSC	C	9.7	A	12.6	B
Clausen Road/Griffith Road	AWSC	C	7.3	A	7.3	A

1. TWSC = Two Way Stop Control

2. LOS = Delay based on worst minor street approach for TWSC intersections

As presented in Table 5-7, citywide intersections were determined to mostly operate acceptably. However, the following intersections were determined to operate at unacceptable service levels according to the City's General Plan policies:

- Taylor Road / SR 99 NB Ramps — AM & PM peak-hours
- Taylor Road / SR 99 SB Ramps — PM peak-hour
- Taylor Road / Walnut Avenue — AM peak-hour
- Monte Vista Avenue / Crowell Road — PM peak-hour
- Monte Vista Avenue / Geer Road — PM peak-hour
- Fulkerth Road / Golden State Boulevard — PM peak-hour
- Main Street / Kilroy Road — AM & PM peak-hours
- Westbound Golden State Blvd. / Berkeley Ave. — PM peak-hour
- Glenwood Avenue / Lander Avenue — PM peak-hour
- Greenway Avenue / Lander Avenue — AM & PM peak-hours
- Clausen Road / Lander Avenue — AM & PM peak-hours

Figure 5-5 presents the AM peak-hour results at intersections. Figure 5-6 presents the PM peak-hour results at intersections. Intersections operating at LOS E or F are presented in red, LOS D in orange, and LOS C or better in green.

