



# Circulation

## Chapter 8

The Circulation Element addresses the movement of people, goods, and services within and around the City of Williams. This Element contains goals, policies and programs that establish the City’s circulation system to accommodate pedestrians, bicycles, motor vehicles, public transit, and other means of travel.

Since the Circulation Element was first required by State law in 1955, transportation technology and needs in California have changed greatly, with the emphasis today on the development of a balanced, multi-modal transportation system. More recently, Assembly Bill 1358, The California Complete Streets Act, adopted in 2010, contains a number of requirements to include in the Circulation Element to create a coordinated circulation network incorporating multi-modal circulation programs. The policies and plan proposals of the Circulation Element should:

1. Create complete streets that serve everyone, including pedestrians, bicyclists, transit riders, and drivers; that they take into account the needs of people with disabilities, older people, and children.
2. Coordinate the transportation and circulation system with planned land uses;
3. Promote the efficient and accessible transport of goods and the safe and effective movement of all segments of the population;
4. Make efficient use of existing transportation facilities; and
5. Protect environmental quality and promote the wise and equitable use of economics and natural resources.

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### Relationship to Other General Plan Elements

This is one of several other General Plan elements that have been updated as part of the City of Williams 2010 Comprehensive General Plan Update Program. An effective Circulation Element accurately coordinates estimated increases in the intensities of land uses (found in the Chapter 3, Land Use and Character Element) with improvements in the circulation system to provide sufficient capacity for the resulting increases in travel demand. In coordination with this Circulation Element, the Land Use and Character Element has helped and continues to improve on the City's development patterns within the City's Sphere of Influence (SOI) to improve circulation efficiencies. For example, mixed use development has been emphasized in the Land Use and Character Element, particularly in the downtown area. This allows frequently visited destinations to be accessible by multiple transportation modes.

The Circulation Element has been designed to be consistent with and directly related to other elements of the General Plan. In particular, the Future Land Use Plan, presented in Chapter 3, Land Use and Character, proposes substantial residential and commercial growth and development east of Interstate 5. If this development occurs, Williams will more than double in size and population, with corresponding increases in trip generation and vehicular traffic on streets throughout the City. This Chapter describes the improvements that will be needed to accommodate this growth.

Since traffic levels on the circulation system are one of the major generators of noise, the Circulation Element is also related to the Noise Element of the General Plan. Traffic safety is an important concern of the Circulation Element; similarly with the policies in the Public Safety Element. Factors of safety and seismic safety affect the location and design of circulation infrastructure, both in terms of structural safety and the need for evacuation and emergency routes.

There are also a number of policies and actions in the Land Use and Character Element that relate to the Circulation Element. For example,

- Action 3.g of the Land Use and Character Element regarding the development of a downtown master plan includes provisions for the use of on- and off-street parking in common for certain uses.
- Action 3.l provides for streetscape enhancements in the downtown. An entire section of the Land Use Element and Character Element is devoted to community entryways and corridors.
- Action 3.w of this Chapter encourages the development of a corridor master plan on 7th Street (Old Highway 99).
- In the same vein, Action 8.m-2 of this Circulation Element emphasizes the need for the City to collaborate with other agencies in developing a master design plan for 7th Street. Components in this design would include more



detailed plans for amenities, such as separated sidewalks, street trees and other landscaping, street furniture, and other features as appropriate.

The Draft Citywide Circulation Study, prepared in 2007 based by Omni-Means, in October, 2007, was used as a basic improvement needs to accommodate anticipated growth in Williams. This study was further updated to coincide with the Draft Land Use and Character Element update by the Technical Memorandum, 2011 Circulation Study Update, prepared by Omni Means on August 23, 2011. These studies includes a complete description and analysis of the City's circulation system and incorporates an evaluation of existing transportation facilities, a buildout development summary, a transportation capital improvement program and a circulation element with a number of proposed policies and programs for possible implementation by the City. These studies are incorporated into this document by reference (refer to Appendices B and C). Appendix A serves and the list of recommended improvements. Based on further evaluation of the revised land use scenario for 2010 General Plan Update, a number of improvements shown in the 2007 Study were shown as no longer necessary in the 2011 Technical Memorandum

### Multi-Modal Strategy

This Circulation Element includes all the State required topics that must be included in a Circulation Element in addition to identification of issues of concerns and potential solutions to address them to include the primary circulation system, the secondary circulation system, and goals, policies, and programs. Williams circulation system in this General Plan is designed to accommodate multiple methods of travel including automobile, pedestrian, bicycle, and public transit. Such a strategy is often called “multi-modal.”

The City's transportation planning will therefore encourage pedestrian and bicycle use. Consequently, the City will not design roads simply to accommodate vehicular traffic during peak demand periods. The City will design its circulation infrastructure to facilitate a more sustainable proportion of vehicular and non-vehicular trip. The City will emphasize pedestrian and bicycle safety over vehicular traffic flow and speed in the downtown area, residential neighborhoods where higher pedestrian activity is expected.

### Circulation Element Organization

A Circulation Master Plan was developed to guide the future expansion of the City's circulation system and to define the functional classification of the system to meet the travel needs of the community. Shown on Map 8.1 is the City's Circulation Master Plan.

### Roadways

Functional classification designates all streets and highways within the City Limits and Sphere of Influence (SOI). These categories include Freeway, Highway, Arterial (Major and Minor), Major Collector, Collector, and Local streets. Each

classification has specific standards and criteria through which design and routes are developed. These criteria include:

1. Existing and potential development and land use intensities as provided under the General Plan Land Use Map;
2. Expected peak traffic loads;
3. Potential physical improvements such as road widening; and
4. Special designations such as scenic routes.

The following classification system is consistent with national standards, and provides a framework for the planning of a city-wide/area-wide transportation system. The Freeways and Expressways fall under the jurisdiction of Caltrans and hence their construction standards are dictated by the policies and standards of Caltrans. Additional definitions for the City's Street Classification System are summarized below:

**Freeways** – Characterized by high speeds and limited controlled access, freeways primarily serve regional and long distance travel. I-5, the only freeway through the City of Williams (controlled and maintained by Caltrans), is a four-lane freeway that extends from Mexico to the Oregon border, providing regional access to the City of Williams from Redding, Sacramento, and the San Francisco Bay Area. This roadway has an average daily trip (ADT) rate of approximately 60,000 vehicles. Within the City's Sphere of Influence, I-5 has interchanges at Husted Road, E Street and SR 20.

**Expressways and/or Major Arterials** – Have four lanes with restricted driveway access, but with a mix of grade-separated interchanges and at-grade intersections. SR 20, the only expressway in Williams (controlled and maintained by Caltrans), is a state highway facility that traverses in the east-west direction through central and northern California connecting Interstate Highway 5 with Interstate Highway 80. Regionally, SR 20 serves as an interregional auto and truck travel route that connects the Central Valley with the cities of Williams, Marysville, Grass Valley, and Nevada City. Within the City's SOI, SR 20 is predominantly a two-lane arterial.

