This section of the Draft Environmental Impact Report (DEIR) describes the existing transportation conditions in the Planning Area and identifies the potential environmental impacts on the transportation system associated with adoption of the proposed General Plan Update and full buildout of the City by the year 2030. It should be noted that full buildout of the Land Use Diagram is not expected until well after the year 2030 and thus the traffic impact analysis and its conclusions are conservative. The impact analysis evaluates the local and regional roadway, transit, bicycle, pedestrian, and aviation components of the overall transportation system.

4.5.1 EXISTING SETTING

REGIONAL ROADWAY SYSTEM

California State Routes 32 and 99 comprise the backbone of Chico's regional transportation network and serve much of the population in Butte County. In addition, many of the existing streets serve as major arterials that create an effective "hub and spoke" system to efficiently move vehicles through the network. Collectors and local roads form the remainder of the city's roadway system.

The state highways and major arterials accommodate regional and cross-city travel, while the minor arterials, collectors, and local roads generally serve short to medium-length trips. Cohasset Road, The Esplanade, and Skyway are examples of major arterials that connect communities in and around Chico. Minor arterials, such as Lassen Avenue and Main Street, are primarily used for travel within the city. **Figure 4.5-1** presents Chico's existing roadway network, including the functional classification of these roadways.

State Highways

Freeways serve regional and intercity travel but are typically not the optimum route for intracity trips. Access is controlled, grade crossings are separated, and medians separate lanes moving in opposite directions. Typical free-flow speeds exceed 55 miles per hour.

State Route 99 (SR 99) is a north-south state highway, beginning at its intersection with Interstate 5 in Kern County and continuing north through the Central Valley, terminating in Tehama County. In Butte County, SR 99 runs through the cities of Chico, Biggs, and Gridley. SR 99 alternates between a two-lane rural highway and a four-lane freeway. In the City of Chico, SR 99 is a four-lane freeway.

State Route 32 (SR 32) is an east-west state highway that begins to the west in Glenn County and terminates to the east at its junction with SR 89 in Tehama County. In the City of Chico, SR 32 is a two-lane roadway with a 2-mile section through Downtown separated into a one-way couplet — East 8th Street heading westbound and East 9th Street heading eastbound. SR 32 then reverts to an undivided road and is designated as Nord Avenue until it exits the City of Chico to the north. SR 32 is generally a two-lane facility, except where it is a one-way couplet, where each direction has two lanes.

Expressway

Expressways serve longer-distance intracity travel as well as linking the city with other nearby urban areas. Expressways are designated to carry heavy traffic volumes at speeds of 40 to 55 miles per hour. Access is limited, crossings are generally signalized at grade, parking is not allowed, and a continuous median separates lanes in opposite directions.

Skyway is an east-west expressway that begins in the City of Chico near SR 99, continues through the Town of Paradise, and terminates to the north in the unincorporated community of Butte Meadows. Skyway is generally a divided four-lane facility from the City of Chico to the outskirts of Paradise and then continues as either an undivided four-lane or divided two-lane facility through the remainder of Paradise and as a two-lane facility until termination in Butte Meadows.

Arterials

The primary function of major arterials is to move large volumes of traffic between freeways and other arterials within Chico and to adjacent jurisdictions. Arterials generally provide four travel lanes, but may have fewer lanes. On street parking may be provided. Driveway access should be minimized, consistent with the primary function of arterials to move through traffic. Bike lanes, medians park strips, sidewalks, and transit facilities are also accommodated within the right-of-way.

Cohasset Road is a north-south arterial that begins in the unincorporated community of Cohasset, located about 10 miles north of Chico, and ends at its intersection with Esplanade in the City of Chico. Cohasset Road is generally a two-lane facility north of the city and a four-lane facility near the city's Downtown.

Nord Avenue is a north-south arterial which is also designated as SR 32 for its entire length, begins in downtown Chico at West 1st Street and terminates at West East Avenue. Nord Avenue then continues to the north past West East Avenue as SR 32. Nord Avenue is primarily a two-lane facility, which expands to a three-lane facility with a center turning lane for portions of its 2-mile length.

Chico River Road/West 5th Street is a two-lane east-west arterial in the City of Chico, beginning at its intersection with River Road, west of Downtown, and terminating at its intersection with Woodland Avenue. It is a two-lane facility with low access control east of Downtown and high access control west of Downtown. Chico River Road is designated as West 5th between Walnut Street and Woodland Avenue.