Figure 5-5: A.M. Peak -Hour Level of Service

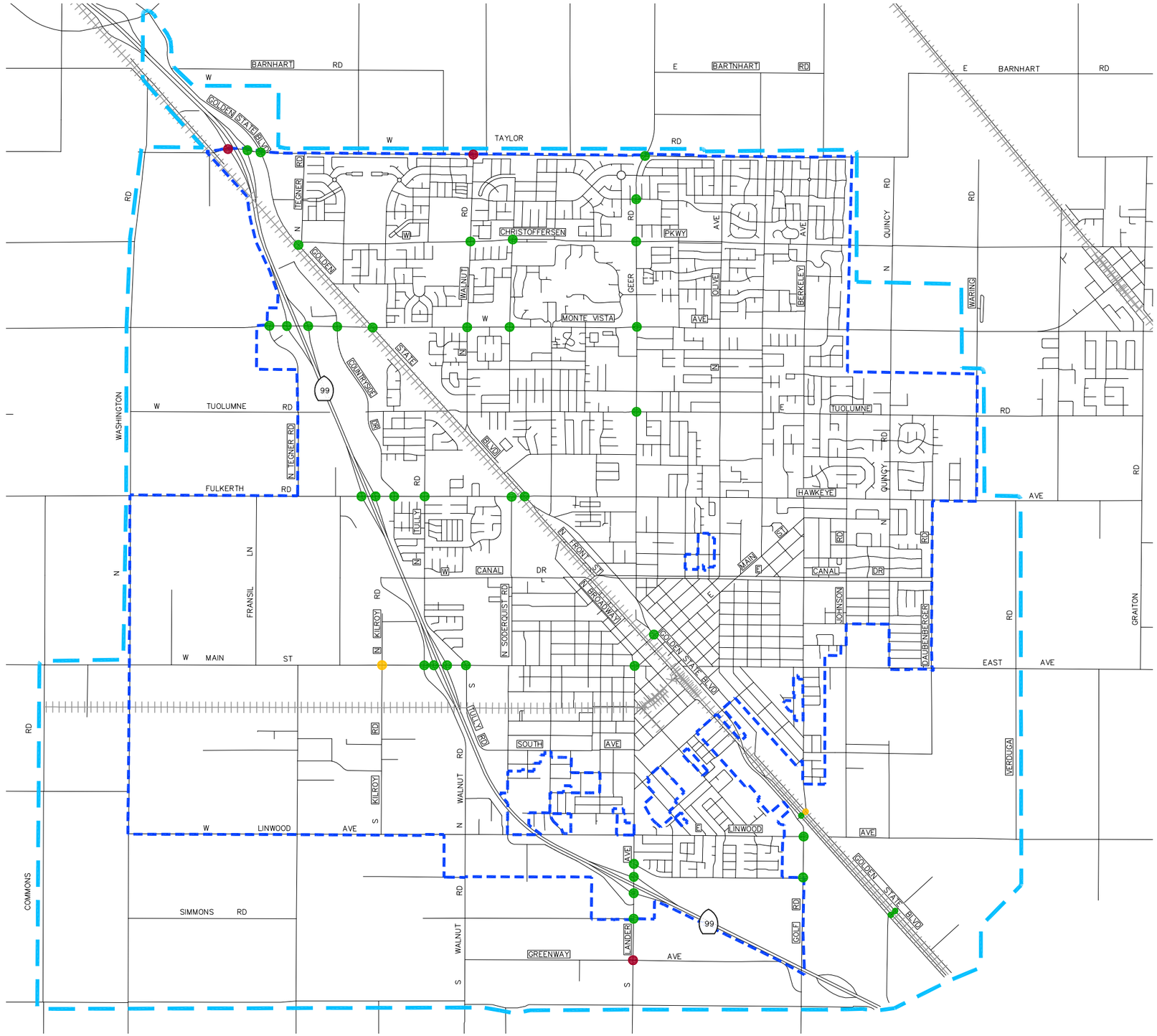


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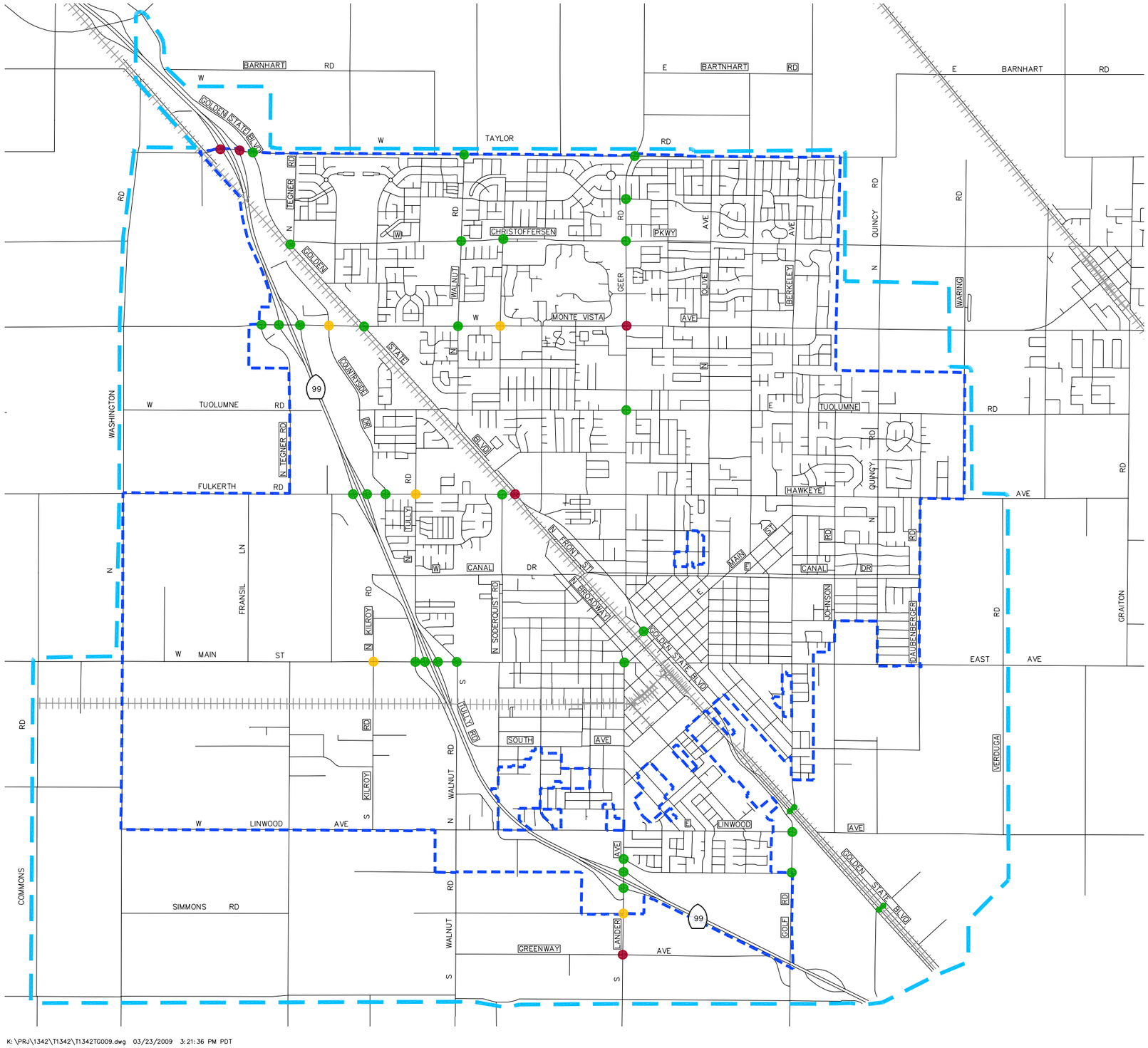
Figure 5-6: P.M. Peak -Hour Level of Service



Legend

- City Limit
- Planning Boundary
- LOS C or Better
- LOS D
- LOS E / F

0 0.25 0.5 1 Miles

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Existing Roadway LOS Results

Existing roadway LOS was determined on a daily basis with 24-hour volume counts taken between 2007 and 2008. LOS was determined relative to average daily volume and facility capacity. Table 5-8 presents the roadway volume/capacity (V/C) ratios in percentages and subsequent LOS results.

Table 5-8 Existing Roadway LOS Results

Roadway	*Location*	*Facility Type*	*2007/2008 Daily Count*	*V / C*	*LOS*
State Route 99	s/o Golden State Boulevard	Six-Lane Freeway	68,000	57%	A
	s/o SR 165/Lander Avenue	Six-Lane Freeway	60,000	50%	A
	s/o Main Street	Six-Lane Freeway	74,000	62%	B
	s/o Fulkerth Road	Six-Lane Freeway	83,000	69%	B
	s/o Monte Vista Avenue	Six-Lane Freeway	77,000	64%	B
	s/o Taylor Road	Six-Lane Freeway	71,000	59%	A
	n/o Taylor Road	Six-Lane Freeway	82,000	68%	B
State Route 165	***s/o Clausen Road***	Two-Lane Arterial	***19,100***	***136%***	***F***
	s/o State Route 99	Two-Lane Arterial	***20,000***	***143%***	***F***
Golden State Boulevard	s/o Berkeley Avenue	Four-Lane Expressway	11,800	37%	A
	s/o Tuolumne Road	Four-Lane Expressway	14,100	44%	A
	s/o Monte Vista Avenue	Four-Lane Expressway	14,430	45%	A
	n/o Taylor Road	Four-Lane Expressway	4,600	14%	A
Washington Road	s/o Main Street	Two-Lane Arterial	2,060	15%	A
Tegner Road	n/o Linwood Avenue	Two-Lane Arterial	1,300	9%	A
Countryside Drive	s/o Tuolumne Road	Four-Lane Arterial	11,180	40%	A
	s/o Monte Vista Avenue	Four-Lane Arterial	14,120	50%	A
Walnut Avenue	n/o Monte Vista Avenue	Four-Lane Arterial	7,270	26%	A
Dels Lane	s/o Monte Vista Avenue	Two-Lane Collector	5,180	43%	A
Lander Avenue	s/o Main Street	Four-Lane Arterial	15,400	55%	A
Geer Road	n/o Canal Drive	Four-Lane Arterial	18,320	65%	B
	n/o Tuolumne Road	Four-Lane Arterial	***23,610***	***84%***	***D***
	s/o Christofferson Parkway	Four-Lane Arterial	16,370	58%	A
	n/o Taylor Road	Two-Lane Arterial	10,800	77%	C
Olive Avenue	s/o Tuolumne Road	Two-Lane Arterial	8,810	63%	A
Golf Road	s/o Clausen Road	Two-Lane Collector	2,200	18%	A
	s/o Harding Avenue	Two-Lane Collector	2,280	19%	A
	s/o Glenwood Avenue	Two-Lane Collector	2,930	24%	A
	s/o Linwood Avenue	Two-Lane Collector	4,320	36%	A
Berkeley Avenue	n/o Golden State Boulevard	Two-Lane Collector	6,120	51%	A
	s/o East Avenue	Two-Lane Collector	4,250	35%	A
	s/o Tuolumne Road	Two-Lane Collector	5,830	49%	A
	s/o Monte Vista Avenue	Two-Lane Collector	6,960	58%	A
	s/o Christofferson Parkway	Two-Lane Collector	3,840	32%	A
	s/o Taylor Road	Two-Lane Collector	3,310	28%	A
Daubenberger Road	s/o Canal Drive	Two-Lane Collector	1,390	12%	A
Linwood Avenue	w/o Tegner Road	Two-Lane Collector	1,008	8%	A
	e/o Kilroy Road	Two-Lane Collector	2,190	18%	A
	w/o Golf Road	Two-Lane Collector	4,400	37%	A
Main Street	w/o Washington Road	Two-Lane Collector	8,900	74%	B
	e/o Tegner Road	Two-Lane Arterial	11,140	80%	C
	w/o Tully Road	Four-Lane Arterial	17,700	63%	B
	w/o Soderquist Road	Four-Lane Arterial	16,080	57%	A
	w/o Lander Avenue	Two-Lane Arterial	***12,900***	***92%***	***D***
East Avenue	e/o Verduga Road	Two-Lane Collector	3,400	28%	A
Canal Drive	w/o Geer Road	Four-Lane Arterial	4,030	14%	A
	w/o Olive Avenue	Four-Lane Arterial	6,480	23%	A
	e/o Johnson Road	Four-Lane Arterial	1,530	5%	A
Fulkerth Road	w/o Washington Road	Two-Lane Collector	3,600	30%	A
	w/o Tegner Road	Two-Lane Collector	3,920	33%	A
	w/o Countryside Drive	Four-Lane Arterial	***23,500***	***84%***	***D***
Hawkeye Avenue	w/o Geer Road	Four-Lane Arterial	16,600	59%	A
	e/o Colorado Avenue	Two-Lane Collector	6,150	51%	A
	e/o Johnson Road	Two-Lane Collector	4,000	33%	A
	e/o Daubenberger Road	Two-Lane Collector	2,700	23%	A
Tuolumne Road	e/o Quincy Road	Two-Lane Collector	2,500	21%	A
Monte Vista Avenue	***w/o Countryside Drive***	Four-Lane Arterial	***32,500***	***116%***	***F***
	e/o Countryside Drive	Four-Lane Arterial	***33,240***	***119%***	***F***
	w/o Geer Road	Four-Lane Arterial	21,700	78%	C
	e/o Berkeley Avenue	Two-Lane Arterial	6,600	47%	A
	e/o Waring Road	Two-Lane Arterial	6,900	49%	A
Christofferson Parkway	w/o Walnut Avenue	Four-Lane Expressway	9,960	31%	A
	e/o Walnut Avenue	Four-Lane Expressway	11,380	36%	A
	w/o Geer Road	Four-Lane Expressway	11,700	37%	A
	e/o Geer Road	Four-Lane Expressway	9,050	28%	A
	w/o Berkeley Avenue	Four-Lane Expressway	4,370	14%	A
	w/o Berkeley Avenue	Four-Lane Expressway	1,900	6%	A
Taylor Road	e/o Washington Road	Two-Lane Collector	740	6%	A
	e/o Tegner Road	Two-Lane Collector	***10,390***	***87%***	***D***
	e/o Walnut Avenue	Two-Lane Collector	7,010	58%	A
	e/o Griffin Road	Two-Lane Collector	7,900	66%	A
	w/o Berkeley Avenue	Two-Lane Collector	3,260	27%	A

