

Appendix L

Transportation Impact Study

Appendices

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Clovis General Plan Update Draft Transportation Impact Study

**Prepared for:
City of Clovis**

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SA09-0148

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I. INTRODUCTION

This study analyzes the transportation effects related to the proposed City of Clovis General Plan Update (“Proposed Project”). The Clovis General Plan Update would guide future development within the Clovis Planning Area.

The analysis contained in this report will form the basis of the transportation and traffic chapter for the Environmental Impact Report (EIR). The methodologies used in this study comply with applicable California Environmental Quality Act (CEQA) guidelines and requirements.

The impact analysis examines the roadway, transit, bicycle, and pedestrian components of the transportation system in the City of Clovis and adjacent jurisdictions. To provide a context for the impact analysis, this study begins with an introduction to the project study area, the relevant regulatory framework, and the impact significance thresholds based on the regulatory framework. This is followed by a description of the existing physical and operational conditions of the transportation system, the transportation conditions with the proposed project by 2035, and the transportation conditions with full build out of the proposed project. Lastly, this study includes identifies potentially significant effects and recommended mitigation measures.

The technical analysis contained in this report addresses traffic operations for roadway and freeway segments within the Clovis Planning Area. This report also provides a qualitative evaluation of transit, bicycle, and pedestrian facilities. This study identifies mitigation measures to address significant project impacts where appropriate.

REPORT OUTLINE

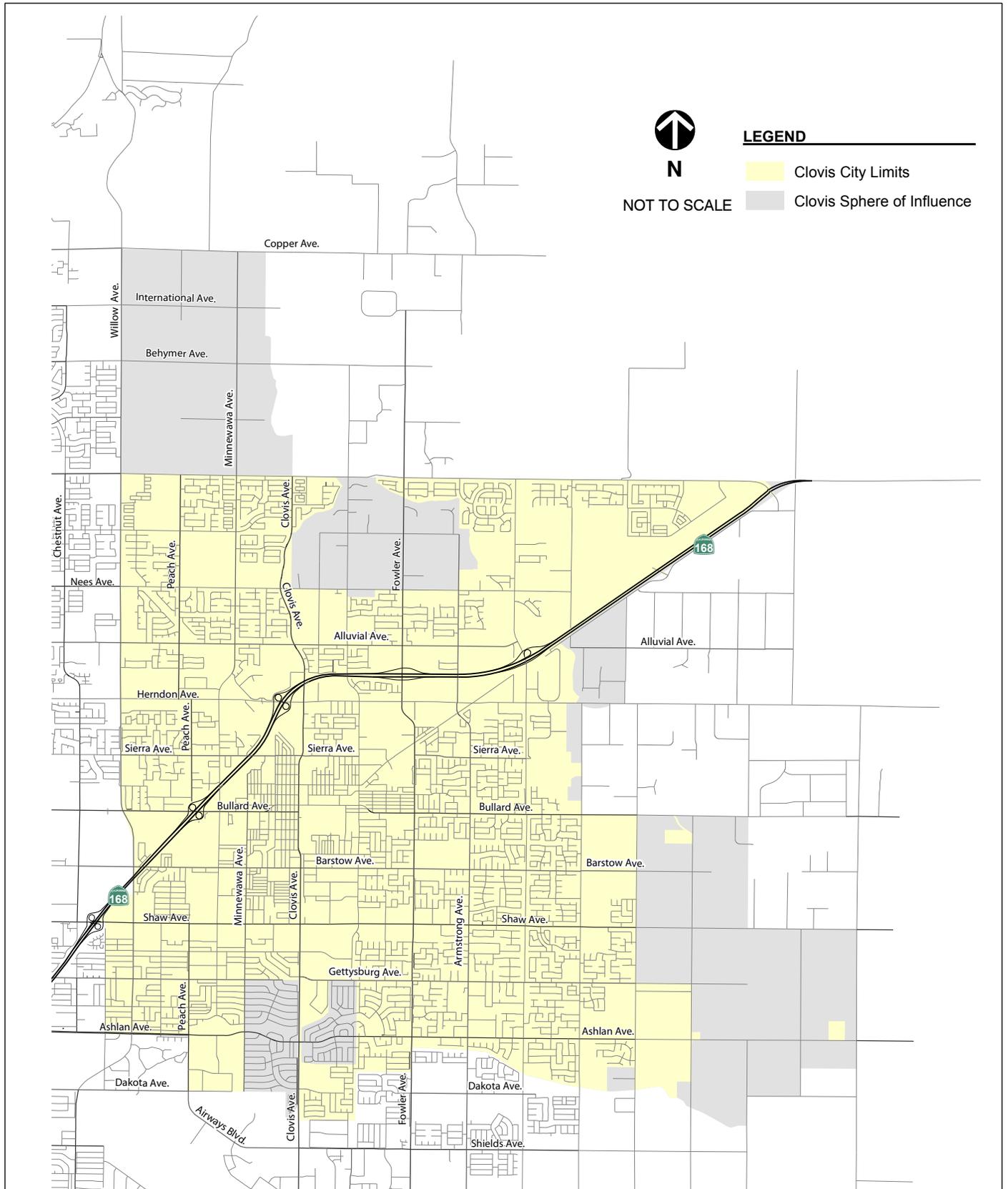
This report is divided into the following key chapters:

1. Introduction
2. Existing Conditions
3. 2035 Plus Proposed General Plan
4. Full Build Out of Proposed General Plan
5. Impact Assessment

The remainder of this introduction chapter will discuss the project study area, analysis methodology, and regulatory setting for this transportation impact study.

PROJECT STUDY AREA

The City of Clovis is located in Fresno County within California's San Joaquin Valley. It is a part of the larger Fresno-Clovis Metropolitan Area, bordered on the west and south by developed areas in the City of Fresno and to the north and east by rural areas in the County of Fresno. Clovis has a multi-modal transportation system consisting of freeways, streets, bikeways, and pedestrian and bicycle paths. The City of Clovis also provides fixed-route and demand-response (i.e., Dial-a-Ride) transit service. Figure 1 identifies the Clovis city limits and sphere of influence.



STUDY ROADWAY SEGMENTS

Table 1 presents the existing roadway segments analyzed in this transportation impact study. These segments were selected based on a review of the roadway network and circulation throughout Clovis:

TABLE 1: STUDY ROADWAY SEGMENTS

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Copper Ave.	West of Willow Ave.		Herndon Ave.	West of Willow Ave.	
Copper Ave.	Willow Ave.	Auberry Rd.	Herndon Ave.	Willow Ave.	SR 168
Copper Ave.	Auberry Rd.	Minnewawa Ave.	Herndon Ave.	SR 168	Clovis Ave.
Copper Ave.	East of Minnewawa Ave.		Herndon Ave.	Clovis Ave.	Sunnyside Ave.
Behymer Ave.	West of Willow Ave.		Herndon Ave.	Sunnyside Ave.	Fowler Ave.
Behymer Ave.	Willow Ave.	Minnewawa Ave.	Herndon Ave.	Fowler Ave.	Temperance Ave.
Behymer Ave.	Minnewawa Ave.	Fowler Ave.	Herndon Ave.	Temperance Ave.	DeWolf Ave.
Perrin Ave.	West of Willow Ave.		Herndon Ave.	DeWolf Ave.	McCall Ave.
Shepherd Ave.	West of Willow Ave.		Herndon Ave.	McCall Ave.	Academy Ave.
Shepherd Ave.	Willow Ave.	Minnewawa Ave.	Sierra Ave.	Willow Ave.	Villa Ave.
Shepherd Ave.	Minnewawa Ave.	Clovis Ave.	Sierra Ave.	Villa Ave.	Clovis Ave.
Shepherd Ave.	Clovis Ave.	Fowler Ave.	Sierra Ave.	Fowler Ave.	Temperance Ave.
Shepherd Ave.	Fowler Ave.	Temperance Ave.	Third Street	Clovis Ave.	Sunnyside Ave.
Shepherd Ave.	Temperance Ave.	DeWolf Ave.	Tollhouse Rd.	Sunnyside Ave.	Armstrong Ave.
Shepherd Ave.	DeWolf Ave.	SR 168	Bullard Ave.	West of Willow Ave.	
Teague Ave.	Willow Ave.	Minnewawa Ave.	Bullard Ave.	Willow Ave.	SR 168
Nees Ave.	West of Willow Ave.		Bullard Ave.	SR 168	Villa Ave.
Nees Ave.	Willow Ave.	Minnewawa Ave.	Bullard Ave.	Villa Ave.	Fifth Street
Nees Ave.	Minnewawa Ave.	Clovis Ave.	Fifth Street	Bullard Ave.	Clovis Ave.
Nees Ave.	Clovis Ave.	Fowler Ave.	Fifth Street	Clovis Ave.	Sunnyside Ave.
Nees Ave.	Fowler Ave.	Temperance Ave.	Bullard Ave.	Sunnyside Ave.	Fowler Ave.
Nees Ave.	Temperance Ave.	Locan Ave.	Bullard Ave.	Fowler Ave.	Temperance Ave.
Alluvial Ave.	West of Willow Ave.		Bullard Ave.	Temperance Ave.	DeWolf Ave.
Alluvial Ave.	Willow Ave.	Clovis Ave.	Barstow Ave.	Willow Ave.	Clovis Ave.
Alluvial Ave.	Clovis Ave.	Fowler Ave.	Barstow Ave.	Clovis Ave.	Fowler Ave.
Alluvial Ave.	Fowler Ave.	Temperance Ave.	Barstow Ave.	Fowler Ave.	Temperance Ave.
Owens Mtn. Pkwy.	DeWolf Ave.	SR 168	Barstow Ave.	Temperance Ave.	Locan Ave.

TABLE 1: STUDY ROADWAY SEGMENTS

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Shaw Ave.	West of SR 168		Shields Ave.	Clovis Ave.	Fowler Ave.
Shaw Ave.	SR 168	Willow Ave.	Shields Ave.	Fowler Ave.	Temperance Ave.
Shaw Ave.	Willow Ave.	Peach Ave.	Shields Ave.	Temperance Ave.	Leonard Ave.
Shaw Ave.	Peach Ave.	Villa Ave.	Willow Ave.	Friant Rd.	Copper Ave.
Shaw Ave.	Villa Ave.	Minnewawa Ave.	Willow Ave.	Copper Ave.	Behymer Ave.
Shaw Ave.	Minnewawa Ave.	Clovis Ave.	Willow Ave.	Behymer Ave.	Shepherd Ave.
Shaw Ave.	Clovis Ave.	Sunnyside Ave.	Willow Ave.	Shepherd Ave.	Nees Ave.
Shaw Ave.	Sunnyside Ave.	Fowler Ave.	Willow Ave.	Nees Ave.	Alluvial Ave.
Shaw Ave.	Fowler Ave.	Temperance Ave.	Willow Ave.	Alluvial Ave.	Herndon Ave.
Shaw Ave.	Temperance Ave.	DeWolf Ave.	Willow Ave.	Herndon Ave.	Bullard Ave.
Shaw Ave.	DeWolf Ave.	McCall Ave.	Willow Ave.	Bullard Ave.	Barstow Ave.
Shaw Ave.	McCall Ave.	Academy Ave.	Willow Ave.	Barstow Ave.	Shaw Ave.
Gettysburg Ave.	West of Willow Ave.		Willow Ave.	Shaw Ave.	Ashlan Ave.
Gettysburg Ave.	Willow Ave.	Minnewawa Ave.	Chestnut Diagonal	South of Ashlan Ave.	
Gettysburg Ave.	Clovis Ave.	Fowler Ave.	Peach Ave.	Shepherd Ave.	Teague Ave.
Gettysburg Ave.	Fowler Ave.	Temperance Ave.	Peach Ave.	Teague Ave.	Nees Ave.
Gettysburg Ave.	Temperance Ave.	DeWolf Ave.	Peach Ave.	Nees Ave.	Herndon Ave.
Gettysburg Ave.	DeWolf Ave.	Leonard Ave.	Peach Ave.	Shaw Ave.	Ashlan Ave.
Ashlan Ave.	SR 168	Willow Ave.	Peach Ave.	Ashlan Ave.	Dakota Ave.
Ashlan Ave.	Willow Ave.	Peach Ave.	Auberry Rd.	North of Copper Ave.	
Ashlan Ave.	Peach Ave.	Minnewawa Ave.	Villa Ave.	Herndon Ave.	Bullard Ave.
Ashlan Ave.	Minnewawa Ave.	Clovis Ave.	Villa Ave.	Bullard Ave.	Shaw Ave.
Ashlan Ave.	Clovis Ave.	Sunnyside Ave.	Villa Ave.	Shaw Ave.	Gettysburg Ave.
Ashlan Ave.	Sunnyside Ave.	Fowler Ave.	Minnewawa Ave.	Copper Ave.	Behymer Ave.
Ashlan Ave.	Fowler Ave.	Temperance Ave.	Minnewawa Ave.	Behymer Ave.	Shepherd Ave.
Ashlan Ave.	Temperance Ave.	DeWolf Ave.	Minnewawa Ave.	Shepherd Ave.	Teague Ave.
Ashlan Ave.	DeWolf Ave.	McCall Ave.	Minnewawa Ave.	Teague Ave.	Nees Ave.
Ashlan Ave.	McCall Ave.	Academy Ave.	Minnewawa Ave.	Nees Ave.	Herndon Ave.
Dakota Ave.	West of Peach Ave.		Minnewawa Ave.	Bullard Ave.	Shaw Ave.
Airways Blvd.	Dakota Ave.	Clovis Ave.	Minnewawa Ave.	Shaw Ave.	Ashlan Ave.

TABLE 1: STUDY ROADWAY SEGMENTS

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Clovis Ave.	Shepherd Ave.	Teague Ave.	Armstrong Ave.	Shaw Ave.	Gettysburg Ave.
Clovis Ave.	Teague Ave.	Nees Ave.	Armstrong Ave.	Gettysburg Ave.	Ashlan Ave.
Clovis Ave.	Nees Ave.	Alluvial Ave.	Armstrong Ave.	Ashlan Ave.	Dakota Ave.
Clovis Ave.	Alluvial Ave.	Herndon Ave.	Armstrong Ave.	South of Dakota Ave.	
Clovis Ave.	Herndon Ave.	Third Street	Temperance Ave.	Shepherd Ave.	Nees Ave.
Clovis Ave.	Third Street	Fifth Street	Temperance Ave.	Nees Ave.	SR 168
Clovis Ave.	Fifth Street	Barstow Ave.	Temperance Ave.	SR 168	Herndon Ave.
Clovis Ave.	Barstow Ave.	Shaw Ave.	Temperance Ave.	Herndon Ave.	Sierra Ave.
Clovis Ave.	Shaw Ave.	Ashlan Ave.	Temperance Ave.	Sierra Ave.	Bullard Ave.
Clovis Ave.	Ashlan Ave.	Shields Ave.	Temperance Ave.	Bullard Ave.	Barstow Ave.
Clovis Ave.	South of Shields Ave.		Temperance Ave.	Barstow Ave.	Shaw Ave.
Sunnyside Ave.	North of Shepherd Ave.		Temperance Ave.	Shaw Ave.	Ashlan Ave.
Sunnyside Ave.	Shepherd Ave.	Nees Ave.	Temperance Ave.	Ashlan Ave.	Shields Ave.
Sunnyside Ave.	Nees Ave.	Herndon Ave.	Locan Ave.	Shepherd Ave.	Nees Ave.
Sunnyside Ave.	Herndon Ave.	Fifth Street	Locan Ave.	Herndon Ave.	Bullard Ave.
Sunnyside Ave.	Fifth Street	Shaw Ave.	Locan Ave.	Bullard Ave.	Shaw Ave.
Fowler Ave.	Behymer Ave.	Shepherd Ave.	Locan Ave.	Shaw Ave.	Ashlan Ave.
Fowler Ave.	Shepherd Ave.	Nees Ave.	Locan Ave.	Ashlan Ave.	Shields Ave.
Fowler Ave.	Nees Ave.	SR 168	DeWolf Ave.	Shepherd Ave.	Owens Mtn. Pkwy.
Fowler Ave.	SR 168	Herndon Ave.	DeWolf Ave.	Tollhouse Rd.	Herndon Ave.
Fowler Ave.	Herndon Ave.	Tollhouse Rd.	DeWolf Ave.	Herndon Ave.	Bullard Ave.
Fowler Ave.	Tollhouse Rd.	Bullard Ave.	DeWolf Ave.	Bullard Ave.	Shaw Ave.
Fowler Ave.	Bullard Ave.	Shaw Ave.	DeWolf Ave.	Shaw Ave.	Ashlan Ave.
Fowler Ave.	Shaw Ave.	Gettysburg Ave.	DeWolf Ave.	Ashlan Ave.	Shields Ave.
Fowler Ave.	Gettysburg Ave.	Ashlan Ave.	Leonard Ave.	Bullard Ave.	Shaw Ave.
Fowler Ave.	Ashlan Ave.	Shields Ave.	Leonard Ave.	Shaw Ave.	Ashlan Ave.
Fowler Ave.	South of Shields Ave.		Thompson Ave.	Cole Ave.	Herndon Ave.
Armstrong Ave.	Nees Ave.	Herndon Ave.	McCall Ave.	Herndon Ave.	Shaw Ave.
Armstrong Ave.	Herndon Ave.	Bullard Ave.	McCall Ave.	Shaw Ave.	Ashlan Ave.
Armstrong Ave.	Bullard Ave.	Shaw Ave.	McCall Ave.	South of Ashlan Ave.	