Dayton Road/Aguas Frias Road is a two-lane north-south arterial. The roadway begins to the south as a dirt road in the City of Biggs and becomes an arterial roadway at its intersection with SR 162, where it is designated Aguas Frias Road. After traveling north through the unincorporated community of Dayton, it is designated as Dayton Road and terminates in downtown Chico at its intersection with West 9th Street.

Midway/Richvale Highway is a north-south arterial that begins to the south at its intersection with SR 162 and continues into the City of Chico as Park Avenue. The roadway is predominantly two lanes in width, but widens to a four-lane roadway when it becomes Park Avenue.

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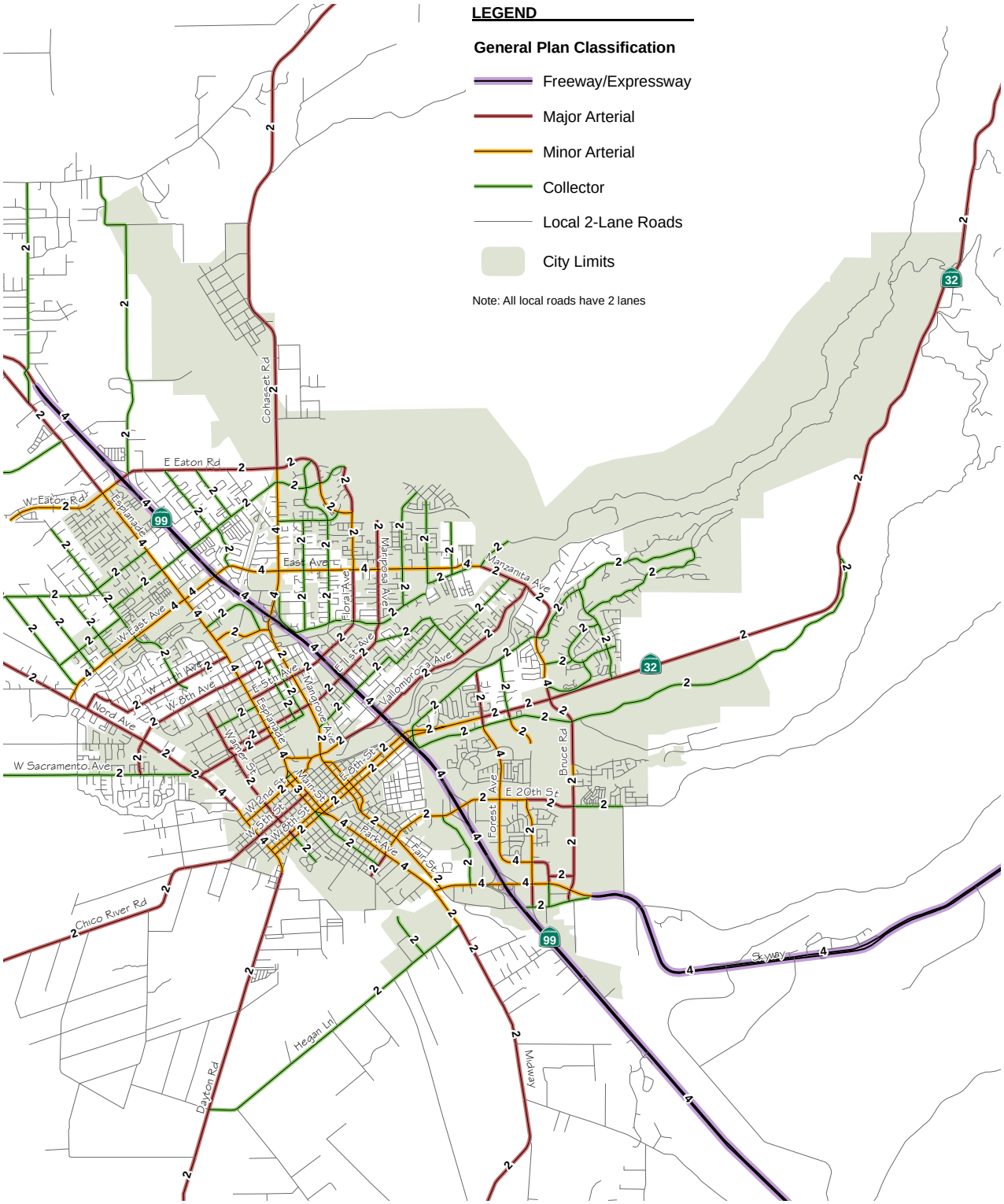

Source: Fehr & Peers, 2007

Figure 4.5-1
Existing Roadway Network

PMC®

Collectors

Collectors are intended to "collect" traffic from local roadways and carry it to roadways higher in the street classification hierarchy. These roadways also serve adjacent properties and typically have one lane of traffic in each direction. Bike lanes may be present. The following is a list of collector streets in the City of Chico.