**Minor Arterials** – Have four lanes and medium carrying capacity that are principally for travel between larger land uses within the community. Husted Road and E Street between Husted Road and 6th Street, designated the City's the minor arterials, are currently two-lane roadways that extends east and west from I-5, connecting with SR 20 and Old Highway 99 to the west and Husted Rd. to the east. The posted speed limit on E Street varies from 25 mph to 35 mph. E Street forms all way stop controlled intersections with 7th Street and 5th Street. The roadway has half-street improvements as it crosses I-5, without any bicycle lanes.

**Major Collectors (Industrial Streets)** – Have two lanes that may be upgraded to an arterial in the future and usually limit on-street parking to maintain smooth flow. Old Highway 99, the only designated Major Collector in Williams is a two-lane north south arterial that traverses parallel to I-5, and connects to it via the Husted Road interchange ramps. Old Highway 99 West traverses through a mixed use



commercial and residential areas. This roadway is designated as 7th Street between B Street and Theatre Road.

**Collector Streets** – Have two lanes for carrying relatively low capacity at slower speeds and are used to connect neighborhoods as well as arterials. A collector street serves abutting property and carries traffic to and from the higher street classifications. There are 18 roadway sections within the City’s SOI that are designated Collectors (see Table 8.1).

**Local Streets** – Have two lanes that provide access for smaller residential subdivisions which are characteristic of low speed, low capacity roads that provide direct access to adjacent land uses and are typically meant only for local, as opposed to through traffic. These consist of all other City Streets not designated freeways, expressways, arterials or collector roads.

Roads not listed in the table are designated as Local Streets.

**Table 8.1 Functional Classification System for Williams Roadways**

Functional Classification/ Roadway	From	To
<b>Freeway</b>		
I-5	Northern City Limits	Southern City Limits
<b>Expressway</b>		
SR 20	Western City Limits	Eastern City Limits
<b>Minor Arterial</b>		
Husted Road	SR 20	Southern City Limits
E Street	6th Street	Husted Road
<b>Major Collector</b>		
E Street	SR 20	12th Street
Old Highway 99w	Northern City Limits	Husted Road (Old Highway 99 W Extension West Of I-5)
Walnut Drive	Western City Limits	Husted Road
<b>Collector</b>		
Husted Road	SR 20	Southern City Limits
Freshwater Road	Western City Limits	Husted Road
E Street	6th Street	Husted Road
Hankins Road	Western City Limits	9th Street
Hill Road	Hankins Road	Walnut Drive
Davis Road	E Street	Walnut Drive
Freshwater Lateral Road	Freshwater Road	SR 20
Marguerite Drive	E Street	SR 20
Ella Street	Marguerite Drive	Husted Road
Virginia Way	SR 20	E Street
Venice Boulevard	E Street	Hankins Road
George Road	Hankins Road	New Street (Connecting Hankins Road to 9th Street)
12th Street	E Street	New Street (Connecting Hankins Road to 9th Street)
9th Street	Theatre Road	Southern City Limits
Theatre Road	9th Street	Old Highway 99 W
Crawford Road	9th Street	Old Highway 99 W
Abel Road	Husted Road	Eastern City Limits
Old Highway 99W	Crawford Road	Southern City Limits

**Maintaining Livability through Appropriate Design of Local Streets**



Local streets are intended to provide direct access to/from adjacent property. Local streets serving residential areas should ideally carry small volumes of traffic so that neighborhood residents' "livability" thresholds are not exceeded. The City may also consider implementing physical traffic calming measures and/or enforcing ordinance measures to restrict through truck traffic on local streets serving residential areas. Local streets should exhibit sound design qualities and should provide easy access to all emergency vehicles. City standards for the design of local streets should be strictly adhered to.



Most local streets in Williams have pavement widths of 40 feet or more. Future streets should be developed at the substantially narrower width of 28 feet.



**LEVEL OF SERVICE THRESHOLD**

The Citywide Traffic Circulation Study quantifies current and projected future traffic operations through the determination of level of service (LOS). Level of service is a qualitative measure of traffic operating conditions, whereby, a letter grade “A” through “F” is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. For the analysis of transportation facilities, LOS D has been taken as the City’s threshold for acceptable/tolerable operations for all study roadway facilities except in downtown area. LOS E has been taken as the threshold for acceptable/tolerable operations in downtown (see Policy 8.p). Actual methodology and criteria for determining the Level of Service Threshold will be made through the development of Traffic Impact Study Guidelines (see Action 8.p-1)

The City-wide transportation study concluded that all City roadway sections and intersections currently operate at acceptable levels (see Tables 8.4 and 8.5). As shown on Table 8.6, most roadways in the City can remain without significant upgrade. However, the following roadway segments are shown for widening needs as follows:

- Husted Road from Freshwater Road to E Street.
- Husted Road from E Street to Abel Road.
- Husted Road from Abel Road to I-5 SB Ramps.
- E Street from Husted Road to I-5 SB Ramps.

**IMPROVEMENTS NEEDED TO ACCOMMODATE FULL BUILDOUT**

As listed in Table 8.6 and shown on Map 8.2, 17 intersections are expected to exceed the City’s acceptable Level of Service, LOS D at the City’s full plan buildout. These intersections will eventually need to be signalized to accommodate the City’s land use distribution and growth. Table 8.7 presents mitigated General Plan buildout with improvements planned in Appendix A of this Circulation Element. A more specific list of City-wide circulation system improvements are presented in Appendix A of this document. It is noted that planned improvements in this Element will mitigate future growth to a higher level LOS than the City’s accedptable LOS.

**Table 8.2 Level of Service (LOS) Criteria for Roadways**

LOS	Signalized Intersections	Unsignalized Intersection
A	Uncongested operations, all queues clear in a signal cycle	Little or no delay
B	Uncongested operations, all queues clear in a signal cycle	Short traffic delays
C	Light congestion, occasional backups on critical approaches	Average traffic delays
D	Significant congestion of critical approaches but intersection functional Cars are required to wait through more than one cycle during short peaks. No long queues formed.	Long traffic delays
E	Severe congestion with some long-standing queues at critical approaches. Blockage of intersection may occur if traffic signal	Very long traffic delays



LOS	Signalized Intersections	Unsignalized Intersection
	does not provide for protracted turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es).	
F	Total breakdown, stop and go operation	Interaction blocked by external cause.