As presented in Table 5-8, citywide roadways were determined to operate acceptably for the large majority of roadways. However, the following roadway segments were determined to be operating unacceptably according to City General Plan policy, based on being over or nearing full capacity:

- State Route 165, south of Clausen Road — Over Capacity – LOS F
- State Route 165, south of State Route 99 — Over Capacity – LOS F
- Geer Road, north of Tuolumne Road — Nearing Capacity – LOS D
- Main Street, west of Lander Avenue — Nearing Capacity – LOS D
- Fulkerth Road, west of Countryside Drive — Nearing Capacity – LOS D
- Monte Vista Avenue, west of Countryside Dr. — Over Capacity – LOS F
- Monte Vista Avenue, east of Countryside Dr. — Over Capacity – LOS F
- Taylor Road, east of Tegner Road — Nearing Capacity – LOS D

Figure 5-7 shows the daily roadway LOS results. Roadways at or over capacity (LOS E or F) are presented in red, nearing capacity (LOS D) in orange, and with surplus capacity (LOS C or better) in green.

Truck Routes

Truck routes were developed to minimize neighborhood disturbance in the City and consist primarily of freeways, select expressways, and a few arterial and collector streets. SR 99 is a major statewide truck route. Golden State Boulevard provides truck access through the core of Turlock. The only truck routes that cross the Union-Pacific railroad tracks adjacent to Golden State Boulevard are Monte Vista Avenue and Fulkerth Road. Other peripheral truck routes include paths to and from the industrial development west of SR 99 and to regional destinations north and east of the planning area via Geer Road and Monte Vista Avenue respectively. Harding Road and Washington Road provide routes around the southern and western edges of Turlock. Walnut Road, Tegner Road, Linwood Avenue, Main Street, Fulkerth Road and Monte Vista Avenue provide routes into and out of the industrial zones west of SR 99. Figure 5-8 presents the existing truck routes and those designated in the General Plan that are not yet developed.

Accidents

Accident data was provided by City of Turlock staff for the years 2007 and 2008. Table 5-9 presents a summary of collisions resulting in injuries, those resulting in no injuries, and those resulting in a fatality.

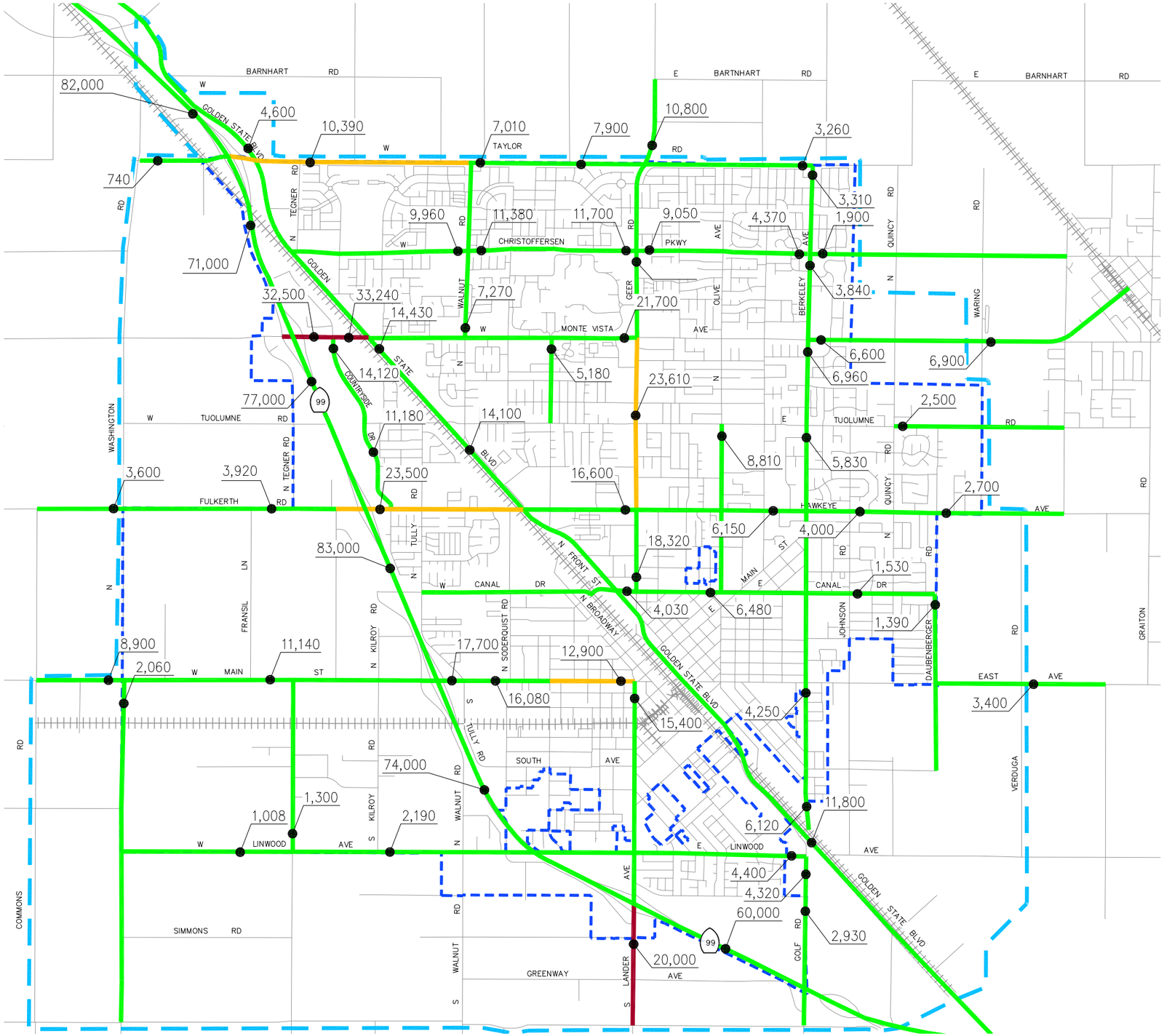
As shown in Table 5-9, there was one accident resulting in a fatality in 2007 and none in 2008. Accidents causing injury went up from 267 in 2007 to 297 in 2008, while accidents causing no injury went down from 349 in 2007 to 337 in 2008. Lastly, total accidents went up from 617 to 634 from 2007 to 2008.