TABLE 1: STUDY ROADWAY SEGMENTS

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Academy Ave.	Shepherd Ave.	Herndon Ave.	SR 168 EB	Shaw Ave.	Bullard Ave.
Academy Ave.	Herndon Ave.	Shaw Ave.	SR 168 WB	Bullard Ave.	Shaw Ave.
Academy Ave.	South of Shaw Ave.		SR 168 EB	Bullard Ave.	Herndon Ave.
SR 168 EB	SR 180	McKinley Ave.	SR 168 WB	Herndon Ave.	Bullard Ave.
SR 168 WB	McKinley Ave.	SR 180	SR 168 EB	Herndon Ave.	Fowler Ave.
SR 168 EB	McKinley Ave.	Shields Ave.	SR 168 WB	Fowler Ave.	Herndon Ave.
SR 168 WB	Shields Ave.	McKinley Ave.	SR 168 EB	Fowler Ave.	Temperance Ave.
SR 168 EB	Shields Ave.	Ashlan Ave.	SR 168 WB	Temperance Ave.	Fowler Ave.
SR 168 WB	Ashlan Ave.	Shields Ave.	SR 168	Temperance Ave.	Owens Mtn. Pkwy.
SR 168 EB	Ashlan Ave.	Shaw Ave.	SR 168	Owens Mtn. Pkwy.	Shepherd Ave.
SR 168 WB	Shaw Ave.	Ashlan Ave.	SR 168	East of Shepherd Ave.	

In addition, the proposed General Plan would result in several new roadways and upgrade existing rural roadways to urban facilities, creating new segments. Table 2 presents the additional study roadways that are analyzed with the build out of the proposed General Plan.

**TABLE 2: PROPOSED GENERAL PLAN –
ADDITIONAL STUDY ROADWAY SEGMENTS**

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Copper Ave. ¹	Minnewawa Ave.	Clovis Ave.	Owens Mtn. Pkwy.	Temperance Ave.	Nees Ave.
Copper Ave.	Clovis Ave.	"NS Arterial 1"	Owens Mtn. Pkwy.	Nees Ave.	DeWolf Ave.
Copper Ave.	"NS Arterial 1"	SR 168	Owens Mtn. Pkwy.	SR 168	"Collector A"
International Ave.	Willow Ave.	Auberry Rd.	Owens Mtn. Pkwy.	"Collector A"	McCall Ave.
International Ave.	Auberry Rd.	Minnewawa Ave.	Owens Mtn. Pkwy.	East of McCall Ave.	
Behymer Ave. ²	Minnewawa Ave.	Clovis Ave.	Owens Mtn. Pkwy.	"NS Arterial 1"	"NS Arterial 2"
Behymer Ave. ²	Clovis Ave.	Sunnyside Ave.	Owens Mtn. Pkwy.	East of "NS Arterial 2" (South)	
Behymer Ave. ²	Sunnyside Ave.	Fowler Ave.	Owens Mtn. Pkwy.	East of "NS Arterial 2" (North)	
Perrin Ave.	Willow Ave.	Peach Ave.	Herndon Ave. ³	McCall Ave.	"NS Collector A"
Perrin Ave.	Peach Ave.	Minnewawa Ave.	Herndon Ave. ³	"NS Collector A"	"NS Collector B"
Perrin Ave.	Minnewawa Ave.	Clovis Ave.	Herndon Ave. ³	"NS Collector B"	Academy Ave.

**TABLE 2: PROPOSED GENERAL PLAN –
ADDITIONAL STUDY ROADWAY SEGMENTS**

Roadway	Segment		Roadway	Segment	
	From	To		From	To
Gettysburg Ave.	Leonard Ave.	Thompson Ave.	McCall Ave.	SR 168	Owens Mtn. Pkwy.
Gettysburg Ave.	Thompson Ave.	McCall Ave.	McCall Ave.	Owens Mtn. Pkwy.	"Collector A"
Peach Ave.	Copper Ave.	Behymer Ave.	McCall Ave.	"Collector A"	"Collector B"
Peach Ave.	Behymer Ave.	Shepherd Ave.	McCall Ave.	"Collector B"	"Arterial 2"
Auberry Rd.	Copper Ave.	International Ave.	McCall Ave.	"Arterial 2"	Herndon Ave.
Clovis Ave.	Copper Ave.	Behymer Ave.	"NS Arterial 1"	Copper Ave.	SR 168
Clovis Ave.	Behymer Ave.	Perrin Ave.	"NS Arterial 1"	SR 168	Owens Mtn. Pkwy.
Clovis Ave.	Perrin Ave.	"Pryor Dr."	"NS Arterial 2"	SR 168	Owens Mtn. Pkwy. (South)
Clovis Ave.	"Pryor Dr."	Shepherd Ave.	"NS Arterial 2"	Owens Mtn. Pkwy. (South)	McCall Ave.
Thompson Ave.	Shaw Ave.	Gettysburg Ave.			
Thompson Ave.	Gettysburg Ave.	Ashlan Ave.			

Notes: ¹Analyzed as Copper Ave. – East of Minnewawa Ave. under Existing Conditions

²Analyzed as Behymer Ave. – Minnewawa Ave. to Fowler Ave. under Existing Conditions

³Analyzed as Herndon Ave. – McCall Ave. to Academy Ave. under Existing Conditions

ANALYSIS METHODOLOGIES

TRAVEL DEMAND FORECASTING

This study uses the most recently adopted Fresno Council of Governments (COG) regional travel demand forecasting (TDF) model released in 2010 to forecasts 2035 and build out traffic volumes with the proposed General Plan update. The model was modified within the study area to reflect the transportation network and land uses associated with the proposed General Plan update.

TRAFFIC OPERATIONS

This study analyzes traffic operations using level of service (LOS) as the primary measure of performance. Roadway LOS is a qualitative description of traffic flow from the perspective of motorists. The *Highway Capacity Manual* (HCM) (Transportation Research Board, 2000) defines six levels of service from LOS A representing the least congested traffic conditions to LOS F representing the most congested traffic conditions. LOS E represents "at capacity" operations. The flow of vehicles without significant impediments is considered "stable" whereas when traffic encounters interference that limits the capacity

acutely, the flow becomes “unstable”. These grades represent the perspective of drivers only and are an indication of the comfort and convenience associated with driving, as well as speed, travel time, traffic interruptions, and freedom to maneuver. Table 3 presents a general description of each LOS.

TABLE 3: LEVEL OF SERVICE DESCRIPTIONS

Level of Service	Description
A	Free-flow operations. Drivers are almost completely unimpeded in their ability to maneuver within the traffic stream.
B	Free-flow speeds are maintained. The ability to maneuver within the traffic stream is only slightly restricted.
C	Traffic flow with speeds at or near free-flow speed. The freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
D	Speeds begin to decline slightly with increasing flows. Freedom to maneuver within the traffic stream is noticeably limited.
E	Operations at or near capacity. There are virtually no useable gaps within the traffic stream, leaving little room to maneuver.
F	Breakdown in vehicular flow. Vehicular demand exceeds capacity.

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

Roadway Segment Traffic Operations

This study conducted roadway operations analysis for the study roadway segments to provide an evaluation of how the roadway network will perform. It also provides an idea of the amount of traffic that will utilize each roadway and if the existing or proposed lane configurations can adequately handle the volumes.

The roadway segment operations analysis uses the peak hour traffic volume thresholds shown in Table 4 to determine the LOS for study roadway segments. These thresholds are based on the planning level methodologies identified in the HCM, and were developed using inputs that specifically to match the typical roadway conditions seen in Clovis.

TABLE 4: LEVEL OF SERVICE CRITERIA – ROADWAY SEGMENTS

Classification	Median Type	# of Lanes	Peak Hour LOS Volume Thresholds					
			LOS A	LOS B	LOS C	LOS D	LOS E	
Freeway	N/A	4	2,720	4,460	6,630	7,720	8,630	
		3+Aux	2,360	3,860	5,640	6,730	7,530	
		3	2,000	3,270	4,660	5,740	6,430	
		2+Aux	1,650	2,700	3,850	4,760	5,340	
		2	1,300	2,130	3,050	3,790	4,260	
Expressway (Caltrans)	Divided	6	2,280	3,750	5,400	7,030	7,980	
		4	1,510	2,500	3,600	4,680	5,310	
Expressway (City)	Raised Median	6	-	-	3,290	6,120	6,400	
		5	-	-	2,685	5,090	5,330	
		4	-	-	2,080	4,060	4,260	
		3	-	-	1,475	3,030	3,190	
Arterial	Raised Median	8	-	-	4,180	7,210	7,580	
		6	-	-	3,060	5,390	5,680	
		5	-	-	2,500	4,480	4,730	
		4	-	-	1,950	3,580	3,780	
		3	-	-	1,400	2,670	2,830	
		2	-	-	860	1,770	1,880	
	TWLTL	TWLTL	4	-	-	1,840	3,400	3,590
			2	-	-	810	1,680	1,790
		Undivided	4	-	-	1,320	2,500	2,640
			2	-	-	570	1,230	1,310
Collector	TWLTL	4	-	-	1,840	3,400	3,590	
		3	-	-	1,325	2,540	2,690	
		2	-	-	810	1,680	1,790	
	Undivided	4	-	-	1,320	2,500	2,640	
		2	-	-	570	1,230	1,310	
State Highway	Undivided	2	310	570	1,020	1,730	2,470	
Rural Arterial	Divided	4	-	-	1,950	3,580	3,780	
	Undivided	2	-	-	570	1,230	1,310	
Rural Collector/Local	Undivided	2	-	-	570	930	1,000	

Source: Developed by Fehr & Peers based on the *Highway Capacity Manual* (Transportation Research Board, 2000).

ANALYSIS ASSUMPTIONS AND METHODOLOGY LIMITATIONS

Key assumptions made in the process of this study include:

- Land use growth for Full Build Out scenario (see Chapter 4).

Travel Demand Forecasting Limitations

As noted above, this study uses the most recently adopted Fresno COG TDF model released in 2010 and made modifications within the study area to reflect the transportation network and land uses associated with the proposed General Plan update. While this makes the TDF model the most valid and capable tool for forecasting future traffic volumes, the TDF model has some limitations in its application for this study. For example, the model was designed to model traffic for regional air quality conformity, and only includes the regional roadway network. Given its regional scale, the model does not include details with regards to access to local streets and driveways, or potential local streets that act as cut-through or parallel routes.

The City of Clovis's roadway network is primarily a grid network with half-mile spacing. Drivers may choose from multiple routes in a grid system based on signal progression, congestion, and individual preferences, and may use different routes for the same trip. While the model accounts for segment level congestion, it is more limited in its ability to directly account for changes in routes due to signal operations or driver preferences. To account for some of these limitations, this study uses a process known as the "difference method" to develop turning movement forecasts. This approach adjusts raw model volume forecasts by adding the forecasted incremental growth from the TDF model to the baseline traffic counts.

Traffic Operations Limitations

This study uses analysis methodologies that are consistent with the planning level application of the *Highway Capacity Manual*. This planning level application uses a set of general inputs that represent the typical characteristics of each roadway classification (i.e., freeway, expressway, arterial, collector, etc.). This study specifically uses inputs that match the typical characteristics of roadways in Clovis to develop the hourly volume thresholds. The thresholds presented in Table 4 are created to capture the key inputs for roadway characteristics such as roadway classification, median type, and number of lanes. As stated in the HCM, these planning level values are useful in evaluating the overall performance of a large number of facilities within a jurisdiction to determine where improvements may be needed, but are not designed to reflect the unique characteristics of a particular facility or to make final decisions on important design features. As such, there may be cases where the specific characteristic of a roadway segment is different than the typical street characteristics used to develop the thresholds in Table 4. For example, an arterial roadway may have more closely spaced intersections or driveways, have a lower or higher speed limit, or carry more truck traffic than a typical arterial in Clovis. Changing these types of inputs would result in

different roadway capacities that may either result in a better or worse LOS than reported based on the thresholds in Table 4.

As stated above, the HCM supports the use of the planning level evaluation when evaluating a large number of facilities and needing to evaluate the overall performance of facilities within a jurisdiction. Therefore, while the thresholds in Table 4 may be limited in their ability to represent every roadway condition or characteristic, the methodology to use planning level thresholds is justified for this study.

REGULATORY SETTING

This section summarizes the transportation policies, laws, and regulations that would apply to the proposed General Plan Update. These regulations provide the context for the impact discussion related to the project's potentially significant effects discussed in Chapter 5 – Impact Assessment. Further, this study identifies significant impacts to traffic operations by comparing roadway LOS analysis results to the LOS policies set forth by the City of Clovis, City of Fresno, County of Fresno, and Caltrans for their respective facilities.

FEDERAL REGULATIONS

Applicable federal regulations are described below.

Americans with Disabilities (ADA) Act of 1990

Titles I, II, III, and V of the ADA have been codified in Title 42 of the United States Code, beginning at section 12101. Title III prohibits discrimination on the basis of disability in “places of public accommodation” (businesses and non-profit agencies that serve the public) and “commercial facilities” (other businesses). The regulation includes Appendix A to Part 36 (Standards for Accessible Design) establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48” inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

Federal Highway Administration (FHWA)

The FHWA is a major agency of the United States Department of Transportation. In partnership with State and local agencies, the FHWA carries out Federal highway programs to meet the Nation’s transportation needs. The FHWA administers and oversees Federal highway programs to ensure that Federal funds are used efficiently.

STATE REGULATIONS

Applicable state laws and state transportation agency plans are described below.

AB 32 – Global Warming Solution Act

With the passage of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32.

In 2007, ARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, ARB defined its 1990 baseline level of emissions, and by 2011 it completed its major rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the proposed cap and trade program, came into effect January 1, 2012. The cap and trade program controls pollution by a governing agency selling permits on the amount of pollutants a firm can emit. A firm's pollutants cannot exceed the limit. Firms requiring the need to increase their emissions must purchase permits from other firms requiring fewer permits.

SB 375 – Sustainable Communities and Climate Protection Act

On December 11, 2008, the California Air Resources Board (CARB) adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of SB 375 as the means for achieving regional transportation-related greenhouse gas (GHG) targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

There are five major components to SB 375. First, SB 375 will address regional GHG emission targets. CARB's Regional Targets Advisory Committee will guide the adoption of targets to be met by 2020 and 2035 for each metropolitan planning organization (MPO) in the state. These targets, which MPOs may propose themselves, will be updated every eight years in conjunction with the revision schedule of housing and transportation elements.

Second, MPOs will be required to create a sustainable communities strategy (SCS) that provides a plan for meeting regional targets. The SCS and the regional transportation plan (RTP) must be consistent with each other, including action items and financing decisions. If the SCS does not meet the regional target, the MPO must produce an Alternative Planning Strategy that details an alternative plan to meet the target.

Third, SB 375 requires that regional housing elements and transportation plans be synchronized on eight-year schedules. In addition, Regional Housing Needs Assessment (RHNA) allocation numbers must conform to the SCS. If local jurisdictions are required to rezone land as a result of changes in the housing element, rezoning must take place within three years.

Fourth, SB 375 provides CEQA streamlining incentives for preferred development types. Residential or mixed-use projects qualify if they conform to the SCS. Transit-oriented developments (TODs) also qualify if they 1) are at least 50 percent residential, 2) meet density requirements, and 3) are within one-half mile of a transit stop. The degree of CEQA streamlining is based on the degree of compliance with these development preferences.

Finally, MPOs must use transportation and air emission modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC). Regional transportation planning agencies, cities, and counties are encouraged, but not required, to use travel demand models consistent with the CTC guidelines.

AB 1358 – California Complete Streets Act

The California Complete Streets Act of 2008 was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 required circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must “meet the needs of all users...in a manner suitable to the rural, suburban, or urban context of the general plan.” Essentially, this bill requires a circulation element to plan for all modes of transportation where appropriate—including walking, biking, car travel, and transit.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. For further clarity, the Governor’s Office of Planning and Research released guidelines related to this legislation in December 2010.

California Department of Transportation (Caltrans)

Caltrans has authority over the State highway system, including freeways, interchanges, and arterial State Routes. Caltrans approves the planning, design, and construction of improvements for all State-controlled facilities including State Route (SR) 168 and its associated interchanges and intersections in Clovis. Caltrans also provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for state funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

Caltrans requirements are described in their *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2001), which covers the information needed for Caltrans to review the impacts on state highway facilities including freeway segments. The *Guide for the Preparation of Traffic Impact Studies* states that “Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on state highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS.” The *Guide for the Preparation*

of *Traffic Impact Studies* also states that where “an existing State highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness (MOE) should be maintained.”