**Table 8.3 Level of Service Criteria for Intersections**

LOS	Type of Flow	Delay	Maneuverability	Signalized Delay	Unsignalized	All-Way Stop
A	Stable	Very slight delay. Progression is very favorable with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤10.0	≤10.0	≤10.0
B	Stable	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≥ 20.0	>10 and ≥ 15.0	>10 and ≥ 15.0
C	Stable	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>20 and ≥ 35.0	>20 and ≥ 25.0	>20 and ≥ 25.0
D	Approaching Unstable	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are frequent occurrences.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≥ 55.0	>35 and ≥ 35.0	>35 and ≥ 35.0
E	Unstable	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≥ 80.0	>55 and ≥ 50.0	>55 and ≥ 50.0
F	Forced	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up condition.	>80.0	>50.0	>50.0

*References: 1. Highway Capacity Manual, Special Report No. 209, Transportation Research Board, Third Edition, Updated December, 2000.*

**Table 8.4 Existing Conditions Roadways Level of Service**

#	Roadway Segment	Capacity Configuration	Acceptable LOS	Average Daily Traffic (ADT)	Estimated LOS
1	Freshwater Road from Freshwater Lateral to Husted Road	Two-Lane Collector	D	500	A
2	Husted Road from Freshwater Road to E Street	Two-Lane Collector	D	2730*	C
3	Husted Road from E Street to Abel Road	Two-Lane Collector	D	1,370	B
4	Husted Road from Abel Road to I-5 SB Ramps	Two-Lane Collector	D	1,660	B
5	E Street from Husted Road to I-5 SB Ramps	Two-Lane Collector	D	2,250	B
6	E Street from I-5 SB Ramps to 6th Street	Four-Lane Undivided arterial	D	6,540*	A
7	E Street from 6th Street to 9th Street South Downtown	Two-Lane divided arterial	D	5,440*	B
8	E Street from 9th Street South to SR 20	Two-Lane Collector	D	650	D
9	SR 20 from E Street to I-5 NB Ramps	Two-Lane Expressway	D	4,450	C
10	SR 20 from I-5 NB Ramps to Husted Street	Two-Lane Expressway	D	3,410	C
11	Old Highway 99W from SR 20 to E Street	Two-Lane Collector	D	2,450	C
12	Old Highway 99W from E Street to Theater Road	Two-Lane Collector	D	2,550*	C
13	Old Highway 99W from Theatre Road to Husted Road	Two-Lane Collector	D	2,540*	C
14	9th Street from Theatre Road to E Street	Two-Lane Collector	D	1,230	B
15	12th Street from Hankins to E Street	Two-Lane Collector	D	800	A

Notes: The daily volumes have been estimated from peak/hour counts using a 10% peak hour volume factor



**Table 8.5 Existing Conditions Intersections Level of Service**

#	Intersection	Control Type <sup>1</sup>	Acceptable LOS	A.M Peak Hour			P.M Peak Hour		
				V/C <sup>2</sup>	LOS	Warrant Met? <sup>3</sup>	V/C <sup>2</sup>	LOS	Warrant Met? <sup>3</sup>
1	SR 20/E. Street	TWSC	D	0.08	A	No	0.13	A	No
2	SR 20/Old Highway 99W	TWSC	D	0.11	A	No	0.18	A	No
3	SR 20/I-5 SB Ramps	TWSC	D	0.10	A	No	0.19	A	No
4	SR 20/I-5 NB Ramps	TWSC	D	0.12	A	No	0.30	A	No
5	SR 20/Husted Rd./Freshwater Rd.	TWSC	D	0.21	A	No	0.27	A	No
6	Street/9th Street North	TWSC	D	0.14	A	No	0.18	A	No
7	Street/9th Street South	TWSC	D	0.20	A	No	0.16	A	No
8	E Street/7th Street	AWSC	D	0.26	A	No	0.30	A	No
9	E Street/5th Street	AWSC	D	0.24	A	No	0.25	A	No
10	E Street/I-5 SB Ramps	TWSC	D	0.25	A	No	0.32	A	No
11	E Street/I-5 NB Ramps	TWSC	D	0.46	A	No	0.31	A	No
12	E Street/Vann Street	TWSC	D	0.33	A	No	0.33	A	No
13	E Street/Husted Road	TWSC	D	0.22	A	No	0.15	A	No
14	Husted Road/Husted Road Lateral	TWSC	D	0.06	A	No	0.09	A	No
15	Husted Road/Abel Road	TWSC	D	0.06	A	No	0.05	A	No
16	Husted Road/Crawford Road	TWSC	D	0.06	A	No	0.01	A	No
17	Husted Road/Old Highway 99W	TWSC	D	0.10	A	No	0.16	A	No
18	Husted Road/I-5 NB Ramps	TWSC	D	0.05	A	No	0.05	A	No
19	Husted Road/I-5 SB Ramps	TWSC	D	0.02	A	No	0.07	A	No

<sup>1</sup> TWSC Two Way Stop Control; AWSC = All Way Stop Control  
<sup>2</sup> V/C = Volume to Capacity Ratio; V/C for TWSC = Ratio of "Worst Case Movement" at Intersection  
<sup>3</sup> Warrant = Based on California MUTCD Warrant 3, performed only when operating at unacceptable LOS

**Table 8.6 Buildout Year-2030 Conditions Intersections Level of Service**

#	Intersection	Control Type <sup>1</sup>	Acceptable LOS	A.M. Peak Hour				P.M. Peak Hour			
				V/C <sup>2</sup>	LOS	Warrant Met? <sup>3</sup>	Significant Impact?	V/C <sup>2</sup>	LOS	Warrant Met? <sup>3</sup>	Significant Impact?
1	SR20/E Street	TWSC	D	0.21	A	No	No	0.68	B	No	No
2	SR 20/Old Highway 99W	TWSC	D	1.52	F	Yes	Yes	OVR	F	Yes	Yes
3	SR 20/I-5 SB Ramps	TWSC	D	OVR4	F	Yes	Yes	OVR	F	Yes	Yes
4	SR 20/I-5 NB Ramps	TWSC	D	OVR6	F	Yes	Yes	OVR	F	Yes	Yes
5	SR 20/Husted Rd./Freshwater Rd.	TWSC	D	OVR	F	Yes	Yes	OVR	F	Yes	Yes
6	E Street/9 <sup>th</sup> Street North	TWSC	D	0.23	A	No	No	0.38	a	No	No
7	E Street/9 <sup>th</sup> Street South	TWSC	D	0.35	A	No	No	0.36	A	No	No
8	E Street/7 <sup>th</sup> Street	AWSC	D	1.43	F	Yes	Yes	1.87	F	Yes	Yes
9	E Street/5 <sup>th</sup> Street	AWSC	D	1.39	F	Yes	Yes	1.71	F	Yes	Yes
10	E Street/ I-5 SB Ramps	TWSC	D	OVR	F	Yes	Yes	OVR	F	Yes	Yes
11	E Street/ I-5 NB Ra	TWSC	D	OVR	F	Yes	Yes	OVR	F	Yes	Yes
12	E Street/Vann Street	TWSC	D	OVR	F	Yes	Yes	OVR	F	Yes	Yes
13	E Street/Husted Road	TWSC	D	OVR	F	Yes	Yes	OVR	F	Yes	Yes
14	Rusted Road/Husted Rd Lateral	TWSC	D	1.95	F	Yes	Yes	OVR	F	Yes	Yes
15	Husted Road/Abel Road	TWSC	D	0.90	D	No	No	OVR0	F	Yes	Yes
16	Husted Road/Crawford Road	TWSC	D	0.60	A	No	No	OVR	F	Yes	Yes
17	Husted Road/Old Highway 99W	TWSC	D	OVR7	F	Yes	Yes	OVR	F	Yes	Yes
18	Husted Road/I-5 NB Ramps	TWSC	D	0.77	C	No	No	0.73		No	No
19	Husted Road/I-5 SB Ramps	TWSC	D	0.34	A	No	No	OVR	F	Yes	Yes
20	E Street/Marguerite Drive	TWSC	D	1.94	F	Yes	Yes	1.14	F	Yes	Yes
21	SR 20/Marguerite Drive	TWSC	D	0.43	A	No	No	1.74	F	Yes	Yes