Table 5-9 Accident Statistics, 2007 and 2008

	Type of Accident			
Year	*With Injury*	*Non-Injury*	*Fatal*	*Total*
2007	267	349	1	617
2008	297	337	0	634

Source: City of Turlock staff

Figure 5-7: Existing Average Daily Traffic and Levels of Service

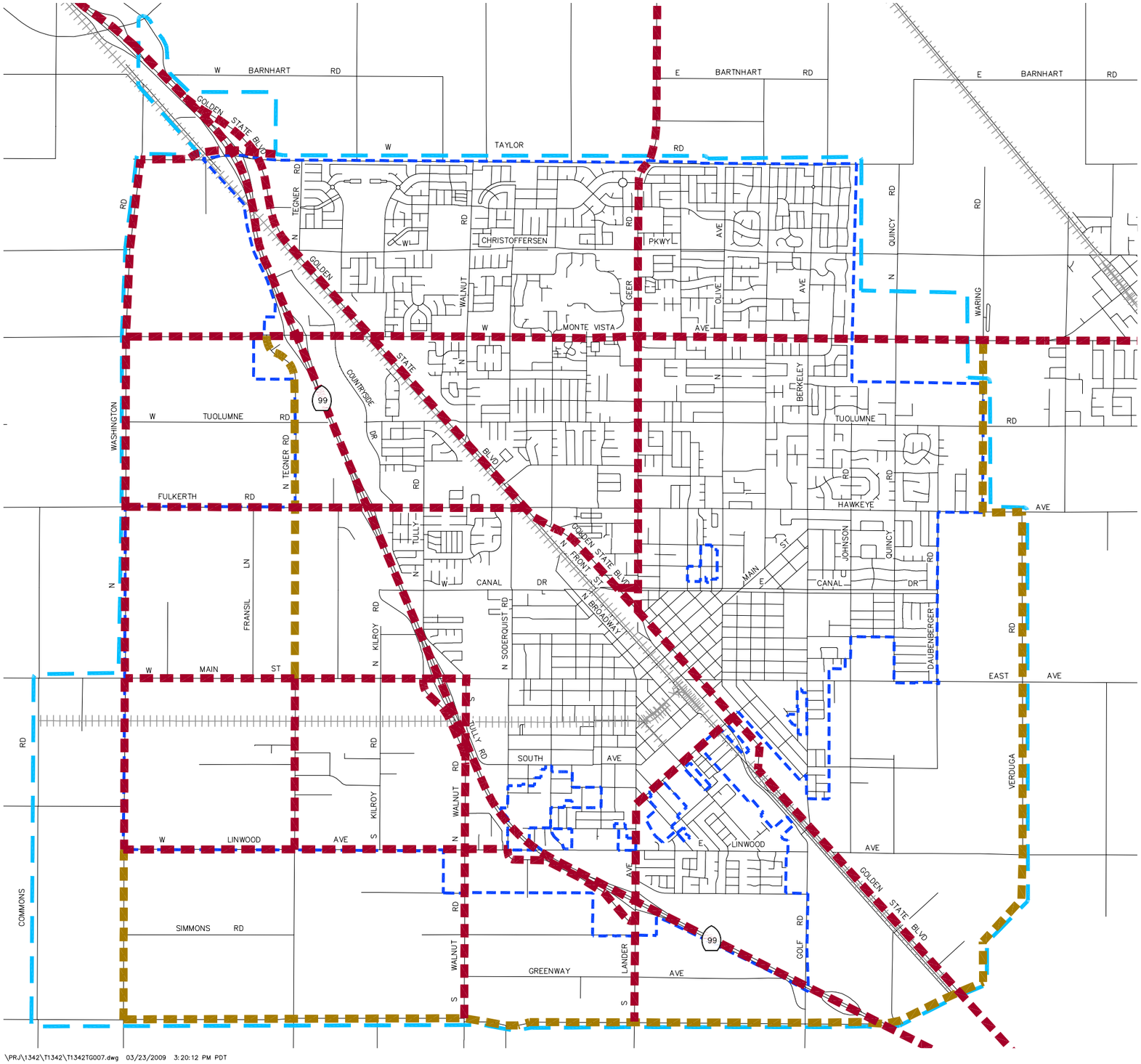


Legend

- City Limit
- Planning Boundary
- LOS C or Better (< 80% Capacity)
- LOS D (80% - 90% Capacity)
- LOS E/F (> 90% Capacity)

0 0.25 0.5 1 Miles

Figure 5-8: Existing and General Plan Designated Truck Routes



Legend

- City Limit
- Planning Boundary
- Existing Truck Route
- Designated General Plan Truck Route (Undeveloped)