Caltrans also prepares comprehensive planning documents, including Corridor System Management Plans (CSMPs) and Transportation Concept Reports (TCRs), which are long-range planning documents that establish a planning concept for state facilities. The CSMPs and TCRs identify a concept LOS, or “target” LOS, for the applicable highway facility. A deficiency or need for improvement is triggered when the actual LOS falls below the concept LOS. Caltrans released the most recent TCR for SR 168 in October 2005. For the study area, the SR 168 TCR identifies LOS D as the route concept LOS.

REGIONAL REGULATIONS AND PLANS

Applicable regional transportation agency plans and policies are described below.

2011 Fresno COG Regional Transportation Plan

The 2011 Fresno COG *Regional Transportation Plan* (RTP) (Fresno COG, 2010) is a federally mandated long-range fiscally constrained transportation plan for Fresno County. The area is designated a federal non-attainment area for ozone, indicating that the transportation system is required to meet stringent air quality emissions targets to reduce pollutant levels that contribute to ozone formation. To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the RTP.

LOCAL REGULATIONS AND PLANS

Adopted local agency planning documents, such as a local jurisdiction’s General Plan, provides guidance for the agency’s management of its transportation system. The majority of the study segments in this transportation impact study are within the City of Clovis. To address potential effects on roadways in the adjacent jurisdictions, this study also analyzes local roadways in the City of Fresno and County of Fresno. Applicable local agency regulatory plans and policies from these agencies are described below.

City of Clovis General Plan

The 1993 City of Clovis General Plan serves as the City’s blueprint for future growth and development, providing comprehensive planning for the future. The 1993 General Plan’s Circulation Element addresses the movement of people and goods throughout the City of Clovis’s transportation network. The Circulation Element evaluates transportation circulation needs within the City and recommends circulation improvements that will accommodate the future demand for transportation service generated by the Land Use Element of the General Plan. The 1993 Clovis General Plan Circulation Element identifies LOS D as the City’s targeted LOS standard.

City of Fresno General Plan

The City of Fresno's current *2025 Fresno General Plan* provides the City's long-range planning strategies for continued development, enhancement, and revitalization of the City of Fresno. The City of Fresno is in the process of updating its General Plan, and will soon adopt a General Plan Update with revised goals and policies.

The City of Fresno's current General Plan Public Facilities Element identifies the public facilities, including circulation and public transportation facilities, needed to support the growth and urban development anticipated under the *2025 Fresno General Plan*. The Transportation section of the Public Facilities Element describes the current and future transportation needs within the City and identifies a preferred circulation plan to accommodate the future demand for transportation service. It also acknowledges several long-term deficiencies that are expected with the growth of the City. The *2025 Fresno General Plan* identifies LOS D as the City's acceptable level of traffic on major streets.

County of Fresno General Plan

The *Fresno County 2000 General Plan* is a comprehensive, long-term framework for the protection of the county's agricultural, natural, and cultural resources, and for development in the county. The General Plan outlines policies, standards, and programs and sets out plan proposals to guide day-to-day decisions concerning Fresno County's future. The Transportation and Circulation Element of the *Fresno County 2000 General Plan* provides the framework for Fresno County decisions concerning the countywide transportation system. It also establishes standards that guide the development of the transportation system and management of access to the highway system by new development throughout the unincorporated areas of the county. The Transportation and Circulation Element includes policies that state the County will strive to meet LOS D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.

Fresno Yosemite International Airport Land Use Compatibility Plan

The Fresno Yosemite International Airport Land Use Compatibility Plan is required by the State Aeronautics Act to provide for the orderly growth of the airport and the area surrounded the airport within the jurisdiction of the Airport Land Use Commission (ALUC). The goal of land use compatibility around airports is to protect the public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

II. EXISTING CONDITIONS

This chapter describes the existing condition of the roadway, transit, bicycle, and pedestrian systems in the study area. Please note much of this information was developed and submitted in May 2011 to assist in informing the development of the General Plan. This study uses the existing conditions as the baseline to measure the potential impacts of proposed project.

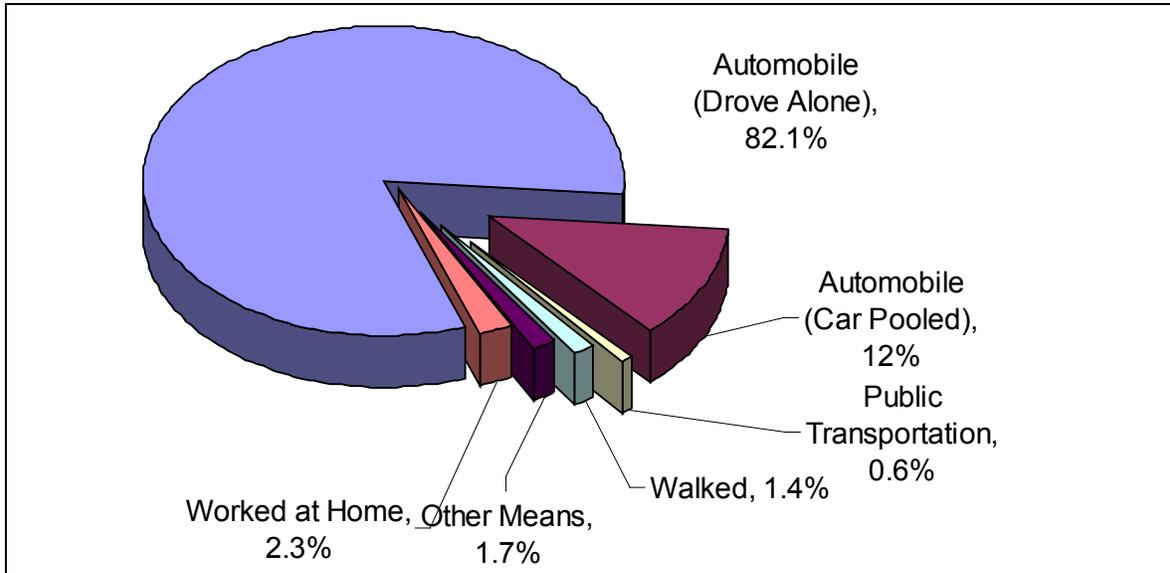
EXISTING TRAVEL BEHAVIOR IN CLOVIS

Both the location of the City of Clovis, as well as its land use patterns, have played an important role in the way that residents travel in and around the City. Although residents of Clovis have access to several modes of travel including walking, biking, and transit, the automobile serves as the primary mode of transportation within the City.

The 2000 U.S. Census “journey to work” data provides detailed information about where residents of the City work, which is useful for estimating peak hour traffic patterns. Due to its close proximity to the much larger City of Fresno, a majority of Clovis’ residents work outside of Clovis. As of the 2000 U.S. Census, only 24 percent of Clovis’ residents worked within the City, while approximately 61 percent worked in the City of Fresno.

Data from the 2000 U.S. Census also provides information regarding the modes of transportation that residents of Clovis use to travel to work. Exhibit 1 shows that 94.1 percent of all working City residents travel from home to work by automobile (compared to 86.3 percent statewide), of which 12 percent travel in a carpool of two or more people. Walking, bicycling, public transit, and other modes account for 5.4 percent of the total work trips by Clovis residents (compared to 9.9 percent statewide), while 2.3 percent of people work from home.

EXHIBIT 1
METHODS OF COMMUTING IN CLOVIS



EXISTING FACILITIES

ROADWAY FACILITIES

Functional Classifications

Roadways in the City of Clovis are categorized according to a typology known as roadway functional classification. Roadway functional classification categorizes roadways based on the type of service they provide. Two major functions of roadways are to provide mobility for through traffic and provide direct access to adjacent properties. Roadways prioritize these two functions differently. For instance, arterial roadways prioritize the movement of traffic over access to individual adjacent properties, whereas local streets prioritize access to private properties over allowing for the through movement of vehicle traffic. Roadways also provide bicycle and pedestrian access and allow for the circulation of non-vehicular traffic. Below are descriptions of the roadway functional classifications in Clovis.

Freeways

Freeways are intended to carry traffic efficiently from one end of the city to the other, serve inter-regional travel, and provide connections from Clovis to other cities and counties. Freeways are access-controlled with two or more lanes in each direction. State Route (SR) 168 is a freeway within the City of Clovis.

Expressways

Similar to freeways, expressways are intended to carry traffic efficiently over long distances. Access to expressways is typically restricted to signalized intersections with arterial and collector streets. Travel lanes for opposing directions of travel are separated by a raised median. Portions of Temperance Avenue and Herndon Avenue within the City of Clovis operate as expressways.

Arterials

Arterials are designed to move large volumes of traffic and are intended to provide a high level of mobility between freeways, expressways, other arterials, and collector roadways. Arterials also provide non-freeway/highway connections between major residential, employment, and activity centers. Unlike freeways, they are intended not only for motor vehicle circulation, but also for bicycle and pedestrian circulation. Arterial streets typically have more right-of-way and a higher degree of access control than collector roadways. Most arterials in Clovis have four travel lanes, and opposing traffic may be separated by a median.

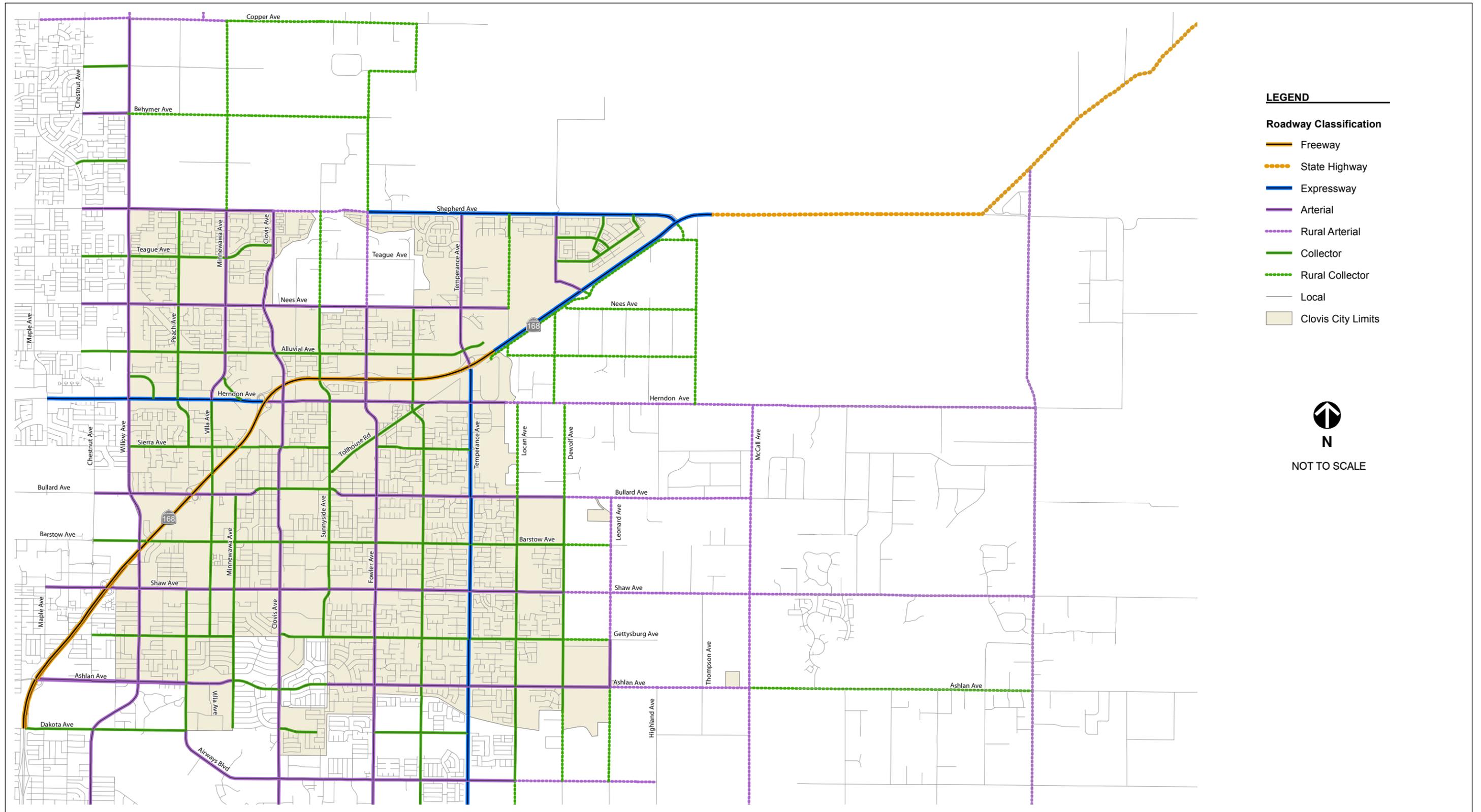
Collectors

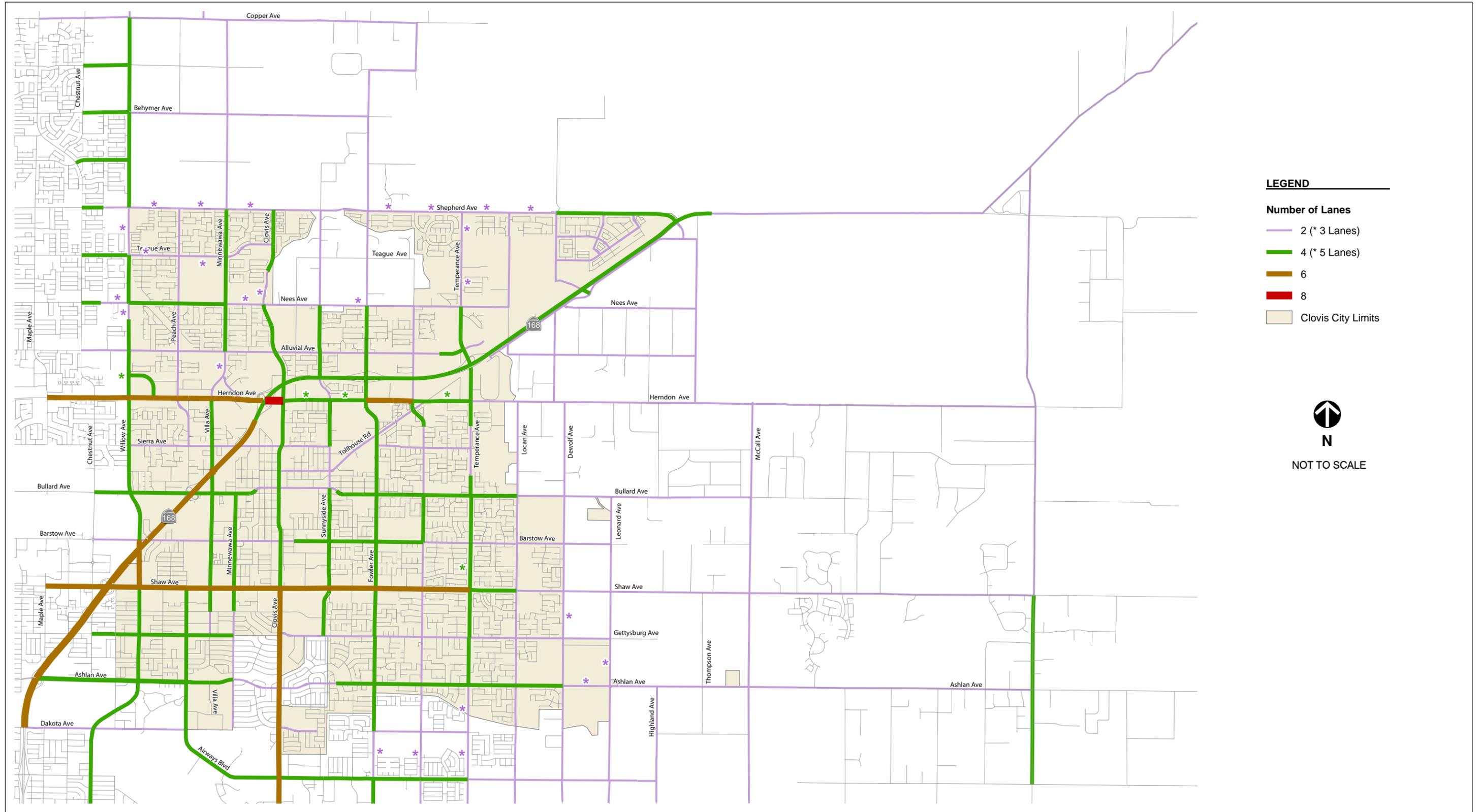
Collector streets provide for relatively short distance travel between and within neighborhoods. Collectors are not designed to handle long-distance through traffic. Driveway access to collectors is less limited than on arterials. Speed limits on these streets are typically lower than those found on arterials.

Local Streets

Local streets are designed to provide direct roadway access to abutting land uses and serve short distance trips within neighborhoods. Traffic volumes and speed limits on local streets are low, and these roadways have no more than two travel lanes.

Figures 2 and 3 show the existing roadway functional classification and number of lanes on the major roadways in Clovis, respectively.





Roadway Network

SR 168 serves as the backbone of Clovis' regional transportation network and provides access into the City of Fresno for residents of Clovis and eastern Fresno County. Additionally, Herndon Avenue to the west of SR 168 and Temperance Avenue south of SR 168 serve as expressways carrying traffic to and from the freeway. Clovis also has a grid of collector and arterial streets spaced approximately a half mile apart throughout most of the City. These streets collect traffic from the local roadways that make up the remainder of the City's roadway system.