<sup>1</sup> TWSC Two Way Stop Control; AWSC = All Way Stop Control

<sup>2</sup> V/C = Volume to Capacity Ratio; V/C for TWSC = Ratio of "Worst Case Movement" at Intersection

<sup>3</sup> Warrant = Based on California MUTCD Warrant 3, performed only when operating at unacceptable LOS

**Table 8.7 Mitigated General Plan Buildout Conditions: Intersection Level of Service**

#	Intersection	Control Type <sup>1</sup>	Acceptable LOS	A.M. Peak Hour			P.M. Peak Hour		
				V/C <sup>2</sup>	LOS	Warrant Met <sup>3</sup>	V/C <sup>2</sup>	LOS	Warrant Met <sup>3</sup>
1	SR 20/E. Street	TWSC	D	0.21	A	-	0.68	B	-
2	SR 20/Old Highway 99W	Signal	D	0.60	A	-	0.74	C	-
3	SR 20/I-5 SB Ramps	Signal*	D	22.22	C	-	16.4	C	-
4	SR 20/I-5 NB Ramps	Signal*	D	12.4	BA	-	16.1	C	-
5	SR 20/Husted Rd./Freshwater Rd.	Signal	D	0.71	C	-	0.79	C	-
6	E Street/9th Street North	TWSC	D	0.23	A	-	0.838	A	-
7	E Street/9th Street South	Signal	D	0.35	A	-	0.36	A	-
8	E Street/7th Street	Signal	D	0.78	C	-	0.68	B	-
9	E Street/5th Street	Signal	D	0.535	A	-	0.51	A	-
10	E Street/I-5 SB Ramps	Signal	D	0.77	C	-	0.80	C	-
11	E Street/I-5 NB Ramps	Signal	D	0.69	B	-	0.70	B	-
12	E Street/Vann Street	Signal	D	0.68	B	-	0.76	C	-
13	E Street/Husted Road	Signal	D	0.52	A	-	0.69	B	-
14	Husted Road/Husted Rd Lateral	Signal	D	0.57	A	-	0.673	B	-
15	Husted Road/Abel Road	Signal	D	0.50	A	-	0.58	A	-
16	Husted Road/Crawford Road	Signal	D	0.52	A	-	0.50	A	-
17	Husted Road/Old Highway 99W	Signal	D	0.49	A	-	0.80	C	-
18	Husted Road/I-5 NB Ramps	TWSC	D	0.77	C	-	0.74	C	-
19	Husted Road/I-5 SB Ramps	Signal	D	0.40	A	-	0.76	C	-
20	E Street/Marguerite Drive	Signal	D	0.46	A	-	0.48	A	-
21	SR 20/Marguerite Drive	Signal	D	0.34	A	-	0.53	A	-

<sup>1</sup> TWSC Two Way Stop Control; AWSC = All Way Stop Control  
<sup>2</sup> V/C = Volume to Capacity Ratio; V/C for TWSC = Ratio of "Worst Case Movement" at Intersection  
<sup>3</sup> Warrant = Based on California MUTCD Warrant 3, performed only when operating at unacceptable LOS  
 \* Optional Roundabout instead of Signal

**Truck Access and Routes**

Trucks play an important role in the movement of goods and the delivery of services. The California Vehicle Code, Section 35701 grants local agencies the authority (by ordinance) to establish Truck Routes. Many communities have established truck routes as a means of reducing conflicts between incompatible uses. By prohibiting or restricting trucks from some residential streets, the noise, safety, and structural pavement deterioration problems caused by trucks can be eliminated or minimized. At the same time, it is essential to ensure adequate truck access to all commercial and industrial locations.

The federal Surface Transportation Assistance Act of 1982 (STAA) has designated certain truck routes through the State of California. I-5 and SR 20 are designated as National Network and Terminal Access, respectively and described in more detail as follows:



- **I-5 - National Network (Federal):** The National Network (NN) are federal highways primarily comprised of the National System of Interstate and Defense Highways. The NN routes are not signed for STAA trucks access. NN routes.
- **SR 20 - Terminal Access (State, Local):** Terminal Access (TA) routes are portions of State routes or local roads that can accommodate STAA trucks (defined as truck tractor-semitrailer (or double) that conforms to the requirements of the STAA. The State Highway TA routes.

Regulations establishing truck routes must not be so strict that they prohibit efficient movement of trucks within and through the City. On the other hand, as the City and neighboring communities continue to grow, the need for regulations prohibiting trucks from interfering with residential livability will also continue to grow. Designated truck routes within and through the City include Old Highway 99W, 6th Street, 5th Street, 4th Street, Vann Street north of E Street and Husted Road are the north-south truck routes. B Street, C Street and D street east of 7th Street/Old Highway 99W, SR 20 and E Street are other major east-west truck routes within the City. Map 8.3 shows the designated truck routes within the City of Williams.

#### Transit/Bus Service

The Colusa County Transit provides a Dial-A-Ride system with fixed timed routes to Williams, as well as the communities of Colusa, Arbuckle, Maxwell, Grimes, Princeton, Sites and Stonyford. The agency also provides out-of-county medical transportation on an on-call basis to Chico, Davis, Lincoln, Marysville, Oroville, Roseville, Sacramento, Willows, Woodland and Yuba City. In addition, they provide curb-to-curb service to the general population and door-to-door service for disabled passengers.

The Colusa County Transit Agency (CCTA) provides a General Public Paratransit service to the County of Colusa. It currently (2011) operates a fleet of six ADA compliant vehicles, with seating capacity of 19 passenger and two wheelchair positions with 14 fixed routes, a Dial-a-Ride service Monday through Friday weekdays (7:00 am to 5:00 pm), and a commuter service to Colusa on Friday. CCTA operates a modern transit office and facility at 715 D Street in Colusa that is well equipped with maintenance, communication, and storage. It has 11 buses, two medical vehicles and staff support vehicles to accommodate additional growth and demand in Colusa County. CCTA meetings are held each month and are open to the public. CCTA also has an “Unmet Needs” advisory meeting, which is held in December of each year to provide input for possible changes that are reasonable to meet. This group is made up of service providers and passengers that represent different groups in the community.

CCTA is funded by Local Transportation Funds (LTF), Transportation Development Act (TDA), State Transit Assistance (STA), Federal Stimulus money and other sources. The recently developed Yuba College Satellite Campus and the Williams Migrant Camp are heavy users of CCTA.