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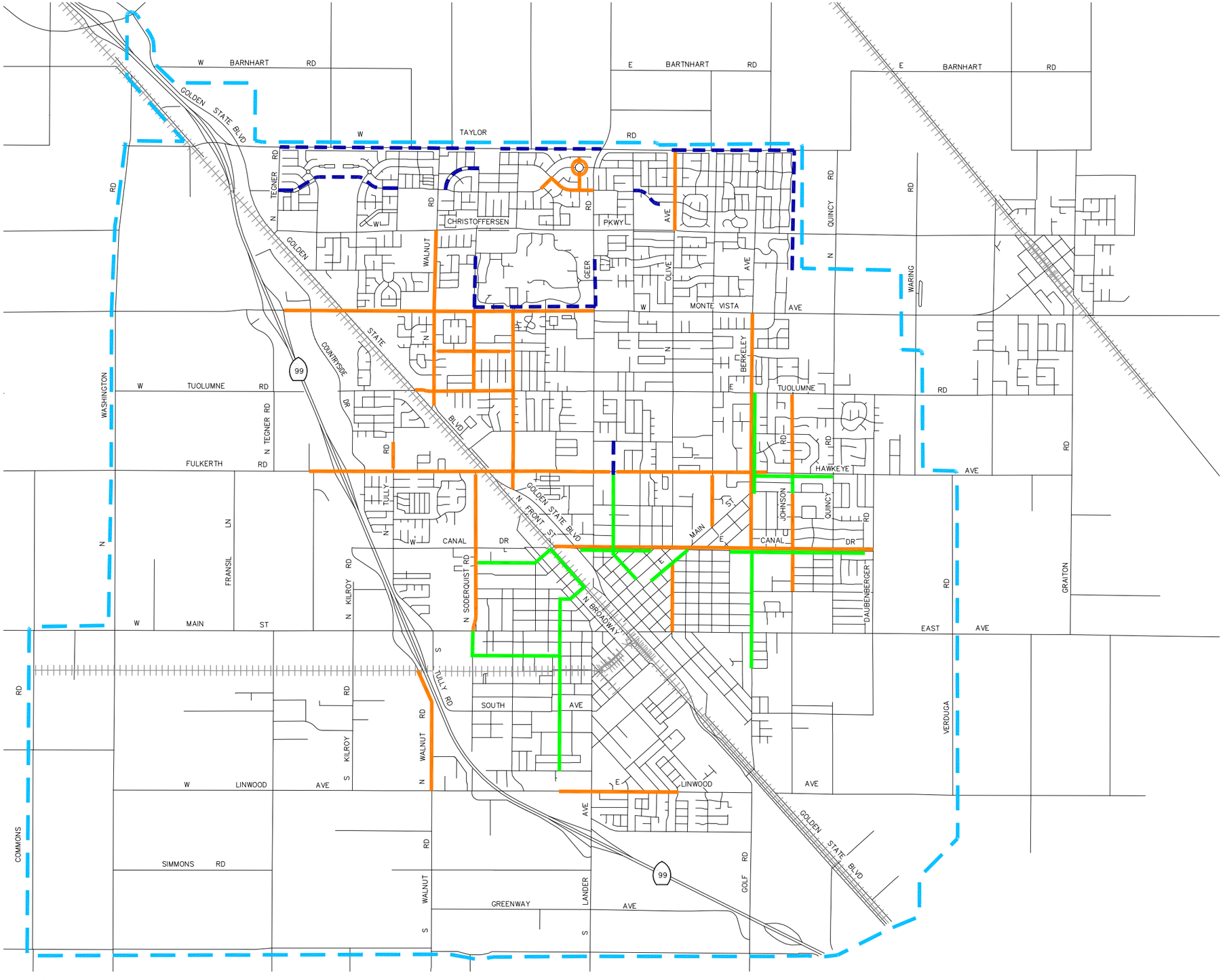
5.4 PEDESTRIAN AND BICYCLE ROUTES

The City of Turlock's flat topography is ideal for travel by bicycle and on foot. However, the hot summer climate can be a deterrent to their travel modes. The current General Plan presents a bikeways and trails map that remains largely undeveloped. Completion of this network would provide the City with a robust bicycle and pedestrian network. The City has yet to fully implement the network presented in the General Plan, but many Class II and Class III facilities exist and are included in the standard cross-section specifications for the various street classifications. To contrast what is currently built versus what is designated in the general plan, Figure 5-9 presents existing bikeways and trails and Figure 5-10 presents those designated in the current general plan.

Figure 5-9: Existing Bikeways & Trails



Legend

- Planning Boundary
- Bike Path (Class I)
- Bike Lane (Class II)
- Bike Route (Class III)

0 0.25 0.5 1 Miles

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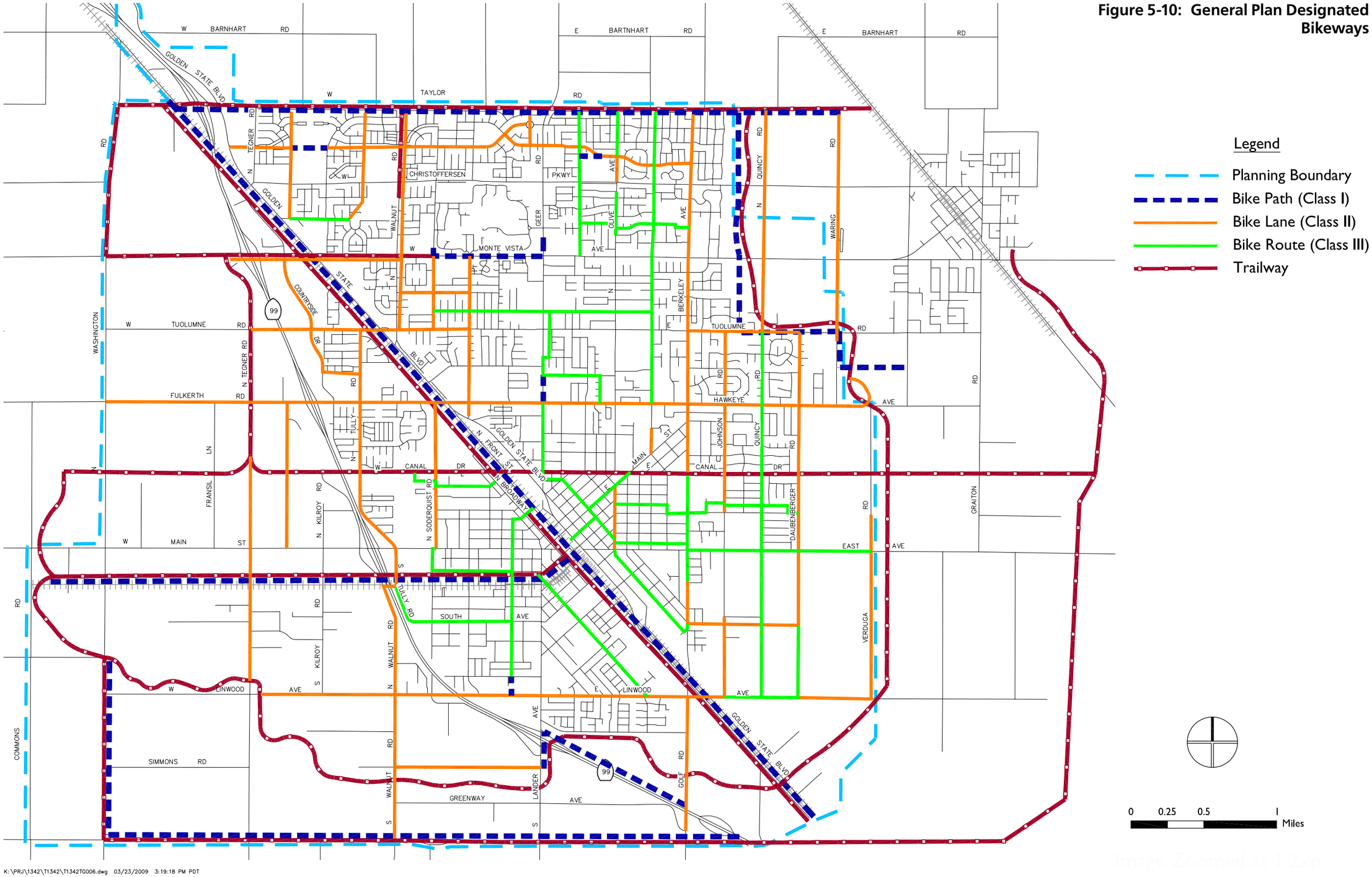
Figure 5-10: General Plan Designated Bikeways



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5.5 PUBLIC TRANSPORTATION

The City of Turlock has a variety of public transportation options including fixed route systems and demand-responsive systems as well as local systems and regional systems. The following public transportation systems are available to City of Turlock residents.