SR 168 along with the City of Clovis' expressways and arterials accommodate regional and cross-city travel. Collector streets and local roadways generally serve short to medium-length trips. Ashlan Avenue, Bullard Avenue, and Clovis Avenue are examples of arterials that connect neighborhoods in and around Clovis. Collector streets, such as Barstow Avenue, Gettysburg Avenue, and Peach Avenue are primarily used for travel within Clovis and connect neighborhood traffic to arterials and expressways.

Major Streets

State Route (SR) 168 is an east-west state highway that travels through the City of Clovis. West of Clovis, SR 168 is a six-lane freeway that connects Clovis to Fresno Yosemite International Airport, Downtown Fresno, and the greater freeway system via SR 180, SR 41, and SR 99. Within Clovis, SR 168 is primarily a four- and six-lane freeway with interchanges at Shaw Avenue, Bullard Avenue, Herndon Avenue, Fowler Avenue, and Temperance Avenue. East of Temperance Avenue, SR 168 becomes a four-lane expressway with signalized access points at Owens Mountain Parkway and Shepherd Avenue. East of Shepherd Avenue, SR 168 leaves the City of Clovis as a two-lane conventional state highway heading towards Shaver Lake and Huntington Lake in the Sierra Nevada.

Herndon Avenue is an east-west arterial that travels through the Fresno-Clovis Metropolitan Area. East of SR 168, Herndon Avenue is an eight-lane arterial that narrows to a four- to six-lane arterial east of Clovis Avenue. West of SR 168, Herndon Avenue is a six-lane expressway within the City of Clovis. The roadway originates west of its interchange with SR 99 in Fresno and connects with both SR 41 and SR 168 before ending east of Academy Avenue east of Clovis.

Bullard Avenue is an east-west arterial roadway beginning at Figarden Drive in Fresno, and extending through Clovis before ending approximately one mile east of McCall Avenue. Bullard Avenue has interchanges with both SR 41 and SR 168. Within Clovis, Bullard Avenue is a four-lane arterial mostly with a raised median. Through Old Town Clovis, through traffic on Bullard Avenue shifts to Fifth Avenue, a two-lane collector street.

Shaw Avenue is an east-west roadway that travels through the Fresno-Clovis Metropolitan Area. To the west, it begins as a two-lane conventional roadway about 13 miles west of SR 99 west of Fresno. It stretches eastward of Clovis past Academy Avenue before it ends at Zediker Avenue. Shaw Avenue has

interchanges with SR 99, SR 41, and SR 168. Within Clovis, it is a four- to six-lane median-divided arterial west of DeWolf Avenue. East of DeWolf Avenue, Shaw Avenue becomes a conventional two-lane arterial.

Willow Avenue is a north-south roadway is a north-south arterial roadway that generally follows the city limit boundary of Fresno and Clovis. It begins at Friant Road north of Fresno and Clovis, and extends south to become Chestnut Diagonal south of Ashlan Avenue. Within Clovis, Willow Avenue is a four- to six-lane arterial divided by a raised median. The speed limit on Willow Avenue ranges from 45 mph to 50 mph.

Clovis Avenue is a north-south roadway that begins in Clovis at Shepherd Avenue, and extends south across SR 99 to the community of Wildflower. Within Clovis, Clovis Avenue is a four to six lane arterial, with portions that are divided by a median. Within the City, speed limits on Clovis Avenue range from 35 mph to 45 mph.

Temperance Avenue is a north-south roadway that begins in Clovis at Shepherd Avenue, and extends south to the community of Fowler. Within Clovis, Temperance Avenue is primarily a four- to six-lane roadway with portions that are divided by a median. North of SR 168, Temperance Avenue is an arterial roadway. South of SR 168, Temperance Avenue is an expressway.

PUBLIC TRANSPORTATION SYSTEM

Public transportation in Clovis consists of the following services and facilities:

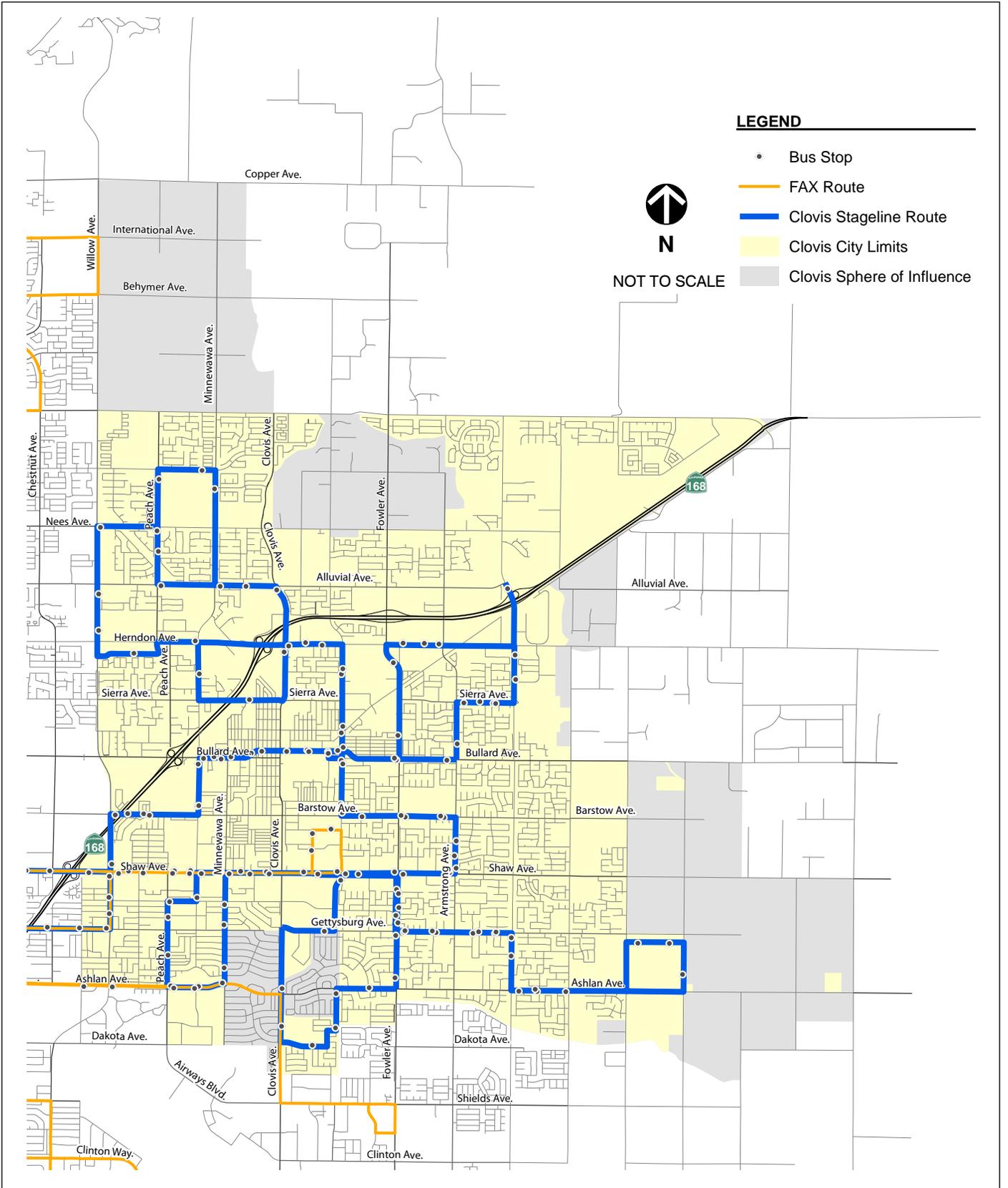
- Public Fixed-Route Bus Service
- Demand Response Paratransit Service

Fixed-Route Bus Service

Fixed route transit service in Clovis is operated by Clovis Transit Stageline and Fresno Area Express (FAX).

Stageline operates from approximately 6:00 AM to 6:40 PM Monday through Saturday on 30-minute headways. The service has two regular routes and one express route (runs on school days only). Additionally, FAX Route 9 operates in Clovis along Shaw Avenue weekdays 6:40 a.m. to 7:30 p.m. and weekends 8:15 a.m. to 3:30 p.m. on 30 minute headways. FAX Route 28 also provides service along Shaw Avenue west of Willow Avenue and on Willow Avenue south of Shaw Avenue in Clovis weekdays 6:15 a.m. to 9:30 p.m. and weekends 6:55 a.m. to 6:50 p.m. Fax Route 28 operates on 15 to 20 minute headways on weekdays and 30-minute headways on weekends.

Clovis Stageline Route 10 intersects both FAX Route 9 and 28 on Shaw Avenue to allow for transfers into the City of Fresno. Clovis Stageline Route 50 also intersects FAX Route 9 near the Sierra Vista Mall on Shaw Avenue for transfers. See Figure 4 for fixed-route bus service routes in the City of Clovis.



Demand Response Paratransit

Round Up is the demand-response transit provider that serves as Clovis' complimentary paratransit service under the Americans with Disabilities Act (ADA). Passengers that are at least 65 years old or disabled may apply for ADA status to receive service on Round Up. Round Up offers curb-to-curb shared ride service within Clovis, Fresno, and nearby areas. Round Up operates from 6:15 AM to 6:15 PM Monday through Friday and from 7:30 AM to 3:30 PM on weekends (weekend service limited to destinations within the Clovis city limits).

BICYCLE FACILITIES

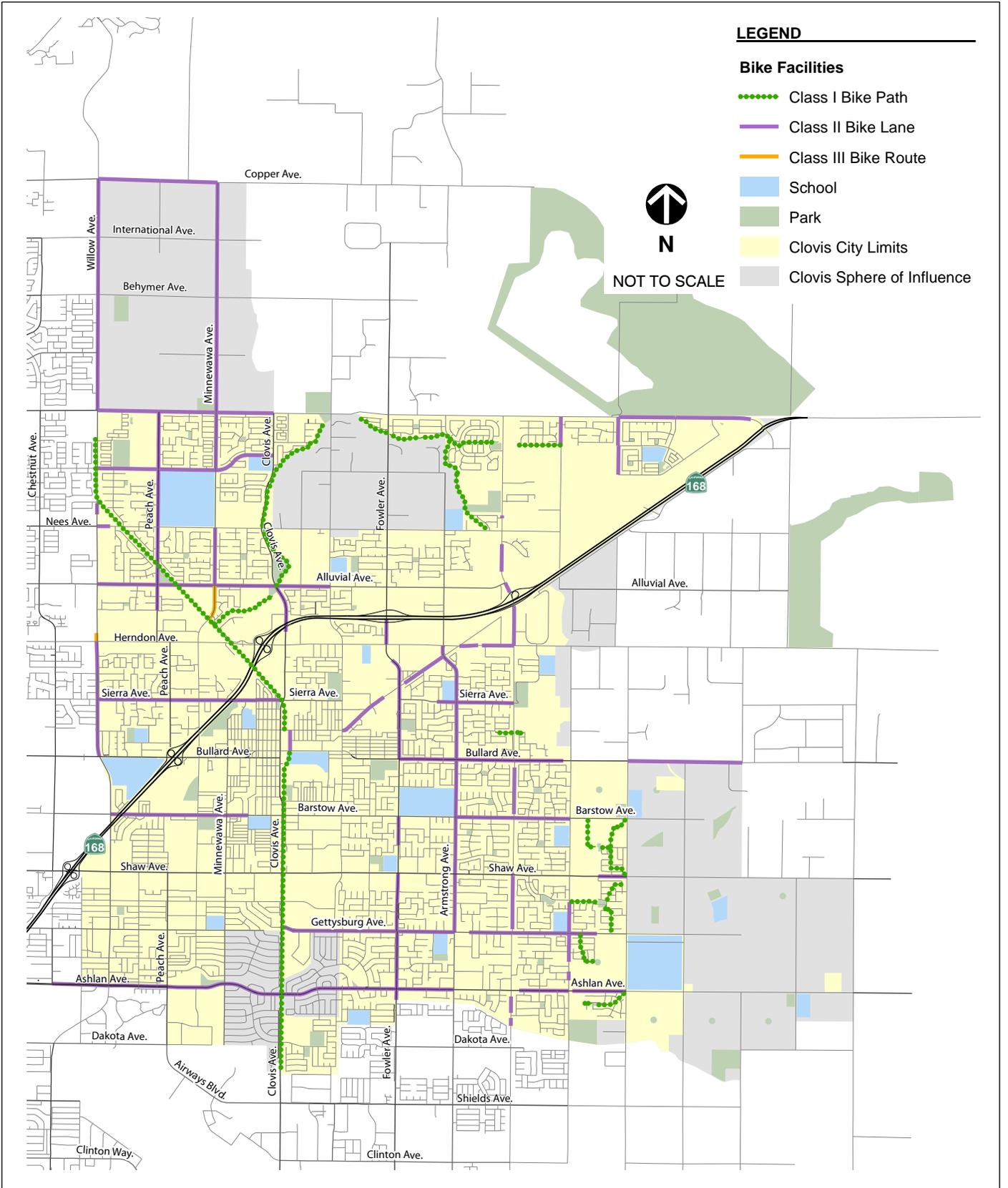
Bicycle facilities can be classified into one of the following three categories:

- Class I Bike Path – Off-street bike paths within exclusive right-of-way
- Class II Bike Lane – Striped, stenciled, and signed on-road bike lanes adjacent to the outside travel lane on preferred corridors for biking
- Class III Bike Route – Shared on-road facility, usually delineated by signage

The City of Clovis adopted the Clovis Bicycle Transportation Plan in May 2011. The plan identifies existing and planned bicycle facilities within Clovis. The Clovis Bicycle Transportation Plan lays out a system of Class I bikeways along portions of Herndon Avenue, Dry Creek, Gould Canal, Enterprise Canal, and former railroad right-of-way. The system is designed to interconnect with Class I facilities in the City of Fresno and Fresno County. Construction has been completed on the Old Town Trail spanning the entire length of the City from the northwestern corner to the southern border with the City of Fresno. Other completed trails include facilities along Dry Creek and the Enterprise Canal. Existing Class II facilities include bicycle lanes along portions of Alluvial Avenue, Armstrong Avenue, Ashlan Avenue, Barstow Avenue, Bullard Avenue, Gettysburg Avenue, Minnewawa Avenue, Peach Avenue, Sierra Avenue, Teague Avenue, and Willow Avenue. Figure 4 shows the existing bicycle facilities in Clovis.

PEDESTRIAN FACILITIES

Improved pedestrian facilities generally consist of sidewalks and pedestrian crossings at intersections. Most roadways within Clovis have sidewalks; however, gaps do exist within the system. In addition to improved pedestrian facilities, the City of Clovis has numerous trails and pathways, including the Class I facilities discussed above.



GOODS MOVEMENT SYSTEM

State Route 168 within Clovis has been designated as a truck route by Caltrans. Clovis has not designated additional truck routes within the City.

AVIATION FACILITIES

No aviation facilities are located within the City of Clovis or the Clovis Planning Area. The Fresno Yosemite International Airport is located immediately southwest of Clovis in the City of Fresno. Air travel patterns into and out of the Fresno Yosemite International Airport are primarily along a northwest-southeast orientation. This primary air travel pattern results in air traffic traveling above the City of Fresno with minimal transportation related affects on adjacent areas in the City of Clovis.

EXISTING TRAFFIC VOLUMES & ROADWAY OPERATIONS

Traffic count data was compiled from a variety of sources. The City of Clovis and City of Fresno provided databases of traffic count data for roadways within their respective cities. The City of Clovis traffic count data also included traffic counts for County of Fresno roadways within the Planning Area for the General Plan. Traffic counts for SR 168 were compiled from a combination of data obtained from Caltrans staff and from Caltrans Performance Management System (PeMS). Traffic count data used in this study were collected between 2009 and 2012. In addition, several new traffic counts were collected in October 2012 to supplement the other traffic count data.

The existing conditions roadway operations analysis uses these traffic counts and the hourly LOS volume thresholds presented in Table 4.

ROADWAY OPERATIONS

Appendix A provides the AM and PM peak hour volumes and roadway LOS results for all study roadway segments under existing conditions. As noted in the regulatory setting section, the current City of Clovis and City of Fresno level of service (LOS) policies identify LOS D as the lowest acceptable LOS. The County of Fresno allows LOS D conditions within the sphere of influence (SOI) of Fresno and Clovis, and strives to maintain LOS C conditions for all other County roadways. Caltrans Transportation Concept Report (TCR) for State Route (SR) 168 identifies LOS D as the Concept LOS.

Based on these policies, the following study roadway segments currently operate worse than the applicable LOS standard during either the AM or PM peak hours:

- Herndon Avenue: DeWolf Avenue to McCall Avenue (LOS D in AM and PM peak hours)
- Shaw Avenue: DeWolf Avenue to McCall Avenue (LOS D in AM and PM peak hours)

- Shaw Avenue: McCall Avenue to Academy Avenue (LOS D in PM peak hour)
- Ashlan Avenue: Minnewawa Avenue to Clovis Avenue (LOS F in PM peak hour)

Other than the segment of Ashlan Avenue between Minnewawa Avenue and Clovis Avenue, all study roadway segments operate at LOS D or better. Table 5 provides a summary of the roadway LOS results for existing conditions.