- Humboldt Road
- Sacramento Avenue
- Lassen Avenue
- Lindo Avenue
- North Avenue
- Ceres Avenue
- Holly Avenue
- Centennial Avenue
- Yosemite Drive
- Hegan Lane
- Doe Mill Road
- Cussick Avenue
- Alamo Avenue
- Guynn Avenue

Local Streets

Local streets are intended to serve adjacent properties and should enhance community livability. They carry limited through traffic. Speed limits on local roadways typically do not exceed 25 miles per hour.

TRAFFIC ANALYSIS STUDY AREA

A detailed analysis was conducted of the following freeway facilities, roadway segments, and intersections in the Study Area. The Study Area includes roadway and transportation facilities in the city and in the Planning Area outside of the current city limits, and considers facilities and regional traffic conditions outside of the Planning Area. These roadway facilities were identified based on the availability of data with input from City staff, and in consultation with Caltrans.

FREEWAY SEGMENTS

State Route 99

1) North of Eaton Road
2) Eaton Road to East Avenue
3) East Avenue to Cohasset Road
4) Cohasset Road to East 1st Avenue
5) East 1st Avenue to SR 32
6) SR 32 to East 20th Street
7) East 20th Street to Skyway
8) South of Skyway

ROADWAY SEGMENTS

State Route 32 (Deer Creek Highway)

1) Bruce Road to Yosemite Drive
2) El Monte Avenue to Bruce Road
3) Forest Avenue to El Monte Avenue
4) Start of undivided highway to Forest Avenue
5) E. 8th Street/Fir Street until road merges into undivided highway
6) SR 99 Ramps to E. 8th Street/Fir Street

8th Street/9th Street

1) SR 99 Ramps to Bartlett Street
2) Cypress Street to Poplar Street
3) Pine Street to Cypress Street
4) Main Street to Wall Street
5) Ivy Street to Hazel Street
6) Orange Street to Cherry Street
7) Walnut Street to Cedar Street

Walnut Street

1) W 8th Street to W 9th Street
2) Bidwell Avenue to W 1st Street

SR 32 (Nord Avenue)

1) W. Sacramento Avenue (South) to W. Sacramento Avenue (North)
2) Oak Way to W. 8th Avenue
3) Glenwood Avenue (South) to Glenwood Avenue (North)
4) East Avenue to Kennedy Avenue

1st Avenue

1) Village Lane to Longfellow Avenue
2) Calgary Lane to Mildred Avenue
3) Esplanade to Oleander Avenue
4) Magnolia Avenue to Esplanade
5) Hobart Street to Citrus Avenue

2nd Street

1) Walnut Street to Cedar Street

5th Street

1) Walnut Street to Cedar Street
2) Oak Street to Walnut Street

8th Avenue

1) SR 32 (Nord Avenue) to Greenwich Drive
2) Magnolia Avenue to Esplanade

8th Street

1) Ashford Way to Centennial Avenue
2) El Monte Avenue to Husa Lane
3) Vista Verde Avenue to Park Vista Drive

20th Street

1) Bruce Road to Notre Dame Boulevard
2) Forest Avenue to Huntington Drive
3) Business Lane to Forest Avenue
4) Sierra Nevada Court to Dr. Martin Luther King Jr. Parkway

Bruce Road/Chico Canyon Road

1) East 20th Street to Raley Boulevard
2) Remington Drive to East 20th Street
3) Humboldt Road to Picholine Way
4) Lakeside Village Commons to Lakewest Drive

Cohasset Road

1) Eaton Road to Thorntree Drive
2) East Avenue to Lorinda Lane
3) Pillsbury Road to East Avenue

Dayton Road

1) Archer Avenue to Pomona Avenue

East Avenue

1) Floral Avenue to Coleman Court
2) Cohasset Road to North Avenue
3) Pillsbury Road to Cohasset Road
4) Connors Avenue to Esplanade
5) Esplanade to Ilahee Lane
6) Cussick Avenue to Alamo Avenue

7) Guynn Avenue to Streamside Court
8) Kennedy Avenue to SR 32

Eaton Road

1) Michael Way to Burnap Avenue
2) Hicks Lane to Silverbell Road
3) Constitution Drive to SR 99 Ramps