According to Barbara Salazar, General Manager of CCTA (phone conversation on January 20, 2011), ridership in Colusa County has dropped in recent years from about 280 passengers per day to about 120. However, she did indicate that as the economy has started to improve in 2011, ridership is increasing. She noted a need for after-hours transit service, such as a taxi service. As the City of Williams grows, increased transit service for employment, shopping, recreation, and medical appointments will continue to increase.

### **Bicycle and Pedestrian Circulation**

Williams' neighborhoods and business districts will be served by a system of on and off-street pedestrian and bicycle routes. The bicycle and pedestrian path system is intended to connect all areas of the community to all major destinations.

Sidewalks, bicycle/pedestrian paths, and /or bicycle lanes will be required along public right-of-way, as directed by the City (refer to Figure 8.1, Roadway Cross Sections by Functional Classification). Paths will be used in areas where there are opportunities in the same corridor to circulate pedestrians and cyclists. There has also been a resurgence of the bicycle as a vital mode of transportation as a result of automobile-oriented transportation difficulties, economics, recreation, leisure time availability, physical fitness needs and concern for the environment. This interest is reflected in increasing public pressure for pathways and routes where bicycles can be ridden in relative safety.

Senate Bill 277 (Statutes of 1975) established the California Bikeways Act. The Act included provisions requiring the State Department of Transportation to establish "recommended minimum general design criteria for the development, planning, and construction of bikeways..." Also, Assembly Bill 1358 (Statutes of 2008), the California Complete Streets Act, requires the City to incorporate new provisions for multi-modal transportation, such as bicycle and pedestrian facilities into the Circulation Element. Providing a safe and convenient system for bicycle and pedestrian circulation is an important concern of the Circulation Element.

#### **PEDESTRIAN ORIENTATION**

Sidewalks provide a relatively safe area for pedestrian movement because they are separated from most other forms of transportation. Consistent with recent legislation under the American Disabilities Act (ADA), all existing and planned pedestrian improvements should allow access to all people and comply with the design guidelines as set forth within the Act. The first priority access for sidewalk improvements should be near schools and school bus stops. Sidewalk improvements should be constructed in these areas first if capital improvement projects are undertaken by the City or if assessment districts are formed. Assessment districts and capital improvement projects for other purposes, such as street widening, may include the installation of curbs, gutters, and sidewalks.

The second priority areas for sidewalk improvements shall be in commercial districts. A considerable network of sidewalks exists in commercial areas of the City. To further encourage and enhance pedestrian circulation, conditional approval

of any development proposal by the Planning Commission and City Council needs to include a requirement that the applicant install curbs, gutters and sidewalks where they do not currently exist. To provide easier access for wheelchairs, City standards, consistent with ADA requirements, call for ramps at all street corners.

### BICYCLE TRAVEL

Unlike pedestrian travel, bicycle travel is linked directly to roadways, often with limited or no separation from vehicular travel. Safety is, therefore, one of the most important aspects to consider when planning bicycle facilities. Most bikeway-related accidents occur because of unsafe or illegal practices by bicyclists, which are usually compounded by poor road conditions, and motorists who are not aware of bicyclists. The leading violations of bicyclists are 1) riding on the wrong side of the road, 2) failure to yield when entering the roadway, 3) failure to obey traffic signs and signals; and 4) riding at night without lights.

### BIKEWAY DESIGNATIONS

The term "Bikeway" is used to define all facilities that explicitly provide for bicycle travel. The Department of Transportation has developed different definitions that are used to systematically categorize different types of bicycle facilities. Bikeways, then, can be anything from fully grade-separated facilities to, simply, signed streets. The three classes of bikeways are Bike Paths (Class I), Bike Lanes (Class II), and Bike Routes (Class III).

1. **Bike Paths (Class I):** Class I Bike Paths are completely separated right-of-ways designated for the exclusive use of bicycles. Cross-flows by pedestrians and motorized vehicles are minimized. Currently, there are no designated Class I bike paths in Williams.
2. **Bike Lanes (Class II):** Class II Bike Lanes are restricted right-of-ways designated for the exclusive or semi-exclusive use of bicycles. Travel by motor vehicles or pedestrians are not allowed; however, vehicle parking may be allowed if there is sufficient space available for both the bicycle lane and the parking lane. Cross flows by motorists are allowed, for example, to gain access to parking facilities or adjacent land uses. In most cases, Class II Bikeways require a lane of at least four feet of well-maintained pavement for the cyclist to ride on.
3. **Bike Routes (Class III):** Class III Bike Routes are shared right-of-ways either on the street or on the sidewalk, and are designated by signs placed on vertical posts or markings stenciled on the pavement. Any bikeway which shares a through-traffic right-of-way with motor vehicles and pedestrians is considered a Class III bikeway.

Bicycle facilities, such as bike paths and bicycle parking racks need to be provided throughout the City.

Map 8.4, Bicycle Circulation Plan, shows the City's designated bike paths.



## Rail Transportation

Currently there are no passenger or freight services through Williams. Freight trains pass through Williams twice a day.

Union Pacific: California Northern Railroad (CFNR) Company. CFNR operates freight service in Northern California over 250 miles of leased Union Pacific rail lines, including those that traverse Williams. CFNR provides freight service over the following lines:

- Schellville to Napa Junction, to a connection with UP at Suisun-Fairfield (23.6 miles);
- From Vallejo to Napa Junction to Rocktram (13 miles);
- Between a connection with UP at Davis to Wyo to a connection with UP at Tehama (110.7 miles);
- Branch line from Wyo to Hamilton (19 miles); and
- Los Banos to a connection with UP at Tracy (54.7 miles)

Rail freight includes lumber, wine, beer, food products, steel pipe, agricultural products, and construction material. Train traffic generally includes four to five trains passing through Williams each day. There are both restricted and available railroad siding-loading points in Williams. The restricted sites are assigned to specific shippers. The available sites are contracted for through the Agent for the CFNR in Sacramento. The following nearby companies in Colusa County have loading and unloading operations specifically designed for their business operations:

- Morning Star Tomatoes, which is the largest tomato paste plant in the world; and
- Colusa County Cannery, which is located approximately one mile south of the City limits and includes 1,000 foot, dual-directional siding.

Available sidings in Williams include:

- One team siding is available at the corner of 5th Street and E Street; and
- The 10-acre Plank Industrial Park located near the South Interchange (Husted and I-5) has dedicated spur right-of-way along 200 feet of the industrial park.

While no studies or plans have been developed to date, establishing a rail-transit link as part of the transportation corridor between the Williams area and the Bay and the Sacramento areas would facilitate the long-term economic growth of the area. Rail transit also offers the potential for more comfortable and expedient alternatives for the movement of people and products between the Williams and the Bay Area. This should be a consideration for planning over the longer-term.

### Aviation

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The Williams Soaring Center is a small, private glider airport, which is located along the east side of Husted Road north of its intersection with E Street. The soaring center has a 2,300 foot paved runway paralleling Husted Road.