TABLE 5: EXISTING CONDITIONS – ROADWAY SEGMENT LOS SUMMARY

Level of Service	Number of Roadway Segments by Jurisdiction				Total
	City of Clovis	City of Fresno	County of Fresno	Caltrans	
AM Peak Hour					
LOS C or better	109	20	28	17	174
LOS D	6	3	11	2	22
LOS E	0	0	0	0	0
LOS F	0	0	0	0	0
PM Peak Hour					
LOS C or better	102	15	29	18	164
LOS D	13	8	9	1	31
LOS E	0	0	0	0	0
LOS F	0	0	1	0	1

Source: Fehr & Peers.

VEHICLE MILES OF TRAVEL

Vehicle miles of travel (VMT) is another measure of the level of vehicle travel within in area. For this study, we used the Fresno COG TDF model to estimate the existing VMT levels for traffic within the Clovis Planning Area. Table 6 presents the existing VMT for the following trip types by time of day:

- Internal-Internal: Trips that travel within the Clovis Planning Area
- Internal-External: Trips that travel from the Clovis Planning Area to locations outside the Clovis Planning Area
- External-Internal: Trips that travel to the Clovis Planning area from locations outside the Clovis Planning Area

TABLE 6: EXISTING VMT BY TRIP TYPE – CLOVIS PLANNING AREA

Trip Type	AM Peak Period	PM Peak Period	Off-Peak Period	Daily
Internal-Internal	44,942	57,502	131,230	233,674
Internal-External	176,591	158,764	413,535	748,890
External-Internal	115,268	214,203	418,395	747,866
Total	336,801	430,469	963,160	1,730,430

Notes: AM Peak Period is 6-9 a.m.; PM Peak Period is 3-6 p.m.; Off-Peak Period includes all travel outside the AM and PM peak periods.

Source: Fehr & Peers, 2012 – Fresno COG TDF Model, 2005.

III. YEAR 2035 PLUS PROPOSED GENERAL PLAN

This chapter presents the transportation analysis for the Year 2035 Plus Proposed General Plan scenario.

PROPOSED GENERAL PLAN – YEAR 2035 CONDITIONS

The Clovis General Plan Update includes land use and mobility plans to support future development within the City of Clovis. Build out of the proposed General Plan is not expected to occur until well beyond 2050 based on the proposed land use plan and current population and employment forecasts for the City of Clovis. However, currently available transportation tools and regional land use projections limit the ability to conduct quantitative traffic analysis using reasonably foreseeable inputs to the 2035 horizon year of the current Fresno COG TDF model. Since the Fresno COG TDF model is limited to forecasting year 2035 conditions, the quantitative traffic analysis for this study analyzes projected year 2035 conditions with the proposed General Plan.

YEAR 2035 TRAVEL DEMAND FORECASTING MODEL DEVELOPMENT

The 2035 Fresno COG TDF model uses land use and transportation inputs associated with year 2035 conditions. This includes land use projections for Fresno County based on existing general plans and 2035 population and employment forecasts. The model also includes funded transportation improvements that are expected to be complete by 2035 based on the list of projects and funding identified in the 2011 Fresno COG RTP.

As noted earlier, the proposed General Plan is expected to have capacity to accommodate growth well beyond 2050. For the 2035 traffic analysis modeling, the land use data for the proposed General Plan needed to reflect 2035 conditions for Clovis to maintain the integrity of the 2035 Fresno COG TDF model. Therefore, PlaceWorks developed land use data for the Clovis Planning Area to reflect anticipated growth in population and employment for the Clovis Planning Area by 2035 with the proposed General Plan Update.

The 2035 model was modified to reflect these proposed 2035 land use and transportation conditions for the City of Clovis using the proposed General Plan Update. Outside the City of Clovis, the rest of the 2035 Fresno COG TDF model land use and transportation inputs remained consistent with the original 2035 model.

2035 City of Clovis General Plan Update Land Use Inputs

To allocate the growth anticipated by 2035 with the proposed General Plan Update geographically, PlaceWorks staff identified the area that is anticipated to develop according to the proposed land use

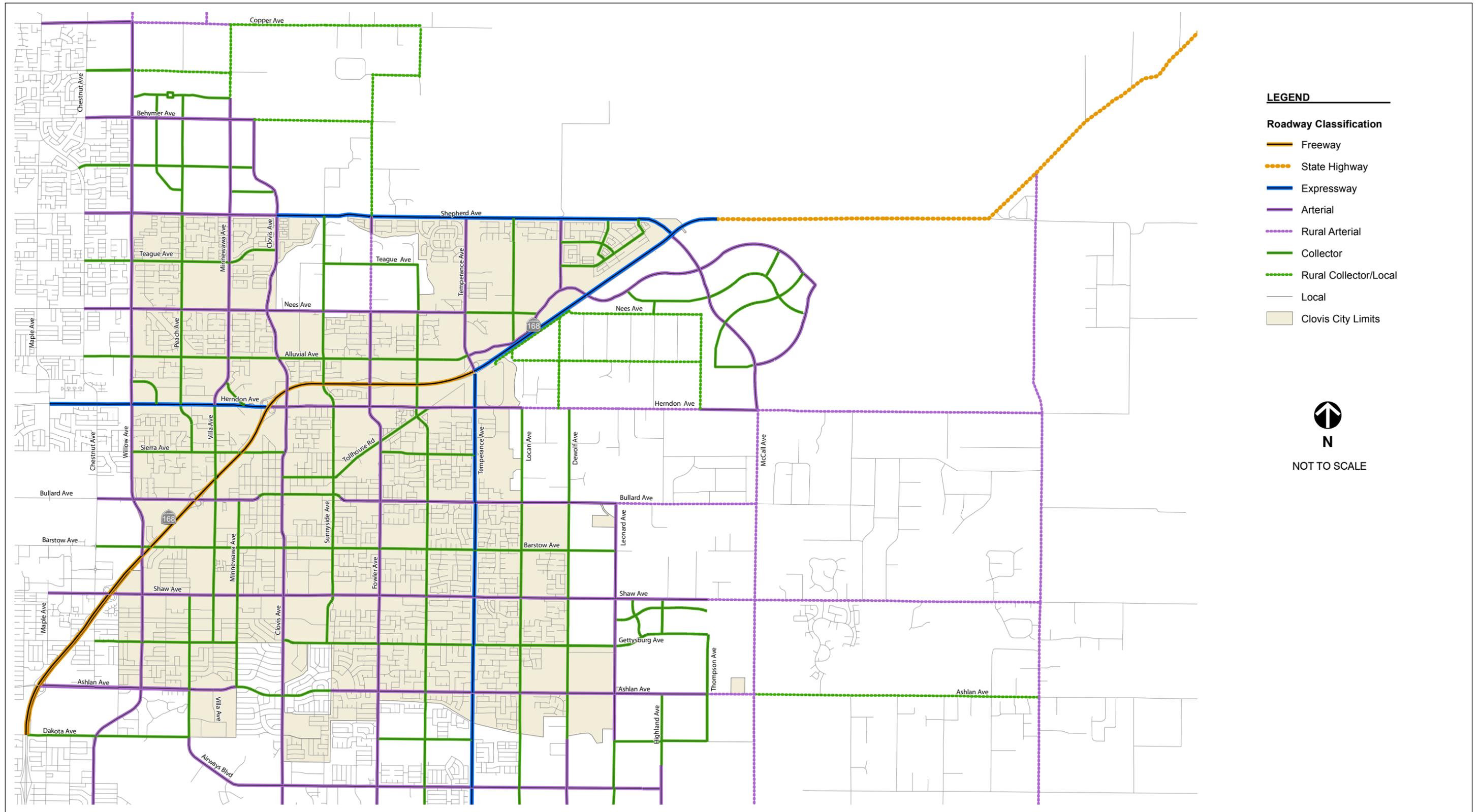
plan as part of the City of Clovis by 2035. Appendix B shows this anticipated growth area bounded by the dashed red line. The areas beyond this 2035 growth area is expected to experience less intense growth based on existing rural land use patterns and will remain part of the County of Fresno.

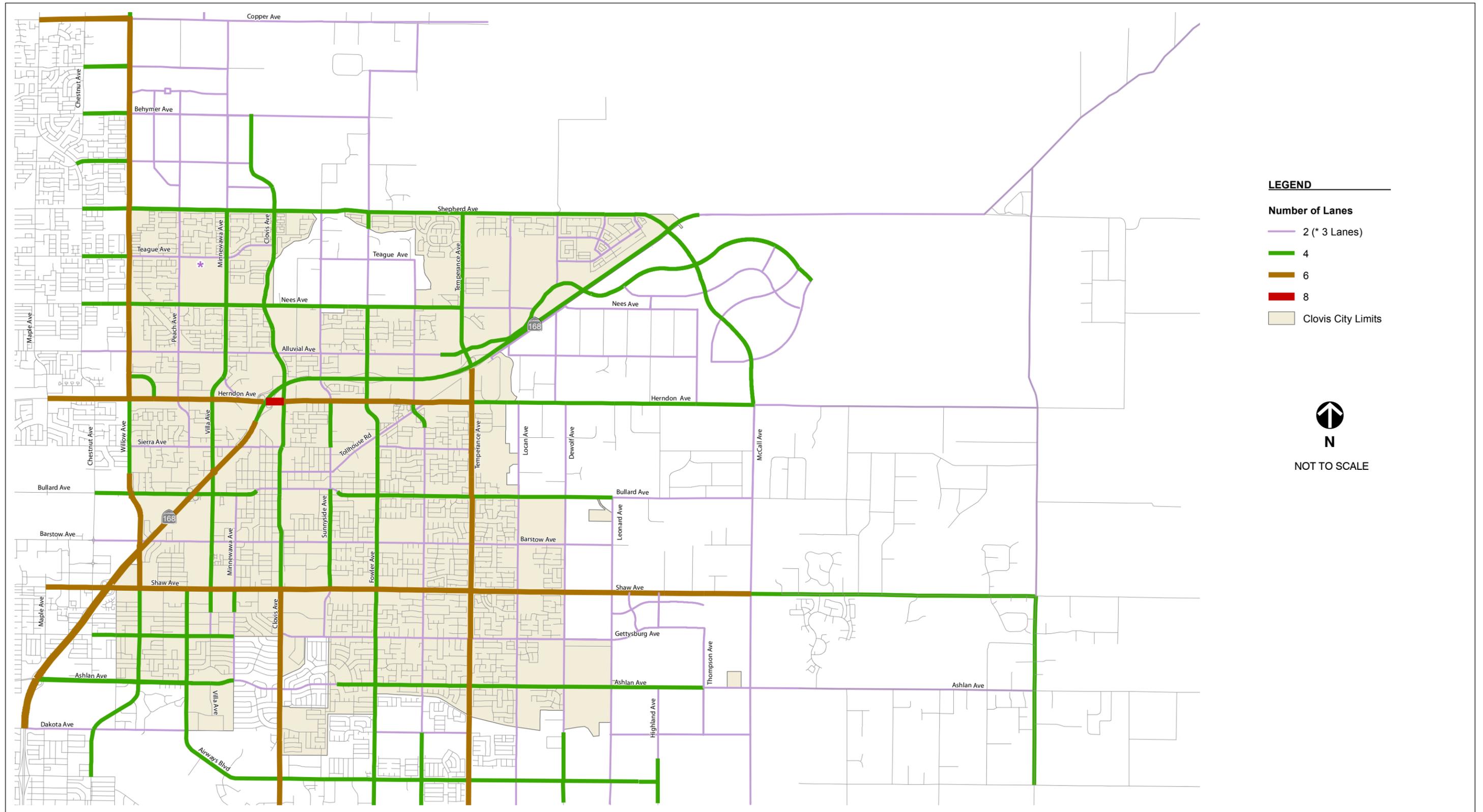
It is understood that the 2035 growth area is not a hard and fast growth boundary, but the estimated geographic area that is anticipated to develop within the 2035 timeframe given forecasted market conditions, population and employment projections, and other development constraints such as growth policies or water supply issues.

2035 City of Clovis General Plan Update Transportation Network

For the 2035 Plus Project analysis, the transportation network within the Clovis Planning Area reflects the 2035 land use scenario described above. This means that the transportation network supports urban-scale development as part of the City within the 2035 area shown in Exhibit B and acknowledges that roadways beyond the 2035 area would remain in the County of Fresno's jurisdiction. Therefore, the 2035 Plus Proposed General Plan Update transportation network within the Clovis Planning Area only includes improvements from the Mobility Plan within the 2035 areas shown in Exhibit B.

Since the amount of growth is less in 2035 than at build out of the proposed General Plan, some roadways would not need to be constructed to their full build-out configuration. This is also reflected in the 2035 transportation network. Figures 6 and 7 show the 2035 roadway functional classification and number of lanes for the major roadways in Clovis, respectively.





2035 PLUS PROPOSED GENERAL PLAN ROADWAY OPERATIONS

TRAFFIC FORECASTS

The traffic generated by the proposed General Plan Update will be caused by future development within the project area. The amount of future development anticipated to occur by 2035 within the City of Clovis Planning Area used in this study is based on the land use information provided by PlaceWorks. This project related traffic was assigned to the transportation system using the following three-step process:

1. Trip Generation – estimates the amount of traffic generated by the proposed plans based on the planned land uses
2. Trip Distribution – distributes project trips based on origins and destinations in the region
3. Trip Assignment – assigns project trips to the roadway network based on the proposed project’s trip generation and distribution

This study uses the Fresno COG TDF model to generate the traffic assignment for the 2035 conditions. The Fresno COG TDF model uses the process described above to generate its 2035 model volumes.

To account for the model’s limitations described in the introduction chapter, this study adjusts project traffic forecasts using a process known as the “difference method,” which adjusts raw model volume forecasts based on expected incremental growth from Existing Conditions using the following formula:

$$2035 \text{ Plus Proposed General Plan Forecasts} = \text{Existing Traffic Count} + (\text{2035 Plus Proposed General Plan Raw Model Volume} - \text{Base Year Raw Model Volume})$$

ROADWAY OPERATIONS

Appendix A provides the AM and PM peak hour roadway volumes and LOS results for all study roadway segments under 2035 Plus Proposed General Plan conditions. Based on the policies shown in the regulatory setting section, the following study roadway segments would operate worse than the applicable LOS standard during either the AM or PM peak hours:

City of Clovis Roadways

- Minnewawa Avenue: Shaw Avenue to Ashlan Avenue (LOS F in PM peak hour)

County of Fresno Roadways

- Copper Avenue: Willow Avenue to Auberry Road (LOS E in AM peak hour)
- Copper Avenue: Auberry Road to Minnewawa Avenue (LOS F in AM and PM peak hours)

- Behymer Avenue: Clovis Avenue to Fowler Avenue (LOS D in PM peak hour)
- Herndon Avenue: McCall Avenue to Academy Avenue (LOS D in PM peak hour)
- Ashlan Avenue: Minnewawa Avenue to Clovis Avenue (LOS F in AM and PM peak hours)
- Ashlan Avenue: McCall Avenue to Academy Avenue (LOS D in PM peak hour)
- Minnewawa Avenue: Copper Avenue to Behymer Avenue (LOS F in AM and PM peak hours)
- Fowler Avenue: Behymer Avenue to Shepherd Avenue (LOS E in PM peak hour)
- DeWolf Avenue: Herndon Avenue to Bullard Avenue (LOS D in AM and PM peak hour)
- McCall Avenue: Herndon Avenue to Shaw Avenue (LOS F in AM and PM peak hours)
- Academy Avenue: Herndon Avenue to Shaw Avenue (LOS D in PM peak hour)

Caltrans Facilities

- SR 168 Eastbound: McKinley Avenue to Shields Avenue (LOS E in AM and PM peak hours)
- SR 168 Eastbound: Shields Avenue to Ashlan Avenue (LOS E in AM and PM peak hours)
- SR 168 Westbound: Ashlan Avenue to Shields Avenue (LOS E in AM peak hour)
- SR 168 Eastbound: Herndon Avenue to Fowler Avenue (LOS E in PM peak hour)
- SR 168 Westbound: Fowler Avenue to Herndon Avenue (LOS F in AM peak hour; LOS E in PM peak hour)
- SR 168 Westbound: Temperance Avenue to Fowler Avenue (LOS E in AM peak hour)
- SR 168: Temperance Avenue to Owens Mountain Parkway (LOS F in PM peak hour)

The majority of the study roadway segments operate at LOS D or better during the AM and PM peak hours. Table 7 provides a summary of the roadway LOS results for 2035 Plus Proposed General Plan conditions.

TABLE 7: 2035 PLUS PROPOSED GENERAL PLAN UPDATE CONDITIONS – ROADWAY SEGMENT LOS SUMMARY

Level of Service	Number of Roadway Segments by Jurisdiction				Total
	City of Clovis	City of Fresno	County of Fresno	Caltrans	
AM Peak Hour					
LOS C or better	74	8	17	7	106
LOS D	71	17	6	7	101
LOS E	0	0	1	4	5
LOS F	0	0	4	1	5
PM Peak Hour					
LOS C or better	40	8	11	6	65
LOS D	104	17	12	8	141
LOS E	0	0	1	4	5
LOS F	1	0	4	1	6

Source: Fehr & Peers.