Bus Line Service of Turlock

Since 1998, the Bus Line Service of Turlock (BLST) has provided a local fixed route system for Turlock and Denair residents and visitors. BLST operates 4 separate routes, mostly on the east side of SR 99, from Olive Avenue to Countryside Drive and from Christofferson Parkway to Linwood Avenue. BLST operates on Saturdays from 9:20 AM to 4:20 PM and Mondays through Fridays 6:10 AM to 6:50 PM, holidays excluded. BLST buses run about every 35 minutes Monday through Friday and every 70 minutes on Saturdays. Figure 5-11 shows the BLST routes in the city.

Dial A Ride Turlock

Since 1975, the City has operated Dial A Ride Turlock (DART). DART was the only local public transportation until BLST was started in 1998 to meet increasing demand. DART still operates full-service for residents 65 or older and/or with disabilities but is restricted to trips outside the BLST system for other passengers. DART operates in Turlock on Saturdays from 9:20 AM to 4:15 PM and Mondays through Fridays 5:35 AM to 6:15 PM. In Denair, DART operates Mondays through Saturdays 9:20 AM to 4:15 PM.

Regional Systems

Both the counties of Stanislaus and Merced operate public transportation systems that provide service to and from the Turlock area.

Stanislaus Regional Transit

Stanislaus Regional Transit (StaRT) provides a fixed route system, shuttle services, runabout services, and dial-a-ride services. The Turlock/Modesto Shuttle service provides demand-responsive transit between the Cities of Modesto, Ceres, Keyes, and Turlock. The Turlock area is also served by the StaRT fixed route system via Route 10 Express, Route 15, Route 45, and Route 70. These fixed routes connect the City of Turlock to regional destinations such as Gustine, Newman, Crows Landing, Patterson, Merced, Keyes Ceres, and Modesto. StarRT Route 10 Express has two early buses with 20 minute headways starting at 6:10 from Modesto and 6:42 from Turlock. Between 7:30 AM and 5:00 PM, buses run roughly one hour headways. Another two routes are run after 5:00 PM from both Turlock and Modesto about 20 minutes apart. Route 15 runs about every 2:00 hours Monday through Friday 5:05 AM to 8:01 PM from Modesto and 5:48 AM to 8:56 PM from Turlock. On Saturdays, the service starts later and ends earlier but still runs about every 2 hours. Route 45 runs about every 2 to 3 hours with closer spacing in the morning and evening commute periods. Route 70 runs only twice a day, leaving Modesto at 6:10 AM and 4:10 PM.

Merced County Transit

THE BUS is a service provided by the Transit Joint Powers Authority for Merced County and provides, as with StaRT, both fixed route and dial-a-ride services. THE BUS dial-a-ride service is not available to and from the Turlock area, but only with Merced County limits. THE BUS fixed routes provide service to Turlock via Route 6 and Route 7. Route 6 links Turlock with the Hilmar community and travels along SR 165. Route 7 provides service to and from Merced and travels along SR 99. THE BUS Route 6 runs about every hour from 7:00 AM to 9:05 AM and from 1:00 PM to 4:45 PM. Route 7 runs on irregular headways with buses leaving the station anywhere from 1 hour to 2 hours apart. The Saturday Red Route 7 is more limited, with only one bus running the Turlock to Merced and back route. The bus arrives at the Merced terminus at 10:30 AM, 2:00 PM, and 6:45 PM. Figure 5-12 maps the regional transit routes.

Greyhound

Inter-regional, statewide and nationwide bus transportation is provided to the Turlock area via Greyhound. The Greyhound station is open Mondays through Fridays 8:00 AM to 5:30 PM and Saturdays 9:00 AM to 11:59 AM, excluding holidays. The Greyhound depot is located centrally in the Downtown Turlock area, at 243 Golden State Boulevard between Main Street and Marshall Street. The station is identified in Figure 5-12.