The Colusa County Airport is located 12 miles and is about 20 minutes from Williams. It has a 3,000 foot asphalt runway that accommodates twin engine and small jet aircraft and serves all general aviation activities including crop dusters, business/commercial aircraft, emergency aircraft, law enforcement aircraft besides personnel use aircraft. There are long term plans to extend the runway another 700 feet for safety purposes. The general aviation airport offers management, fuel, parking, and car rental services.

Sacramento International Airport is the nearest airport to Williams that provides commercial airline service. It is known as the gateway to Northern California destinations, major cities across the U.S., and the world. Passenger service is provided by 13 major carriers and one commuter airline.

### Complete Streets

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“Complete streets” are those designed to support safe, attractive, and comfortable access and travel for all users, whether in motor vehicles, on foot, on bicycle, or using the public transit. The City will require complete streets in all new neighborhoods and will improve existing streets to be more complete in accommodating bicycle and pedestrian movements, as funding is available. Improvements required for complete streets depend on the type of street. While all streets will be required to have sidewalks for pedestrians, the required bicycle improvements will vary. Public transit improvements, including bus stops and pullouts, should be focused in the downtown area as service becomes available.

### Street Patterns

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A community’s street and block pattern defines the usefulness of its transportation network for multi-modal mobility. The 2010 General Plan requires that development within new growth areas be served by a well-connected street pattern with small blocks and few or no cul-de-sacs. As future development occurs, the layout of Williams’ new streets and blocks will significantly improve the efficiency of the City’s circulation system for all modes of travel.

The traditional grid street pattern is one approach for ensuring a highly connected neighborhood. However, modifications to the grid pattern could also provide a highly connected transportation network (Refer to Figure 8.2). In general, highly connected street patterns characterized by:

- A dense system of parallel routes, both east-west and north-south, with many streets providing through connections;
- Minimal use of cul-de-sacs;
- Frequent intersections; and,
- Frequent points of access.



## Goals

The City's General Plan Circulation Element goals are intended to provide the overall direction desired by the City for planning and implementing the expansion of their circulation system, which meets the changing travel demands of their community. The recommended circulation policies will establish the link between the adopted goals and the implementing programs, and guide how the programs will actually be implemented. The programs, themselves, are the specific action items that will accomplish the improvement or plan that will meet and serve the expanded community need.

1. Coordinate the development of a circulation network incorporating multi-modal circulation programs.
2. Provide Safe and efficient vehicular movement.
3. Coordinate policies for land development and circulation.
4. Promote alternative travel modes, including transit, pedestrian, bicycle, and rail systems.
5. Coordinate local transportation planning and administration with the activities of other governmental agencies and concerns of local citizens and businesses.
6. Design and implement the circulation system to protect natural features and conserve energy.

## Policies and Actions

### *Policy 8.a- Create/Update Citywide Circulation Master Plan.*

#### **Actions:**

- 8.a-1 The City shall maintain the Citywide Traffic Model to help forecast future travel, identify circulation deficiencies and recommend improvements and coordinate this model with other agencies, such as the Colusa County Transportation Commission, Colusa County, and Caltrans.
- 8.a-2 The City shall pursue funding to construct improvements identified in the Circulation Master Plan, including seeking Federal and State grants and updating the traffic impact fee program on a timely basis.

### *Policy 8.b- Establish Complete Street Subdivision Criteria for new development and improve convenience, energy efficiency, and safety for multi-modal travel in existing neighborhoods.*

#### **Actions:**

- 8.b-1 The City will develop Complete Street Subdivision Development Standards. These standards shall include provisions for cul-de-sac designs, required stubbing of streets to adjacent planned development areas, block lengths and neighborhood connectivity.

- 8.b-2 New development shall incorporate connected street and pedestrian/bicycle networks, with many connections between new and older neighborhoods and between neighborhood and commercial and downtown areas.
- 8.b-3 The City shall control and coordinate with adjacent jurisdictions major access points.
- 8.b-4 The City shall consider restriction of on-street parking on major and secondary arterials when needed to provide additional street capacity and/or, accommodate bicycle lanes.
- 8.b-5 Upon signalization improvements, the City shall optimize traffic signal performance to increase traffic flow and reduce vehicular emissions.
- 8.b-6 On an ongoing basis, the City will identify priority transportation improvements in existing developed portions of the City consistent with this Circulation Element and include such improvements in grant applications, capital improvements planning, and through other funding mechanisms as appropriate.
- 8.b-7 The City shall coordinate bicycle and pedestrian paths to logically link to the County's plans for bicycle and pedestrian travel.

***Policy 8.c- Monitor the operation and performance of the multi-modal circulation system.***

**Actions:**

- 8.c-1 The City shall maintain and update a functional classification of the street system (Figure 8.1) that reflects land use and traffic patterns.
- 8.c-2 The City shall establish a data collection program for the street system to include a physical inventory, traffic volumes and accident reports.
- 8.c-3 The City shall strive to control traffic levels in residential neighborhoods a "livable communities standard", to not exceed a threshold of 3,500 ADT on any given residential street segment. As the City grows and this threshold is approached, alternative traffic calming strategies may be considered and implemented as resources permit. Such calming devices may include planted medians, landscaped planter strips, landscaped traffic circles.
- 8.c-4 The City will seek funding for, and include pedestrian and bicycle improvements in Capital Improvement Planning, as feasible. Such improvements will include, but are not limited to:
- Construction of sidewalks where they do not currently exist;
  - Widening of sidewalks in high pedestrian traffic areas;
  - Installation of bike paths and lanes; and



- Improved crossings of roads and railroad for bicycles and pedestrians.
- 8.c-6 The City and Redevelopment Agency will explore opportunities to construct new, or improve safety of the existing east-west freeway crossings on E Street, or may require such improvements as a condition of new development, as appropriate.
- 8.c-7 All transportation improvement projects proposed for inclusion in the City's Capital Improvement Program shall be consistent with air quality, land use, circulation, and other goals and policies of the General Plan.

***Policy 8.d- Maintain roadways and circulation improvements to ensure safe, energy efficient and convenient daily travel for pedestrians, bicyclists, transit users and drivers as Williams grows.***

**Actions:**

- 8.d-1 Establish a City transportation impact fee program that addresses impacts to City transportation facilities. Following adoption of the 2010 General Plan, the City will revise its development impact fees based on a Nexus Study.
- 8.d-2 New development shall construct and dedicate streets that accommodate the full range of locally available travel modes.
- 8.d-3 New development shall construct and dedicate and/or contribute to a connected bicycle/pedestrian network that is designed to promote travel to schools, parks, and other major destinations.
- 8.d-4 Bicycle parking should be provided as a part of all non-residential development.
- 8.d-5 Through the Capital Improvement Program, the City shall develop a priority system for physical improvements based on demonstrated needs according to the collected data on physical conditions, traffic volumes and safety reports. CIP improvements shall be made consistent with the City's Circulation Master Plan.
- 8.d-6 The City shall maintain and update a Bikeway Master Plan to guide the orderly provision of bikeway facilities throughout the City.
- 8.d-7 The City shall integrate local bikeway planning with regional plans.
- 8.d-8 The City shall seek State Bicycle Lane Account funds and other funding to help pay for the completion of a comprehensive bikeway system within in the City.
- 8.d-9 Limit driveway intersections and curb cuts along arterial and collector roadways in order to provide improved mobility and public safety.
- 8.d-10 Encourage the widening of State highways to allow the safe movement of farm vehicles and equipment.