VEHICLE MILES OF TRAVEL

Table 8 presents the VMT for 2035 Plus Proposed General Plan conditions. As with the existing conditions VMT information, the VMT data is presented by time of day for trips that travel from, to, and within the Clovis Planning Area.

TABLE 8: 2035 VMT BY TRIP TYPE – CLOVIS PLANNING AREA

Trip Type	AM Peak Period	PM Peak Period	Off-Peak Period	Daily
Internal-Internal	109,423	151,716	370,909	632,048
Internal-External	314,121	367,616	900,362	1,582,099
External-Internal	270,840	412,902	901,064	1,584,806
Total	694,384	932,234	2,172,335	3,798,953

Notes: AM Peak Period is 6-9 a.m.; PM Peak Period is 3-6 p.m.; Off-Peak Period includes all travel outside the AM and PM peak periods.

Source: Fehr & Peers, 2013 – Fresno COG TDF Model.

Table 8 shows that overall VMT attributable to the Clovis Planning Area increases to roughly 3.8 million miles of travel per day with the proposed level of development anticipated by 2035 with the proposed General Plan Update. It is important to note that traditional TDF models cannot fully capture the benefits of land use, transportation, and urban design policies that reduce VMT. Extensive research has shown that

various planning techniques can reduce vehicle trip, increase non-automobile mode share, reduce trip lengths, and reduce VMT. Increases in development density and intensity are correlated with reduced vehicle trips. Mixing complementary uses in a neighborhood setting increase internal trip "capture." Many different urban design approaches are used to increase transportation connectivity and provide high-quality bicycle, pedestrian, and transit facilities. This increases the relative attractiveness of non-automobile modes of travel, and can promote travel mode shifts.

Increases in travel demand is not itself an adverse physical environmental impact, but rather causes a variety of impacts. Transportation is the largest source of greenhouse gases in California and transportation is a major source of toxic air contaminants and particulate matter. Traffic is a major source of noise in the planning area, and therefore increases in travel demand lead to noise impacts. Transportation is the largest user of energy in California, as well, and therefore impacts related to energy use relate closely to travel demand (U.S. Energy Information Administration 2010, Lawrence Berkeley National Laboratory 2005).

IV. FULL BUILD OUT OF PROPOSED GENERAL PLAN

This chapter presents the transportation evaluation for the Full Build Out of the Proposed General Plan scenario. This full build out traffic evaluation assesses the potential changes in traffic patterns associated with build out of the proposed General Plan compared to year 2035 conditions.

BUILD OUT OF THE PROPOSED GENERAL PLAN

As noted in the previous chapter, build out of the proposed Clovis General Plan Update is not expected to occur until well beyond 2050 based on the proposed land use plan and current population and employment forecasts for the City of Clovis. However, the available transportation tools and regional land use projections do not provide a means to analyze future year traffic conditions with reasonably foreseeable land use and transportation improvements beyond 2035. Therefore, this build out evaluation does not conduct a detailed analysis of future traffic operations, but is an assessment of the potential changes in traffic patterns and estimate of traffic growth associated with build out of the proposed General Plan.

METHODOLOGY AND LIMITATIONS

Like the 2035 analysis, the full build out traffic evaluation uses a modified version of the Fresno COG TDF model. Since the horizon year of the 2011 Fresno COG RTP is 2035, Fresno COG has not developed a TDF model with land use and transportation inputs that correspond with the timing of build out of the proposed Clovis General Plan Update. However, the Fresno COG TDF model remains the preferred and state-of-the-practice tool for forecasting future traffic conditions in Fresno County.

Land Use Inputs

PlaceWorks staff developed land use data for the Clovis Planning Area to reflect build out of the proposed General Plan Update. Based on the demographic forecasts PlaceWorks had prepared for Fresno COG in 2012 and the amount of development that can be accommodated with the proposed General Plan Update, PlaceWorks staff estimated that full build out of the proposed General Plan Update would occur approximately in 2080. Since Fresno COG does not have a TDF model that corresponds with 2080 conditions, PlaceWorks staff also provided an estimate for population and employment growth for Fresno County through 2080 by extending projections from the *San Joaquin Valley Demographic Forecasts 2010-2050* published by Fresno COG and prepared by PlaceWorks in 2012. This background growth was incorporated into the build out model to reflect a rough estimate of growth in the remainder of Fresno County at the time of build out of the proposed Clovis General Plan.

Transportation Network Inputs

Within the Clovis Planning Area, the build out evaluation uses the full roadway network proposed as part of the General Plan Update. Since the horizon year of the 2011 Fresno COG RTP is 2035, it is speculative to determine what transportation improvements would occur by 2080. Therefore, outside the Clovis Planning Area, only the financially-constrained transportation improvements identified in the 2011 Fresno COG RTP are included.

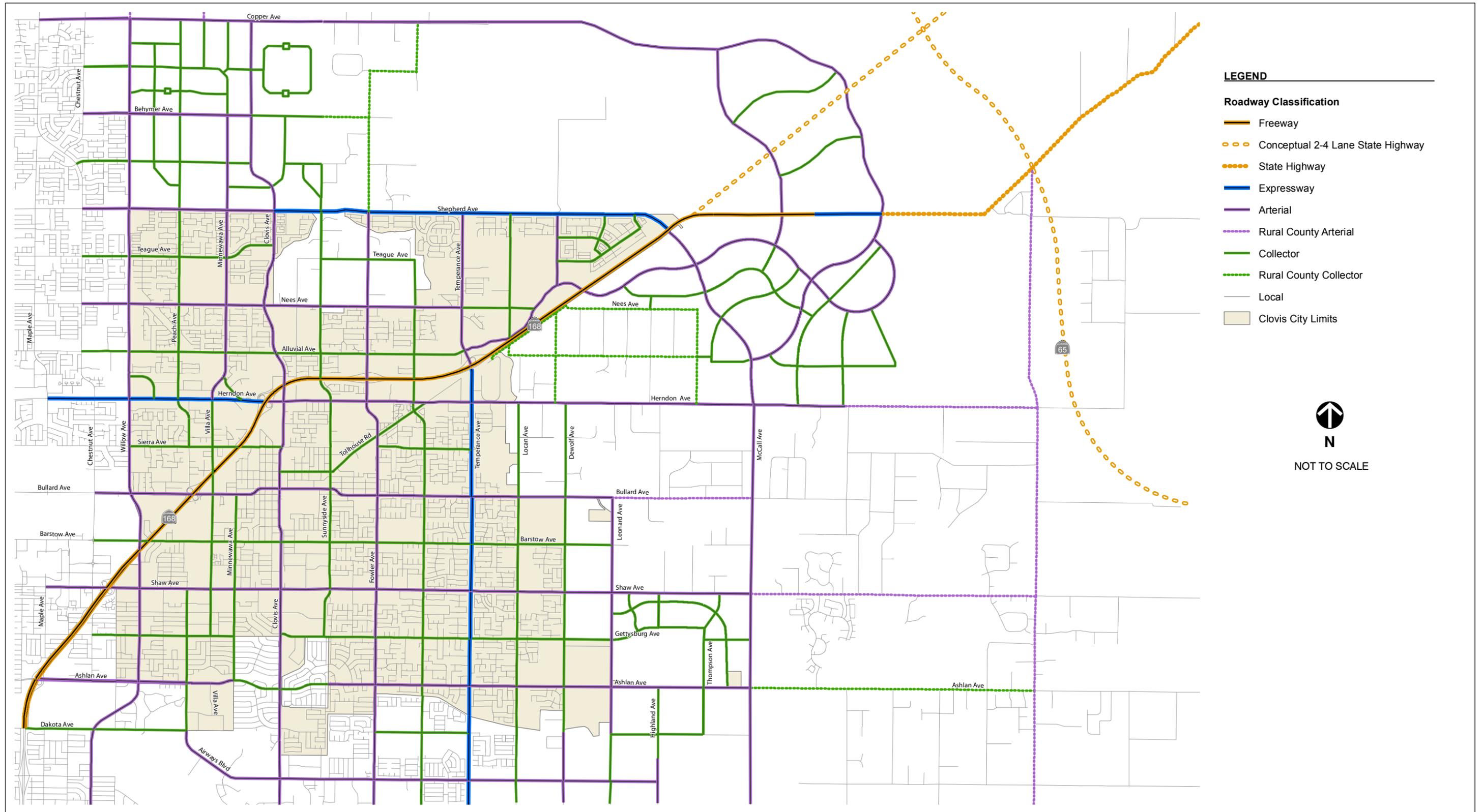
Limitations

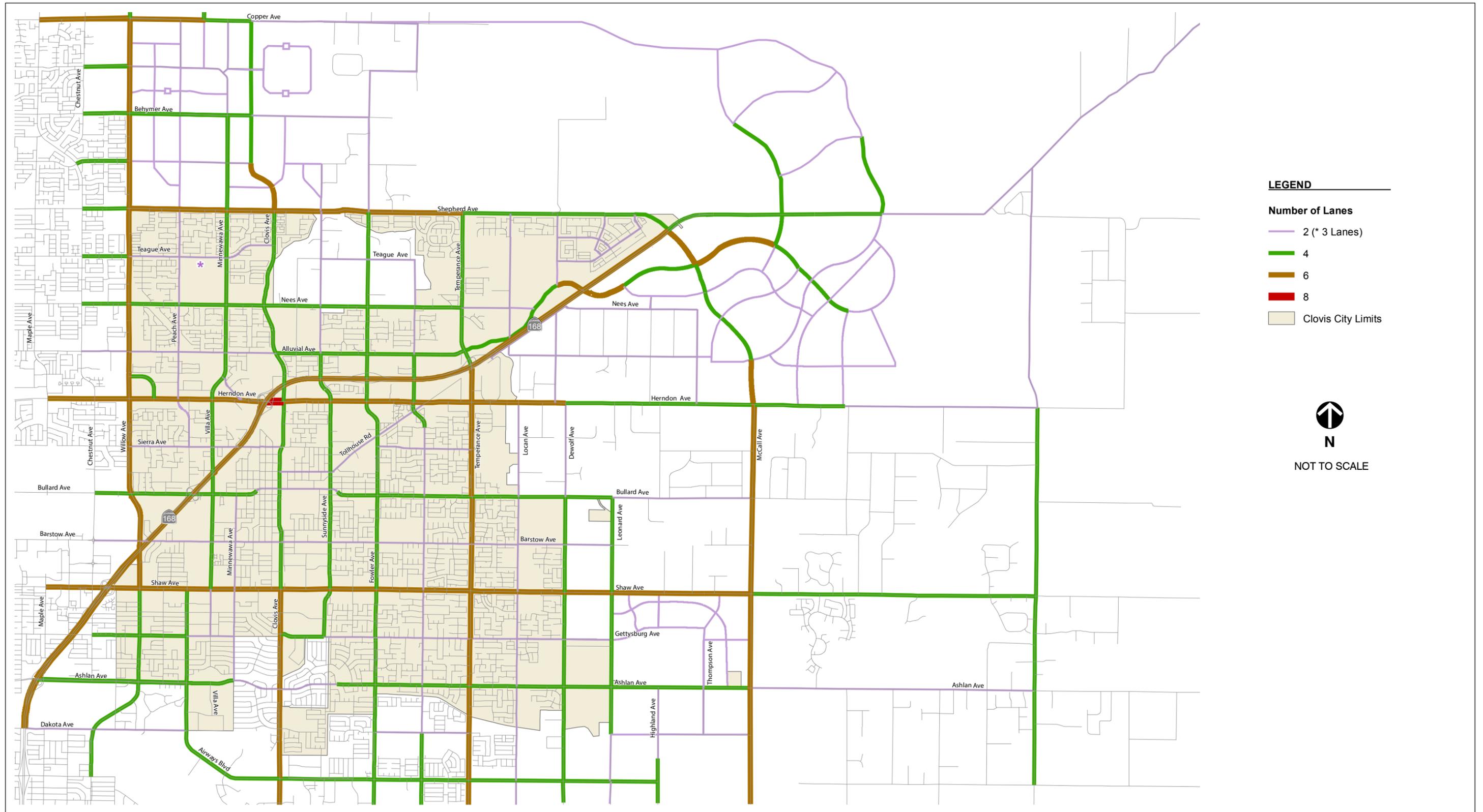
Although the Fresno COG TDF model is the best tool available to forecast future traffic conditions, it is important to note that the model develops traffic forecasts based on current travel behavior, which may no longer be applicable for long-term future conditions. Changes in technology, demographics, and economic conditions particularly over a long time frame (e.g., 40+ years) may affect people's travel behavior in ways that are not captured by the model and would be speculative to predict at this time.

The proposed build out circulation network is based on the forecasted traffic patterns from the Fresno COG TDF model. Given the limitations identified above, we recommend that the build out circulation system be reviewed and modified over time, as needed. As newer versions of TDF models are available, updated traffic forecasts that represent build out conditions should be used to verify the proposed circulation system.

BUILD OUT CIRCULATION SYSTEM

Figures 8 and 9 show the roadway functional classification and number of lanes for the major roadways in Clovis, respectively, with build out of the proposed General Plan Update.





CHANGES TO TRANSPORTATION SYSTEM

Northwest Urban Center

Build out of the proposed General Plan would result in additional development in the Northwest Urban Center than anticipated under the 2035 scenario. Based on traffic growth from this additional development, we would recommend the following changes to the circulation system compared to year 2035 conditions:

- New roadways north and east of the Enterprise Canal to serve new development
- Copper Avenue: Willow Avenue to Auberry Road – 2 lanes to 6 lanes
- Copper Avenue: Auberry Road to Clovis Avenue – 2 lanes to 4 lanes
- Behymer Avenue: Willow Avenue to Clovis Avenue – 2 lanes to 4 lanes
- Minnewawa Avenue: Shepherd Avenue to Behymer Avenue – 2 lanes to 4 lanes
- Clovis Avenue: extended north from Behymer Avenue to Copper Avenue as a 4-lane arterial
- Clovis Avenue: Shepherd Avenue to Perrin Avenue – 4 lanes to 6 lanes

Northeast Urban Center

Build out of the proposed General Plan would result in additional development in the Northeast Urban Center than anticipated under the 2035 scenario. Based on traffic growth from this additional development, we would recommend the following changes to the circulation system compared to year 2035 conditions:

- New roadways north of SR 168 and east of McCall Avenue to serve new development
- Owens Mountain Parkway: DeWolf Avenue to “Muncie Avenue” (east-west collector street east of SR 168) – 4 lanes to 6 lanes
- Owens Mountain Parkway: McCall Avenue to “Dockery Avenue” (north-south arterial street east of McCall Avenue in Northeast Urban Center) – 4 lanes to 6 lanes
- Herndon Avenue: McCall Avenue to “Del Rey Avenue” (north-south collector street west of Academy Avenue in Northeast Urban Center) – 2 lanes to 4 lanes
- McCall Avenue: SR 168 to Owens Mountain Parkway – 4 lanes to 6 lanes
- McCall Avenue: north of Herndon Avenue – 4 lanes to 6 lanes

Loma Vista

Build out of the proposed General Plan would result in additional development in the Loma Vista Specific Plan area than anticipated under the 2035 scenario. Based on traffic growth from this additional development, we would recommend the following changes to the circulation system compared to year 2035 conditions:

- New roadways east of Thompson Avenue to serve new development
- Ashlan Avenue: Thompson Avenue to McCall Avenue – 2 lanes to 4 lanes
- DeWolf Avenue: Bullard Avenue south to City Limits – 2 lanes to 4 lanes
- Leonard Avenue: Bullard Avenue south to City Limits – 2 lanes to 4 lanes

Remainder of City of Clovis

Outside of the three urban centers (Northwest, Northeast, and Loma Vista), additional growth in the City of Clovis and the region would increase traffic volumes on roadways in Clovis under the full build out scenario. Based on this growth in traffic, we would recommend the following changes to the circulation system compared to year 2035 conditions:

- Shepherd Avenue: Willow Avenue to Temperance Road – 4 lanes to 6 lanes
- Alluvial Avenue: Clovis Avenue to Temperance Avenue – 2 lanes to 4 lanes
- Herndon Avenue: Temperance Avenue to DeWolf Avenue – 4 lanes to 6 lanes
- Gettysburg Avenue: Clovis Avenue to Sierra Vista Parkway – 2 lanes to 4 lanes
- Willow Avenue: Herndon Avenue to Escalon Avenue – 4 lanes to 6 lanes
- Sunnyside Avenue: Alluvial Avenue to Fifth Street – 2 lanes to 4 lanes
- Fowler Avenue: Enterprise Canal to Nees Avenue – 2 lanes to 4 lanes
- Armstrong Avenue: Alluvial Avenue to Herndon Avenue – 2 lanes to 4 lanes

Changes to County of Fresno Facilities

Build out of the proposed General Plan along with the background regional growth assumed in the build out scenario would increase traffic volumes on County of Fresno roadways within and adjacent to the Clovis Planning Area. This growth in traffic would likely require larger roadways to handle the additional traffic, including the following recommended changes compared to year 2035 conditions:

- McCall Avenue: Herndon Avenue to SR 180 – 2 lanes to 6 lanes
- Academy Avenue: Herndon Avenue to Shaw Avenue – 2 lanes to 4 lanes

Changes to Caltrans Facilities

Build out of the proposed General Plan along with background regional growth assumed in the build out scenario would increase traffic demand on SR 168 in the Clovis Planning Area. Growth in the Sierra Gateway Commerce Center and Northeast Urban Center in particular would contribute to traffic growth on SR 168 likely requiring the following recommended changes:

- SR 168: Herndon Avenue to Temperance Avenue – widen from 4 lanes to 6 lanes
- SR 168: Temperance Avenue to Shepherd Avenue/McCall Avenue – widen from 4 lanes to 6 lanes and improve to freeway standards with new interchanges at:
 - Owens Mountain Parkway
 - Shepherd Avenue/McCall Avenue
- SR 168: Shepherd Avenue/McCall Avenue to “Dockery Avenue” – widen from 2 to 4 lanes and improve to freeway standards with new interchange at “Dockery Avenue”
- SR 168: east of “Dockery Avenue” to east of “Indianola Avenue” (north-south arterial west of Academy Avenue in Northeast Urban Center) – improve to expressway standards and widen from 2 lanes to 4 lanes

In addition, Caltrans has long-term plans to potentially construct an extension of SR 65 from Tulare County to Madera County traveling east of Clovis. While this new facility is not funded and does not have a projected opening date, Figure 8 shows an illustrative potential alignment through the northeastern section of the Clovis Planning Area. The actual alignment of SR 65 would be determined and refined through future planning studies.