Figure 5-11: Bus Line Service (BLST) Fixed Route System

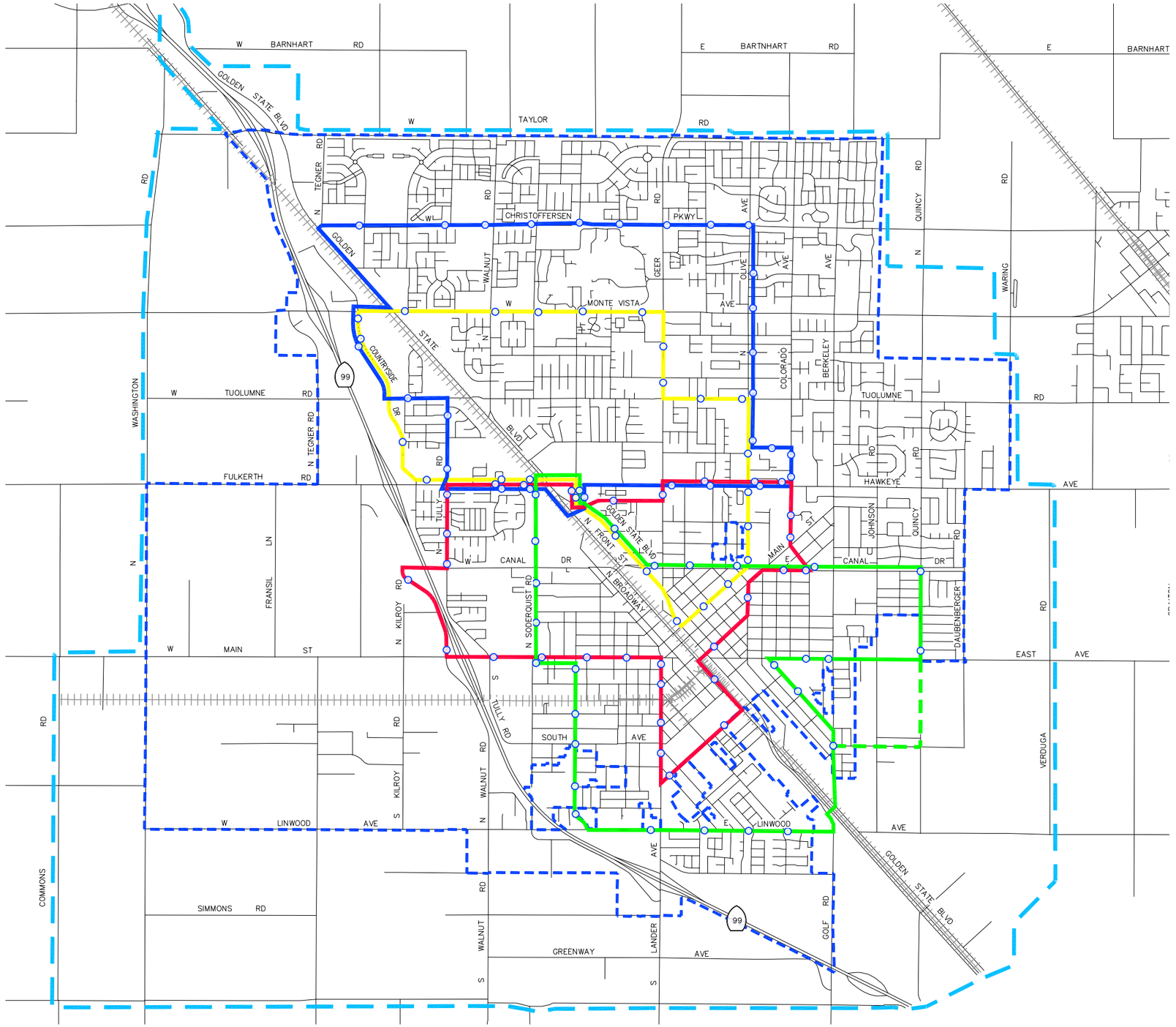

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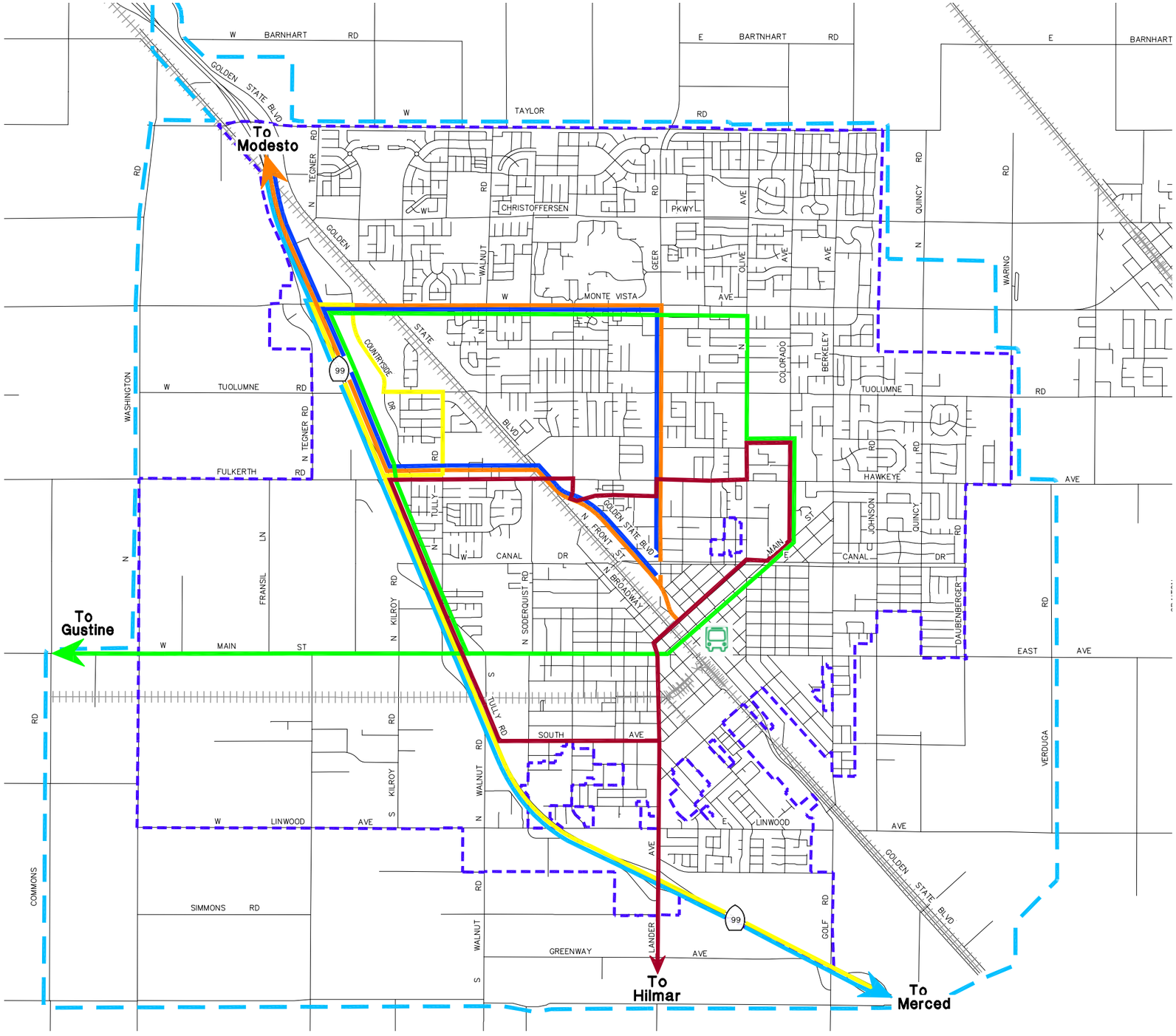
Figure 5-12: Regional Fixed Route Transit Systems



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Legend

- City Limit
- Planning Boundary
- Turlock Greyhound Station

Merced County Transit

- Route 6 (Hilmar/Turlock)
- Route 7 (Turlock to Merced)

Stanislaus Regional Transit

- Route 10 Express (Modesto/Turlock)
- Route 15 (Modesto/Turlock)
- Route 45 (Turlock/Patterson/Newman/Gustine)
- Route 70 (Modesto/Turlock/Merced)

0 0.25 0.5 1 Miles

Image Zoomed at: 1.2xp

5.6 RAILROADS

The City of Turlock is well positioned to be a multi-modal transportation hub with the available railroad facilities within and near the City. Both freight and passenger rail services are available within a few miles of Downtown Turlock. The City is serviced by two railroad lines, Union-Pacific and BNSF. Amtrak service is provided via the BNSF railroad line. Figure 10 presents the railroads and Amtrak station in the Turlock area.

Union-Pacific

The railroads within the City limits are owned by Union-Pacific. These railroads provide freight service in and out of the City, serving the industrial area west of SR 99 and the downtown area parallel to Golden State Boulevard. The main Union-Pacific line runs parallel to Golden State Boulevard and connects the City to a vast statewide and interstate rail network via the City of Modesto to the north and the City of Fresno to the south. The secondary Union-Pacific line that serves primarily rural areas west of Turlock and the west side industrial area runs a mile south of and parallel to Main Street from Golden State Boulevard out west where it meets a north-south line headed to Modesto via Ceres.

BNSF

BNSF owns and operates a railroad line east of the City limits running through the census-designated place of Denair. The BNSF line runs roughly parallel to the Union-Pacific line, connecting to the Cities of Stockton and Modesto to the north and the City of Fresno to the south. This railroad is about 4 miles northeast of the Union-Pacific railroad.

Amtrak

Amtrak connectivity is provided via the host BNSF railroad in Denair, just east of Turlock. The Turlock/Denair station is on the "San Joaquin" Amtrak line between the Modesto and Merced station to the north and south respectively. Public transportation is available to and from the City of Turlock and the Turlock/Denair Amtrak platform. Annual ridership at this station, as of 2006, was 15,300. The unstaffed stop has an unattended passenger parking lot near the platform.

California High-Speed Rail

Since voter approval of Proposition 1A on the November 4th, 2008 statewide ballot providing $9 billion in bond funding, the California High-Speed Rail project is moving forward. The current preferred alternative plan expects to have stops in Modesto and Merced. Turlock residents will be able to access the high-speed service easily by means of existing interregional transit services (StaRT and THE BUS) or through the Amtrak station in Denair that also stops in Modesto and Merced. High-speed rail will allow Turlock residents to commute farther than today in a short amount of time. Estimated travel time and fare from Modesto to Sacramento, for instance, is expected to be 31 minutes for $22. Merced to Fresno is expected to be 21 minutes for $20. Travel to San Jose from Merced would even be reasonably at an estimated 45 minutes at $26. The exact high-speed rail alignment is not, as of this time, finalized. However, preliminary layouts show the high-speed rail right-of-way following existing rail rights-of-way. What is not determined is whether the alignment would bring the high-speed trains through central Turlock on the Union Pacific line or through Denair on the BNSF line.