- 8.d-11 Provide dedicated pedestrian and bike lanes on the E Street overpass of I-5, as recommended in Chapter 5, Open Space and Conservation.

***Policy 8.e- Improve travel safety, accessibility and energy efficiency.***

**Actions:**

- 8.e-1 The City shall review the location and frequency of accidents and develop specific site improvements.
- 8.e-2 The City shall consider changes in speed limits, parking and turning restrictions to enhance public safety.
- 8.e-3 The City shall strive to provide for smooth traffic flow and a compact urban pattern to maximize efficient movement between residential, commercial, and public areas.
- 8.e-4 The City shall develop an Americans With Disabilities Act (ADA) transition and compliance program for pedestrian facilities.

***Policy 8.f- Provide for truck and emergency vehicle traffic.***

**Actions:**

- 8.f-1 Accommodate truck and emergency vehicle traffic.
- 8.f-2 The City shall designate by ordinance truck routes to direct trucks to routes that maintain sufficient carrying capacity and to prohibit truck traffic on local residential streets (refer to Figure 4).
- 8.f-2 The City shall identify primary emergency vehicle routes and links between the medical facilities, fire, and police stations.
- 8.f-3 Design standards for local streets will provide adequate access for fire and police department services. Refer to all actions under Policy 8-b.
- 8.f-4 Upon signalization improvements, the City shall upgrade traffic signal installations to include “opticom” emergency vehicle preemption to enhance emergency response safety.

***Policy 8.g- The planning, alignment, and improvement of the street network will reflect the proposed land use pattern of the General Plan.***

**Actions:**

- 8.g-1 The functional classification of streets will identify street purpose and the standards of improvement necessary to accommodate anticipated traffic demand.
- 8.g-2 In establishing priorities for street improvements, the potential for effects on land use and traffic patterns will be evaluated.
- 8.g-3 The City shall adopt new street plan lines (street alignments) for arterials and collectors to protect rights-of-way for future street improvements.



- 8.g-4 Projects included in the Capital Improvement Program and proposed for regional transportation plans should prioritize, in the following order: 1) projects that improve operations on existing roads without increasing capacity, 2) projects that encourage alternative transportation modes, 3) projects that increase capacity on existing roadways, and 4) new roadways.
- 8.g-5 The City will collaboratively study with the Colusa County Transportation Commission, Caltrans and other regional partners to identify operational and capacity improvements for regional facilities to accommodate planned development.

***Policy 8.h- Provide for desirable and safe alternative access to schools, parks, and shopping areas from residential areas within the City.***

**Actions:**

- 8.h-1 The City shall include consideration of the visual aspects of a development for roadways. Aesthetic consideration shall include architectural compatibility and landscaping.
- 8.h-2 The City shall consider the construction of landscaped medians and landscaped sidewalk strips on commercial thoroughfares to help slow traffic flows and to help provide for a more scenic roadway.
- 8.h-3 The City shall consider integrating residential street features that calm traffic, increase safety and are aesthetic amenities to neighborhoods. Additionally, reduction in residential street width shall also be considered as a traffic calming option. If such street width reduction is recommended and implemented, consideration for reduction of public right of way should also be included. All traffic calming and road narrowing projects shall be designed to accommodate emergency service vehicle accessibility.
- 8.h-4 The City shall plan and require construction of bikeways, sidewalks, and pedestrian access ways to major destination points with emphasis on providing connecting access to schools, parks and shopping centers from residential neighborhoods.
- 8.h-5 The City shall evaluate the pedestrian and bicycle safety of critical circulation links, such as the E Street Bridge over Highway 5, and make improvements to these linkages to facilitate safe travel.

***Policy 8.i- Encourage the continued development and expansion of local and regional public transit systems.***

**Action:**

- 8.i-1 The City shall review and comment on proposed changes to the Colusa County Transit Authority (CCTA) bus system.
- 8.i-2 The City will consult with the California Public Utilities Commission, Amtrak, Union Pacific Railroad Company, and any other relevant agencies to encourage and accommodate any future opportunities for establishing

passenger rail service in Colusa County and create a central multi-modal transit station in Williams.

- 8.i-3 The City shall encourage the restoration of passenger rail service along the California Northern Pacific Railroad tracks within Williams.

***Policy 8.j- Improve and maintain the system of sidewalks and crosswalks to promote a pedestrian-friendly community.***

**Actions:**

- 8.j-1 The City shall identify and prioritize major sidewalk improvements.
- 8.j-2 The City shall comply with the American Disabilities Act (ADA) and construct improvements to enhance accessibility.
- 8.j-3 The City shall provide crosswalks at signalized intersections and improve pedestrian access across railroad track crossings.

***Policy 8.k- Publicize major transportation issues and solicit public input.***

**Actions:**

- 8.k-1 The City shall provide timely notification on major transportation issues to the public through press releases, public service radio announcements, television, and contact with local organizations.
- 8.k-2 The City shall conduct public hearings on proposed major actions and notify the public through public notices.

***Policy 8.l- Coordinate transportation planning with regional and local plans.***

**Actions:**

- 8.l-1 The City shall coordinate compatibility of proposed actions with transportation plans of adjacent cities and Colusa County.
- 8.l-2 The City shall evaluate regional impacts of proposed local improvements.
- 8.l-3 The City shall coordinate with Caltrans District 3 and the Federal Highway Administration (FHWA) on improvement plans to State/Federal facilities within the City's Sphere of Influence and surrounding area.
- 8.l-4 The City will coordinate with Caltrans, the Colusa County Air Pollution Control District and the Colusa County Regional Transportation Commission to minimize air quality and transportation impacts associated with planned and existing transportation facilities.

***Policy 8.m- Designate local scenic routes and enhance and protect their scenic qualities.***

**Actions:**

- 8.m-1 The City shall control the quality of improvements through design standards and review.



- 8.m-2 The City will seek funding to work collaboratively with other agencies to develop a master design plan for Old Highway 99 W. The plan should include such design components as wide, separated sidewalks, street trees and other landscaping, street furniture and other amenities as appropriate. The plan will provide design guidance for Old Highway 99 W property frontage, as well as the public right-of-way. The plan will identify priorities for phasing and financing of these improvements. This master design plan will identify local preferences for improvements as a means for economic revitalization of the downtown. Aspects of this plan will be integrated into the City's Improvement Standards, as appropriate. The City will proactively seek funding to implement segments of the corridor improvements over time. The City and Redevelopment Agency may fund and/or implement sections of this design plan in advance of construction with creation of agreements that result in fair-share contribution of benefitting properties that reimburse the City or Redevelopment Agency once the improvements have been made as projects develop.
- 8.m-3 The City shall develop a street tree program that includes a list of approved trees for landscape street planting strips and medians.
- 8.m-4 The City will explore funding opportunities to improve City streets with landscaping.