VEHICLE MILES OF TRAVEL

Table 9 presents the VMT for Build Out of the Proposed General Plan conditions. As with the previous VMT information, the VMT data is presented by time of day for trips that travel from, to, and within the Clovis Planning Area.

TABLE 9: BUILD OUT VMT BY TRIP TYPE – CLOVIS PLANNING AREA

Trip Type	AM Peak Period	PM Peak Period	Off-Peak Period	Daily
Internal-Internal	268,702	386,730	993,817	1,649,249
Internal-External	459,550	617,891	1,529,386	2,606,827
External-Internal	459,836	647,823	1,503,755	2,611,414
Total	1,188,088	1,652,444	4,026,958	6,867,490

Notes: AM Peak Period is 6-9 a.m.; PM Peak Period is 3-6 p.m.; Off-Peak Period includes all travel outside the AM and PM peak periods.

Source: Fehr & Peers, 2013 – Fresno COG TDF Model.

Table 9 shows that overall VMT attributable to the Clovis Planning Area increases to roughly 6.9 million miles of travel per day with the build out of the proposed General Plan Update, according to the Fresno COG TDF model outputs. As noted earlier in this chapter and this report, the TDF model used to develop this VMT data has several limitations that influence the VMT information. These include a limited ability to reflect the changes in technology, demographics, and economic conditions that may affect people's travel behavior particularly when looking many years into the future, along with limitations in being able to fully capture the benefits of land use, transportation, and urban design policies that reduce VMT.

V. IMPACT ASSESSMENT

This chapter documents the potentially significant effects of the proposed City of Clovis General Plan Update on transportation and traffic conditions for use in the environmental document. This study uses the regulatory setting information in Chapter 1 and the California Environmental Quality Act (CEQA) Guidelines to identify significance thresholds, and identifies potentially significant effects based on the analysis results presented in previous chapters.

SIGNIFICANCE CRITERIA

Based on the state and local policies and regulations listed in the regulatory setting in Chapter 1 and the Appendix G Environmental Checklist from the CEQA Guidelines listed below, this study uses the following criteria to determine if the project causes a significant impact.

According to the Appendix G Environmental Checklist, a project may have a significant impact related to transportation and traffic if the projects would:

- a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- e. Result in inadequate emergency access?
- f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

TRAFFIC OPERATIONS THRESHOLDS

As it relates to criterion (a) shown above, the following describes the specific traffic thresholds for local and state roadway facilities based on the applicable plans and policies listed in the regulatory setting in Chapter 1.

City of Clovis

Based on the policies in the currently adopted City of Clovis 1993 General Plan, the proposed project would cause a significant impact to traffic operations by conflicting with applicable LOS policies if the project would:

- Cause a City of Clovis roadway operating at an acceptable LOS to operate at an unacceptable LOS
- Result in an increase of the v/c ratio by 0.05 for a City of Clovis facility that currently operates at an unacceptable LOS (LOS E or F)

City of Fresno

Based on the policies in the City of Fresno General Plan and the City of Fresno *Traffic Impact Study Report Guidelines*, the proposed project would cause a significant impact to traffic operations by conflicting with applicable LOS policies if the project would:

- Cause a City of Fresno roadway operating at an acceptable LOS to operate at an unacceptable LOS
- Result in an increase of the v/c ratio by 0.05 for a City of Fresno facility that currently operates at an unacceptable LOS (LOS E or F)

County of Fresno

Based on the policies in the County of Fresno 2000 General Plan, the proposed project would cause a significant impact to traffic operations by conflicting with applicable LOS policies if the project would:

- Cause a County of Fresno roadway operating at an acceptable LOS (LOS D or better within the City of Fresno and City of Clovis Sphere of Influence (SOI), LOS C outside the City of Fresno and City of Clovis SOI) to operate at an unacceptable LOS
- Result in an increase of the v/c ratio by 0.05 for a County of Fresno facility that currently operates at an unacceptable LOS (LOS E or F within the City of Fresno and City of Clovis SOI; LOS D, E, or F outside the City of Fresno and City of Clovis SOI)

Caltrans

In coordination with *Guide for the Preparation of Traffic Impact Studies*, the proposed project would cause a significant impact if it would:

- Cause a Caltrans facility operating at an acceptable LOS to operate at an unacceptable LOS (i.e., LOS E or F)
- Result in an increase of the applicable measure of effectiveness (i.e., v/c ratio) on a Caltrans facility that currently operates at an unacceptable LOS (LOS E or F)

TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

As noted in criterion (f) in the Appendix G Environmental Checklist, the proposed General Plan Update may result in a significant impact if the project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The City of Clovis, City of Fresno, County of Fresno, and Caltrans have not identified specific thresholds for impacts on transit, bicycle, and pedestrian facilities. However, based on the criterion in the Appendix G Environmental Checklist and the local plans and policies related to transit, bicycle, and pedestrian travel, this study uses the following criteria: the project would cause a significant impact to the transit system, bicycle network, and/or pedestrian facilities if it would:

- Disrupt or interfere with existing or planned public transit services or facilities
- Create an inconsistency with policies concerning transit systems set forth in an applicable General Plan or other applicable adopted policy document
- Disrupt or interfere with existing or planned bicycle/pedestrian facilities
- Result in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/vehicle conflicts
- Result in unsafe conditions for bicycles, including unsafe bicycle/pedestrian or bicycle/vehicle conflicts
- Create an inconsistency with policies related to bicycle or pedestrian systems set forth in an applicable General Plan, Bicycle Plan, or other applicable adopted policy document

IMPACTS AND MITIGATION MEASURES

The remainder of this chapter identifies the potentially significant effects of the proposed City of Clovis General Plan Update on transportation and traffic conditions for use in the environmental document based on the significance criteria presented above. The significant impacts and suggested mitigation measures below are specifically for the 2035 scenario for the proposed General Plan Update.

TRAFFIC INCREASE

Impact 1a **The addition of project traffic to the roadway network would result in traffic operations that conflict with the City of Clovis 1993 General Plan LOS policy.**

The proposed project will increase the traffic volumes on City of Clovis roadways. The majority of the roadway segments would continue to operate at an acceptable LOS D or better during the AM and PM peak hours. However, the following segment would operate at an unacceptable LOS F during the PM peak hour:

- Minnewawa Avenue: Shaw Avenue to Ashlan Avenue

Significance: *Significant*

Mitigation 1a: The City of Clovis General Plan Update includes a new policy that allows lower LOS values than the current 1993 General Plan under certain circumstances. This reflects a change in policy for the City of Clovis to acknowledge that transportation planning based solely on roadway LOS, may conflict with other community values. Specifically, the new policy (proposed policy 2.1) reads:

Until the City adopts Transportation Impact Analysis Guidelines, the following level of service (LOS) standards shall apply:

- a. Achieve LOS D vehicle traffic operations during the a.m. and p.m. peak hour
- b. Allow exceptions on a case-by-case basis where allowing lower levels of service would result in other public benefits, such as:
 - i. Preserving agriculture or open space land
 - ii. Preserving the rural/historic character of a neighborhood
 - iii. Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts
 - iv. Avoiding adverse impacts to pedestrians, cyclists, and mass transit riders
 - v. Where right-of-way constraints would make capacity expansion infeasible

In the case of Minnewawa Avenue, widening the existing roadway from 2 to 4 lanes to address the LOS F condition has the following constraints:

- Would result in adverse impacts to pedestrians and cyclists in the Tarpey neighborhood, particularly school-aged children traveling to and from the adjacent Tarpey Elementary School
- Would result in adverse impacts to the character of the adjacent Tarpey neighborhood
- Available right-of-way constraints make capacity expansion infeasible; adjacent residential properties would need acquired and existing residential structures removed.

Given these constraints, discussions with City of Clovis staff indicated that this segment of Minnewawa Avenue would be a location where an exception to the City's LOS standard would apply.

Based on policy of the General Plan Update, no mitigation measures are feasible to reduce the impact to the 1993 General Plan policy to a less-than-significant level. Therefore, this impact would remain significant and unavoidable in the context of the 1993 General Plan LOS policy.

Residual Significance: Significant and Unavoidable

Impact 1b: The addition of project traffic to the roadway network would not result in traffic operations that conflict with the City of Fresno 2025 General Plan LOS policy.

The proposed project will increase the traffic volumes on City of Fresno roadways. However, all City of Fresno roadway segments in this study would continue to operate at an acceptable LOS D or better during the AM and PM peak hours. Therefore, this impact is less than significant.

Significance: Less Than Significant

Impact 1c: The addition of project traffic to the roadway network would result in traffic operations that conflict with the County of Fresno 2000 General Plan LOS policy.

The proposed project will increase the traffic volumes on County of Clovis roadways. The majority of the roadway segments would continue to operate at an acceptable LOS during the AM and PM peak hours. However, the following segments would operate at an unacceptable LOS during the AM and/or PM peak hours:

- Copper Avenue: Willow Avenue to Auberry Road
- Copper Avenue: Auberry Road to Minnewawa Avenue
- Behymer Avenue: Clovis Avenue to Fowler Avenue
- Herndon Avenue: McCall Avenue to Academy Avenue
- Ashlan Avenue: Minnewawa Avenue to Clovis Avenue
- Ashlan Avenue: McCall Avenue to Academy Avenue
- Minnewawa Avenue: Copper Avenue to Behymer Avenue
- Fowler Avenue: Behymer Avenue to Shepherd Avenue
- DeWolf Avenue: Herndon Avenue to Bullard Avenue
- McCall Avenue: Herndon Avenue to Shaw Avenue
- Academy Avenue: Herndon Avenue to Shaw Avenue

Significance: Significant

Mitigation 1c: A combination of capacity expansion and policy measures is proposed as mitigation to address the significant impacts to County of Fresno roadways. These are discussed in further detail below.

While these mitigation measures would address the conflicts with the County of Fresno’s existing LOS policy, these improvements would require action on the part of the County of Fresno. Since the City of Clovis does not have control over the implementation of these mitigation measures, this impact would remain significant and unavoidable.

Residual Significance: Significant and Unavoidable

Description of Mitigation Measure 1c

Table 10 presents the summary of proposed capacity expansion and policy measures to address the significant impacts to County of Fresno roadways.

TABLE 10: MITIGATION MEASURE 1C SUMMARY

Roadway	Segment	LOS before Mitigation		Mitigation Option	LOS with Mitigation	
		AM	PM		AM	PM
Copper Ave.	Willow Ave. to Auberry Rd.	E	D	Widen to 4 lanes	C	C
Copper Ave.	Auberry Rd. to Minnewawa Ave.	F	F	Widen to 4 lanes to Clovis Ave. (see Minnewawa Ave.)	C	C
Behymer Ave.	Clovis Ave. to Fowler Ave.	D	D	Improve to 2-lane urban collector with TWLTL (infeasible)	C	C
Herndon Ave.	McCall Ave. to Academy Ave.	C	D	Improve to 2-lane urban arterial with TWLTL	C	C
Ashlan Ave.	Minnewawa Ave. to Clovis Ave.	F	F	Widen to 4 lanes (infeasible)	D	D
Ashlan Ave.	McCall Ave. to Academy Ave.	D	D	Improve to 2-lane urban collector with TWLTL (infeasible)	C	C
Minnewawa Ave.	Copper Ave. to Behymer Ave.	F	F	Extend Clovis Avenue to Copper Avenue (see Policy 7.1)	C	C
Fowler Ave.	Behymer Ave. to Shepherd Ave.	C	E	Widen to 4 lanes (infeasible)	C	C
DeWolf Ave.	Herndon Ave. to Bullard Ave.	D	D	Widen to 4 lanes (infeasible)	C	C
McCall Ave.	Herndon Ave. to Shaw Ave.	F	F	Widen to 4 lanes	C	C
Academy Ave.	Herndon Ave. to Shaw Ave.	C	D	Widen to 4 lanes	C	C

Notes: **BOLD** text indicates unacceptable LOS based on the County of Fresno LOS policy in its 2000 General Plan.
Source: Fehr & Peers.

Copper Avenue

For the segments of Copper Avenue from Willow Avenue to Auberry Road and Auberry Road to Minnewawa Avenue, the following aspects were considered to address LOS F conditions:

- Widening the roadway from two lanes to four lanes would mitigate the project's LOS impact and improve operations to an acceptable LOS.
- These improvements are listed as City of Clovis projects in the Fresno COG RTP, and are consistent with the proposed General Plan Mobility Plan.

- Copper Avenue is beyond the 2035 development area. Therefore, it is analyzed as a County of Fresno facility, and it is anticipated the City of Clovis would not have jurisdiction to implement these improvements by 2035.

Therefore, this impact would remain significant and unavoidable. However, when the City expands north to Copper Avenue, the City would have jurisdiction to either implement these improvements or, if preserving agricultural land is a higher priority, use the proposed General Plan Update policy to allow a more congested LOS.

Behymer Avenue

For Behymer Avenue from Clovis Avenue to Fowler Avenue, expanding the capacity of this two-lane roadway to an urban collector with two lanes and a two-way left-turn lane would mitigate the project's impact and improve operations to an acceptable LOS. However, these capacity enhancements are not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, improving this roadway to urban collector standards would conflict with County standards for local roadways, and right-of-way constraints would make widening potentially infeasible. Therefore, the impact would remain significant and unavoidable.

Herndon Avenue

Herndon Avenue between McCall Avenue and Academy Avenue is projected to operate at LOS D during the PM peak hour for the 2035 Plus Proposed General Plan scenario. Since this segment of Herndon Avenue is outside the City of Clovis's current SOI, LOS D operations are considered unacceptable. Upgrading this segment of Herndon Avenue to a two-lane urban arterial with a two-way left-turn lane would mitigate the project's impact and improve operations to an acceptable LOS. However, this capacity enhancement project is not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since this project is not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

Ashlan Avenue

Ashlan Avenue between Minnewawa Avenue and Clovis Avenue is projected to operate at LOS F. Widening Ashlan Avenue to a four-lane roadway would mitigate the project's impact and improve operations to LOS D. However, this roadway widening is not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, right-of-way constraints may make widening Ashlan Avenue infeasible.

This segment of Ashlan Avenue is in the City of Clovis's SOI, and is the same area as the Minnewawa Avenue segment that operates at LOS F in the City of Clovis. If annexed in the future, the proposed policy 2.1 could also apply to this segment given the existing residences along Ashlan Avenue and the right-of-

way constraints. Overall, since funding is not identified and widening may be infeasible, this impact would remain significant and unavoidable.

Ashlan Avenue between McCall Avenue and Academy Avenue is projected to operate at LOS D. Since this segment of Herndon Avenue is outside the City of Clovis's current SOI, LOS D operations are considered unacceptable. Improving this segment of Herndon Avenue by converting it to an urban collector with a center two-way left-turn lane would mitigate the project's impact and improve operations to an acceptable LOS. However, this capacity enhancement project is not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since this project is not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

Minnewawa Avenue

Minnewawa Avenue between Behymer and Copper Avenue is projected to operate at LOS F. This segment of Minnewawa is ultimately planned to become a collector and local street, with regional traffic shifting to a proposed extension of Clovis Avenue. Since the proposed General Plan Update proposes converting Minnewawa Avenue to a more local facility with regional traffic on Clovis Avenue, the preferred mitigation option is to extend Clovis Avenue north of Behymer Avenue to Copper Avenue to reduce the amount of traffic on Minnewawa Avenue by providing a parallel facility to carry traffic to and from Copper Avenue. This is further emphasized in Policy 7.1 in the draft Circulation Element, which states that the City will invest in the extension of Clovis Avenue north to Copper Avenue as funding is available. This improvement is listed as a City of Clovis project in the Fresno COG RTP, and is consistent with the proposed General Plan Mobility Plan.