5.7 AIRPORTS

The City of Turlock has two general aviation airport facilities in its vicinity. The Turlock Airpark is located between SR 99 and Greenway Avenue, east of SR 165 (Lander Avenue). The Turlock Municipal Airport is located about 8 miles east of Downtown Turlock just south East Avenue, east of Newport Road. Figure 5-13 shows the location of Turlock's airports and railroad lines.

Turlock Airpark

Turlock Airpark is a private airstrip located just south of SR 99 within the City limits, owned by Turlock Airpark Inc. Air traffic in and out of Turlock Airpark is light, the runway asphalt and markings are listed as being in poor condition, and use is limited to single wheel craft under 4,000 lbs. 32 aircraft are based at the airfield, including 12 single-engine planes and 20 ultralight craft. 60 percent of traffic is local and 40 percent is itinerant.[1]

Turlock Municipal Airport

The City of Turlock owns and operates the Turlock Municipal Airport. The airport is 8 miles east of the City, outside City limits, and is in fact located in adjacent Merced County. The airport is open to the public and has repair facilities. The runway asphalt is listed as being in good condition and the markings in fair condition. Use is limited to single wheel craft under 12,000 lbs. Fifty-seven aircraft are based at the airfield, including 52 single-engine planes, three multi-engine planes, and two helicopters. Seventy-nine percent of traffic is local and 21 percent is itinerant.[2]

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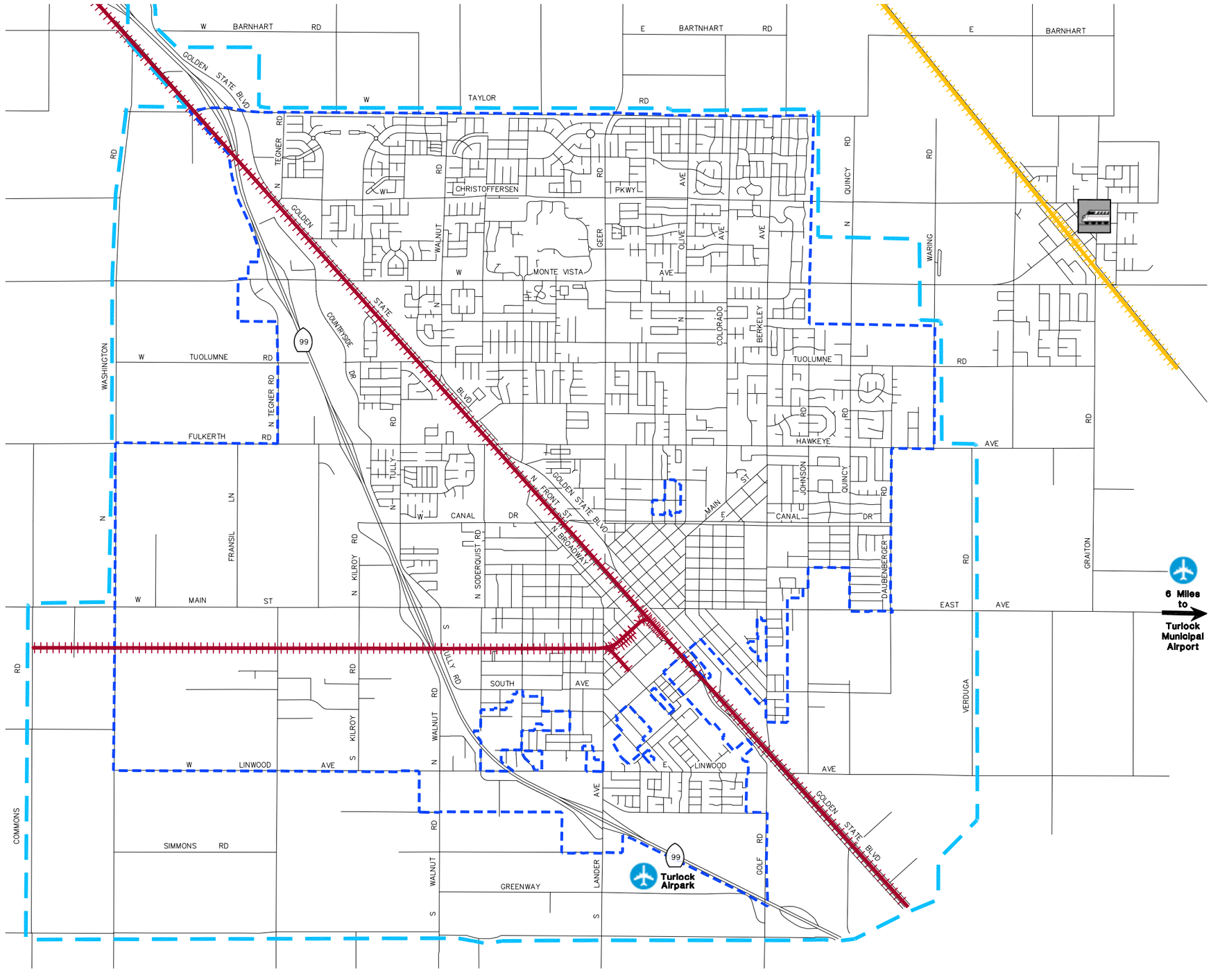
1 "Turlock Airpark Airport (9CL0) Information." Airport-Data. 2008. Airport-Data. 2 Feb. 2009. <http://www.airport-data.com/airport/9CL0/>

2 "Turlock Municipal Airport (O15) Information." Airport-Data. 2008. Airport-Data. 2 Feb. 2009. <http://www.airport-data.com/airport/O15/>

Figure 5-13: Existing Rail and Air Facilities



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5.8 PLANNING ISSUES AND IMPLICATIONS

Upon collection and review of existing transportation conditions and services, it is evident the City to date has planned well. With the planning horizon of the current General Plan nearing its end in 2012, no major widespread transportation deficiencies are evident that can not be resolved with planned, but yet to be constructed, capital transportation improvements. Beyond previously planned capital improvements, looking forward over the next 20 years, the following key issues and opportunities regarding transportation and circulation should be addressed:

- *Local East-West Circulation.* While many of Turlock's east-west roads have excess capacity, travel in this direction on some streets remains problematic for residents of Turlock and Denair.
- *Regional Access to Interstate 5.* Turlock is located along State Route 99; however, access to I-5 is limited. The establishment of the Westside Industrial Specific Plan area is expected to attract industrial users who prioritize interstate access, making improving regional access an important consideration.
- *Upgrading Existing Roadways.* Residents and businesses alike are affected by the deteriorating quality of many of Turlock's existing roads, particularly in older industrial areas that experience heavy truck traffic. Due to budget constraints, the City has deferred maintenance on many roads that are in need of major repairs.
- *Increasing Mode Share of Non-Automobile Means of Transportation.* While projected growth in Turlock will likely necessitate increasing traffic capacity in some places, a larger population base also creates an opportunity for building a more effective transit network. New residential development also has the opportunity to be designed in a way that maximizes ease of walking and cycling to destinations.