***Policy 8.n-Protect natural features.***

**Actions:**

- 8.n-1 The City shall strive to minimize the loss of prime agricultural land to road construction.
- 8.n-2 The City shall strive to minimize grading for new roads and improvements, conserve prominent land forms and minimize tree removals.
- 8.n-6 The City shall evaluate circulation improvements and traffic control as to their effect on air and noise pollution and greenhouse gas emissions.

***Policy 8.o- Provide parking in a way that balances the needs of motorists, pedestrians, bicyclists, transit users and community aesthetics.***

**Action:**

- 8.o-1 Revise the Zoning Ordinance to consider the following criteria to:
- Facilitate infill development, reduce off-street parking requirements located in the downtown area, and require construction of sidewalks where they do not currently exist;
  - Reduce or eliminate off-street parking requirements for guest parking in locations where on-street parking is provided;
  - Reduce parking requirements for nonresidential development of located in commercial centers where on-street parking is, or if

parking can be shared with adjacent uses with different timing for parking needs.

- Establish parking requirements that have minimum and maximums in order to create a pedestrian-friendly environment.

***Policy 8.p- The City will strive to maintain Level of Service D or better for roadway and intersections except as specified below:***

- ***LOS E is acceptable in the Historic Downtown Area.***
- ***Utilize Caltrans LOS standards for Caltrans' facilities***

***Exceptions to the LOS standards above may be considered by the City Council where reducing level of service would result in clear public benefit. Such circumstances include, but are not limited to if improvements necessary to achieve the LOS standard result in impact to a unique historic resource, a highly sensitive environmental area, requires infeasible right-of-way acquisition, or some other unusual physical constraint exists and or overriding economic or social circumstances.***

**Action:**

8.p-1 The City shall develop and adopt transportation impact study (TIS) guidelines that consider modes of travel and define, at a minimum, the need for transportation impact studies, analysis methodology and environmental significance criteria. Development of the TIS guidelines shall include coordination with Caltrans.

8.p-2 The City shall prepare, adopt, and periodically update a Streets and Roadways Master Plan to establish the scope and timing of intersection and roadway improvements to accommodate planned development and to support the update of the Citywide Development Impact Fee program.

***Policy 8.q- Define level of service consistent with the latest edition of the Highway Capacity Manual and calculated using the methodologies contained in that manual.***

Action: See Action 8.p-1



## Appendix A Circulation Improvements

### FUTURE STREET IMPROVEMENT PROJECTS

#### Roadway Improvements:

The following roadway improvements may be necessary to mitigate circulation impacts from anticipated growth in the General Plan to acceptable/tolerable levels of service:

1. **I-5 Interchange Improvements** – Modifications to the E Street interchange and SR 20 to increase the capacity.
2. **Husted Road (between SR 20 and E Street)** – Expand the roadway segment to a four lane major arterial.
3. **Husted Road from Freshwater Road to I-5 Southbound Ramps** – Expand the roadway segment to a four lane major arterial.

**E Street (between I-5 SB Ramps and Husted Road)** – Expand the roadway segment to a four lane major arterial. **Intersection Improvements (Refer to Figure 8.3):**

The following intersection improvements will be necessary to mitigate circulation impacts from anticipated growth in the General Plan to acceptable/tolerable levels of service: Where new traffic signals are proposed, alternative roundabout improvements that would provide acceptable operations should be considered.

4. *SR 20 / Old Highway 99W*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Eastbound Approach: Two through lanes and one left turn lane
- Westbound Approach: One through lane and one shared through-right lane

5. *SR 20 / I-5 SB Ramps*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Construct a multilane roundabout or
- Traffic Signal

6. *SR 20 / I-5 NB Ramps*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Construct a multilane roundabout or
- Traffic Signal

7. *SR 20 / Husted Road*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left, one through, and one right turn lane
- Southbound Approach: One left, one through, and one right turn lane
- Eastbound Approach: One left, one through, and one right turn lane
- Westbound Approach: One left, one through, and one right turn lane

8. *E Street / 7<sup>th</sup> Street*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left turn lane and one shared through-right lane
- Southbound Approach: One left turn lane and one shared through-right lane

9. *E Street / 5<sup>th</sup> Street*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection

10. *E Street / I-5 SB Ramps*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Eastbound Approach: One through lane and one shared through-right lane
- Westbound Approach: Two through lanes and one left turn lane

11. *E Street / I-5 NB Ramps*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Eastbound Approach: Two through lanes and one left turn lane
- Westbound Approach: One through lane and one shared through-right lane

12. *E Street / Vann Street*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:



- Signalize the intersection
- Southbound Approach: One right turn lane and one shared through-left lane
- Eastbound Approach: One left turn lane, two through lanes, and one right turn lane
- Westbound Approach: One left turn lane, one through lane, and one shared through-right lane

#### 13. *E Street Husted Road*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left turn lane, two through lanes, and one right turn lane
- Southbound Approach: One left turn lane, one through lane, and one shared through-right lane
- Eastbound Approach: One left turn lane and one shared through-right lane

#### 14. *Husted Road / Husted Road Lateral*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left, one through, and one shared through-right lane
- Southbound Approach: One left, one through, and one shared through-right lane
- Eastbound Approach: One left turn lane and one shared through-right lane
- Westbound Approach: One left turn lane and one shared through-right lane

#### 15. *Husted Road / Abel Road*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: Two through lanes and one left turn lane
- Southbound Approach: One through lane and one shared through-right lane

#### 16. *Husted Road / Crawford Road*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left, one through, and one shared through-right lane

- Southbound Approach: One left, one through, and one shared through-right lane
- Eastbound Approach: One left turn lane and one shared through-right lane
- Westbound Approach: One left turn lane and one shared through-right lane

17. *Husted Road / Old Highway 99W*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left, one through, and one shared through-right lane
- Southbound Approach: One left, one through, and one shared through-right lane
- Eastbound Approach: One left turn lane and one shared through-right lane
- Westbound Approach: One left turn lane and one shared through-right lane

18. *Husted road / I-5 SB Ramps*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection

19. *E Street / Marguerite Drive*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left and one shared through-right lane
- Southbound Approach: One left and one shared through-right lane
- Eastbound Approach: One left turn lane, one through lane, and one shared through-right lane
- Westbound Approach: One left turn lane, one through lane, and one shared through-right lane

20. *SR 20 / Marguerite Drive*

This intersection is expected to operate at unacceptable LOS F during peak hour buildout conditions. The following improvements are recommended:

- Signalize the intersection
- Northbound Approach: One left and one right turn lane
- Eastbound Approach: One through lane and one right turn lane
- Westbound Approach: One through lane and one left turn lane