Since this improvement is outside the 2035 growth area shown in Exhibit B, this improvement would be outside the City's jurisdiction. Therefore, the City would not have jurisdiction to implement these improvements by 2035, and the impact would remain significant and unavoidable. However, when the City expands north along Clovis Avenue from Behymer Avenue to Copper Avenue, the City would have jurisdiction to implement these improvements.

Fowler Avenue

For Fowler Avenue from Behymer Avenue to Shepherd Avenue, widening this two-lane roadway to four lanes would mitigate the project's impact and improve operations to an acceptable LOS. However, these capacity enhancements are not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, widening this roadway would conflict with County standards for local roadways, and right-of-way constraints would make widening potentially infeasible. Therefore, the impact would remain significant and unavoidable.

De Wolf Avenue

For De Wolf Avenue from Herndon Avenue to Bullard Avenue, widening this two-lane roadway to four lanes would mitigate the project's impact and improve operations to an acceptable LOS. However, these capacity enhancements are not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, widening this roadway would conflict with County standards for local roadways, and right-of-way constraints would make widening potentially infeasible. Therefore, the impact would remain significant and unavoidable.

McCall Avenue

For McCall Avenue between Herndon Avenue and Shaw Avenue, the following aspects were considered to address LOS F conditions:

- Widening the roadway from two lanes to four lanes would mitigate the project's LOS impact and improve operations to an acceptable LOS.
- Widening McCall from two to six lanes is listed as a City of Clovis project in the Fresno COG RTP.
- This segment of McCall Avenue between Herndon and Shaw Avenues is currently outside the City of Clovis's current SOI, and beyond the 2035 and 2035+ development area. Therefore, it is analyzed as a County of Fresno facility, and it is anticipated the City of Clovis would not have jurisdiction to implement these improvements by 2035.

Therefore, this impact would remain significant and unavoidable. As the City expands east, it would need to work with the County of Fresno to widen this segment of McCall Avenue to sufficiently serve traffic demand between Northeast Clovis and Loma Vista.

Academy Avenue

Academy Avenue between Herndon Avenue and Shaw Avenue is projected to operate at LOS D. Since this segment of Academy Avenue is outside the City of Clovis's current SOI, LOS D operations are considered unacceptable. Widening this two-lane roadway to four lanes would mitigate the project's impact and improve operations to an acceptable LOS. However, these capacity enhancements are not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since this project is not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

Impact 1d: The addition of project traffic to the roadway network would result in traffic operations that conflict with Caltrans LOS policies.

The proposed project will increase the traffic volumes on state highways. The majority of the state highway segments would continue to operate at an acceptable LOS D during the AM and PM peak hours. However, the following segments would operate at an unacceptable LOS during the AM and/or PM peak hours:

- SR 168 Eastbound: McKinley Avenue to Shields Avenue
- SR 168 Eastbound: Shields Avenue to Ashlan Avenue
- SR 168 Westbound: Ashlan Avenue to Shields Avenue
- SR 168 Eastbound: Herndon Avenue to Fowler Avenue
- SR 168 Westbound: Fowler Avenue to Herndon Avenue
- SR 168 Westbound: Temperance Avenue to Fowler Avenue
- SR 168: Temperance Avenue to Owens Mountain Parkway

Significance: Significant

Mitigation 1d: Capacity expansion projects are proposed as mitigation to address the significant impacts to Caltrans facilities. These are discussed in further detail below. While these mitigation measures would address the conflicts with the Caltrans LOS policies, these improvements would require action on the part of the Caltrans. Since the City of Clovis does not have control over the implementation of these mitigation measures, this impact would remain significant and unavoidable.

Residual Significance: Significant and Unavoidable

Description of Mitigation Measure 1d

Table 11 presents the summary of proposed capacity expansion measures to address the significant impacts to Caltrans facilities.

TABLE 11: MITIGATION MEASURE 1D SUMMARY

Roadway	Segment	LOS before Mitigation		Mitigation Option	LOS with Mitigation	
		AM	PM		AM	PM
SR 168 EB	McKinley Ave. to Shields Ave.	E	E	Widen to 4 lanes	D	D
SR 168 EB	Shields Ave. to Ashlan Ave.	E	E	Add an Auxiliary Lane	D	D
SR 168 WB	Ashlan Ave. to Shields Ave.	E	D	Add an Auxiliary Lane	D	C
SR 168 EB	Herndon Ave. to Fowler Ave.	D	E	Add an Auxiliary Lane	C	D
SR 168 WB	Fowler Ave. to Herndon Ave.	F	E	Widen to 3 lanes	D	C
SR 168 WB	Temperance Ave. to Fowler Ave.	E	D	Add an Auxiliary Lane	D	C
SR 168	Temperance Ave. to Owens Mountain Parkway	D	F	Improve to a 4-lane freeway; construct interchange with Owens Mountain Parkway	C	C

Notes: **BOLD** text indicates unacceptable LOS based on the County of Fresno LOS policy in its 2000 General Plan.
Source: Fehr & Peers.

State Route 168 Eastbound: McKinley Avenue to Ashlan Avenue

For the segments of SR 168 Eastbound from McKinley Avenue to Shields Avenue and Shields Avenue to Ashlan Avenue, the proposed mitigation option includes increasing the capacity of the highway to address the LOS E conditions. This would include converting the existing three lanes plus auxiliary lane segments from SR 180 to McKinley Avenue and McKinley Avenue to Shields Avenue to four lanes. This would be accomplished by connecting the existing auxiliary lanes between the off-ramps and on-ramps at McKinley Avenue and converting this new outside travel lane to a mixed-flow lane. The existing auxiliary lane between McKinley Avenue to Shields Avenue would also be extended through the Shields Avenue interchange north as an outside mixed-flow travel lane becoming an auxiliary trap exit only lane at the Ashlan Avenue off-ramp.

This capacity enhancement would mitigate the project’s impact and improve operations to an acceptable LOS. However, this capacity enhancement project is not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City’s jurisdiction. Since this project is not funded and outside the City’s jurisdiction to implement, this impact would remain significant and unavoidable.

State Route 168 Westbound: Ashlan Avenue to Shields Avenue

Adding an auxiliary lane between the Ashlan Avenue on-ramp and the Shields Avenue off-ramp to SR 168 Westbound would mitigate the project’s impact and improve operations to an acceptable LOS. However, this capacity enhancement project is not included in the Fresno COG RTP or any other funding program

for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since this project is not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

State Route 168 Eastbound: Herndon Avenue to Fowler Avenue

Adding an auxiliary lane between the Herndon Avenue on-ramp and the Fowler Avenue off-ramp to SR 168 Eastbound would mitigate the project's impact and improve operations to an acceptable LOS. However, this capacity enhancement project is not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since this project is not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

State Route 168 Westbound: Temperance Avenue to Herndon Avenue

For the segments of SR 168 Westbound from Temperance Avenue to Fowler Avenue and Fowler Avenue to Herndon Avenue, the proposed mitigation option includes increasing the capacity of the highway to address the LOS E and LOS F conditions. This would include adding an auxiliary lane from the Temperance Avenue on-ramp to the Fowler Avenue off-ramp. Given the larger amount of traffic entering SR 168 Westbound at Fowler Avenue and traveling west through the Herndon Avenue interchange, a mixed-flow lane would be added at the Fowler Avenue on-ramp and travel through the Herndon Avenue interchange.

This capacity enhancement would mitigate the project's impact and improve operations to an acceptable LOS. However, these capacity enhancement projects are not included in the Fresno COG RTP or any other funding program for roadway improvements. Furthermore, this roadway is not within the City's jurisdiction. Since these projects are not funded and outside the City's jurisdiction to implement, this impact would remain significant and unavoidable.

State Route 168: Temperance Avenue to Owens Mountain Parkway

The current expressway configuration of SR 168 with a signalized at-grade intersection with Owens Mountain Parkway would operate at an unacceptable LOS F conditions with the proposed General Plan Update. To improve the traffic operations, a grade-separated interchange with Owens Mountain Parkway would need to be constructed converting the existing expressway to an access-controlled freeway. The Owens Mountain Parkway interchange would serve future planned development along this section of the SR 168 corridor in the Sierra Gateway Commerce Center, and would primarily be triggered when that development occurs.

CONGESTION MANAGEMENT PROGRAM

Impact 2: **The project would not conflict with an applicable congestion management program or other standards established by the county congestion management agency for designated roads or highways.**

The passage of California Assembly Bill 2419 in 1996 allowed counties to “opt out” of the California Congestion Management Program, reference above, if a majority of local governments elected to exempt themselves from California’s congestion management plans. On September 25, 1997, the Fresno COG Policy Board rescinded the Fresno County Congestion Management Program at the request of the local member agencies. Therefore, there is no applicable congestion management program or congestion management agency standards, and this impact is less than significant.

Significance: *Less Than Significant*

AIR TRAFFIC PATTERNS

Impact 3: **The project would not result in a change in air traffic patterns, including no significant increase in traffic levels or a change in location.**

As noted in the Existing Conditions chapter, there are no aviation facilities in the City of Clovis. The population and employment growth in the City of Clovis attributable to the General Plan Update may result in an increase in demand for aviation facilities or services, but is not expected to result in a substantial change to air traffic patterns, a change to the location of airports, or result in a substantial safety risks. Therefore, this impact is less than significant.

Significance: *Less Than Significant*

HAZARDS

Impact 4: **The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

The proposed General Plan Update would result in some changes and growth of the City's transportation network, but would not increase hazards. All future roadway system improvements associated with development and redevelopment activities under the proposed General Plan Update would be designed in accordance with the established roadway design standards. These improvements would be subject to review and future consideration by the City of Clovis engineering staff. An evaluation of the roadway alignments, intersection geometrics, and traffic control features would be needed. Roadway improvements would have to be made in accordance with the City's Circulation Plan and roadway functional design guidelines, and meet design guidelines in the California Manual of Uniform Traffic Control Devices and the Caltrans Roadway Design Manual.

In addition, the draft Circulation Element includes goals and policies to improve the safety of all users of the transportation system in the City of Clovis. Therefore, this impact is less than significant.

Significance: *Less Than Significant*

EMERGENCY ACCESS

Impact 5: **The project would not result in inadequate emergency access.**

A review of the City of Clovis General Plan Update revealed no potential internal policy inconsistencies or discrepancies related to emergency access. Implementation of the City of Clovis General Plan Update would increase the amount of vehicle traffic, which would require the improvement and expansion of the City of Fresno's roadway system to accommodate forecasts travel demand as well as maintaining acceptable traffic operations (LOS) in the city. An enhanced roadway network that accommodates forecasted travel demand would also provide adequate emergency access. Therefore, this impact is less than significant.

Significance: *Less Than Significant*

TRANSIT, BICYCLE, & PEDESTRIAN IMPACTS

Impact 6: **The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.**

A review of the City of Clovis General Plan Update revealed no potential internal policy inconsistencies or conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or the performance or safety of those facilities. Implementation of the City of Clovis General Plan Update would increase demand for public transit, bicycle, and pedestrian facilities, which would require the improvement and expansion.

As part of the Clovis General Plan Update, additional transit, bicycle, and pedestrian facilities would be constructed. Policy 5.1 of the proposed Circulation Element, the City plans to upgrade existing streets and design new streets to include complete street amenities, prioritizing improvements that will improve bicycle and pedestrian connectivity or result in increased safety. Furthermore, the City would plan, design, operate, and maintain the transportation network to promote safe and convenient travel for all users: pedestrians, bicyclists, transit riders, freight, and motorists.

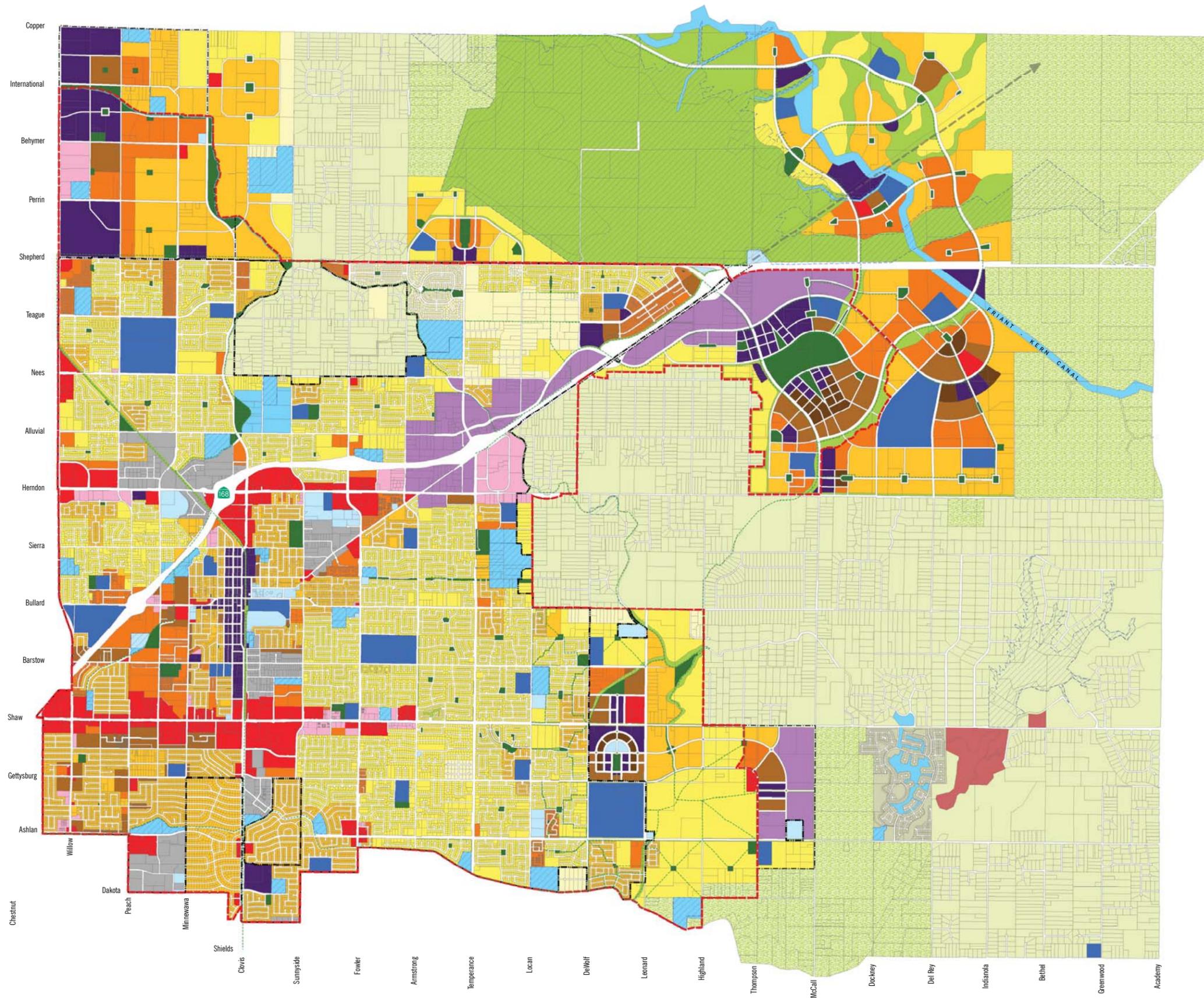
Therefore, this impact is less than significant.

Significance: *Less Than Significant*

APPENDIX A: ROADWAY LOS RESULTS

APPENDIX B: 2035 GROWTH AREA MAP

DRAFT LAND USE DIAGRAM



- Proposed Buildout 2035 (see note)
 - City Boundary
 - Sphere of Influence Boundary
 - Off-Street Trails and Paseos
- City of Clovis General Plan Land Use**
- AG - Agriculture (1 DU/20 AC)
 - RR - Rural Residential (1 DU/2 AC)
 - VL - Very Low Density Residential (0.6-2.0 DU/Ac)
 - L - Low Density Residential (2.1-4.0 DU/Ac)
 - M - Medium Density Residential (4.1-7.1 DU/Ac)
 - MH - Medium High Density Resid.(7.1-15.0 DU/Ac)
 - H - High Density Residential (15.1-25.0 DU/Ac)
 - VH - Very High Density Residential (25.1-43.0 DU/Ac)
 - MU-V - Mixed Use Village
 - MU-BC - Mixed Use/Business Center
 - O - Office
 - I - Industrial
 - C - Commercial
 - OS - Open Space
 - P - Public/Quasi-Public Facilities
 - PK - Park
 - S - School
 - W - Water
- Fresno County General Plan Land Use**
- PRC-FC - Planned Residential Community
 - C-SP - Commercial Specialized
 - FMC Distrct - Basin Facilities

Note: This boundary reflects the estimated geographic area that is estimated to build out at urbanized levels by 2035. The balance of the entire General Plan planning area is assumed to grow but at lower intensity, non-urbanized levels by 2035. Full buildout of the entire planning area is analyzed in a separate analysis.



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