El Monte Avenue

1) E. 8th Street to Kirk Way

Esplanade/Broadway Street/Main Street/Park Avenue/Midway

Esplanade

1) W. Shasta Avenue to Mandalay Court
2) Panama Avenue to East Avenue
3) Connors Avenue to White Avenue
4) E. 2nd Avenue to E. 1st Avenue
5) E. Washington Avenue to W. Sacramento Avenue

Park Avenue

1) E. 16th Street to E. 17th Street
2) Meyers Street to E. Park Avenue

Midway

1) E. Park Avenue to Hegan Lane
2) Hegan Lane to Sandrill Court

Floral Avenue/5th Avenue

1) Ravenshoe Way to East Avenue
2) Esplanade to Oleander Avenue

Forest Avenue

1) Humboldt Road to Wildflower Court
2) E. 20th Street to Parkway Village Drive/Barney Lane

Hicks Lane

1) Eaton Road to Calle Principal

E. Lassen Avenue

1) Esplanade to San Jose Street
2) Burnap Avenue to Scenic Lane

W. Lindo Avenue

1) SR 32 (Nord Avenue) to Trenta Drive

Mangrove Avenue/Pine Street

1) Cohasset Road to E. Lindo Avenue
2) E. 3rd Avenue to E. 1st Avenue
3) E. 1st Avenue to Palmetto Avenue
4) Vallombrosa Avenue to Woodland Avenue/E. 3rd Street
5) Woodland Avenue/E. 3rd Street to E. 4th Street

Manzanita Avenue

1) Vallombrosa Avenue to Chico Canyon Road
2) Hooker Oaks Avenue to Vallombrosa Avenue
3) Mariposa Avenue to Lakewood Way

Martin Luther King Junior Parkway

1) E. 20th Street to E. 23rd Street

Mulberry Street

1) E. 14th Street to E. 15th Street

Palmetto Avenue

1) Downing Avenue to Bryant Avenue

East Park Avenue/Skyway

1) Forest Avenue to Dominic Drive
2) Country Drive to Gilman Way
3) Midway to Fair Street

Sacramento Avenue

1) Hobart Street to Citrus Avenue
2) Columbus Avenue to SR-32 (Nord Avenue)
3) SR 32 (Nord Avenue) to Oak Lawn Avenue

Salem Street

1) W. 4th Street to W. 5th Street

Vallombrosa Avenue

1) Covell Park Avenue to Manzanita Avenue
2) Rey Way to Vallombrosa Circle

Warner Street

1) W. Sacramento Avenue to Stadium Way

Hegan Lane

1) Midway to Skyway Avenue

Ivy Street

1) W. 10th Street to W. 11th Street

Intersections

1) East 1st Avenue and Mangrove Avenue
2) E. 5th Street and Mangrove Avenue
3) E. 20th Street and Park Avenue
4) E. 20th Street and Martin Luther King Junior Parkway
5) Cohasset Road and Eaton Road
6) Eaton Road and Hicks Lane
7) Esplanade and Cohasset Road
8) Mangrove Avenue and Vallombrosa Avenue
9) Midway and Hegan Lane
10) Park Avenue and Midway

EXISTING TRAFFIC VOLUMES

Freeway segment counts were provided by Caltrans and were taken during 2008. Roadway segment and intersection counts were obtained from a variety of internal and external sources collected between 2004 and 2009 including the City's count database, the Butte County Association of Governments' (BCAG's) count database, and other available sources. **Figure 4.5-2** shows existing peak hour roadway segment traffic volumes for local roadways in the Planning Area.

EXISTING TRAFFIC CONDITIONS

The existing operation of Study Area roadways, freeways, transit system, and bicycle/pedestrian facilities are discussed below.

ROADWAY SEGMENTS AND INTERSECTIONS

Analysis Methodology

Vehicle traffic operations conditions at intersections and roadway segments can be described in terms of a level of service (LOS). LOS is a common qualitative measurement of the effects that various factors such as speed, travel time, traffic interruptions, freedom to maneuver and safety have on traffic operations from the perspective of the driver. Intersection and roadway segment LOS criteria range from A, representing the best conditions, to F representing overcapacity conditions. LOS E represents "at capacity" operations. The Transportation Research Board (TRB) has developed empirical LOS standards that have been published in the most recent edition of the *Highway Capacity Manual 2000* (HCM).[1]

Throughout the United States, the HCM 2000 methodology is the prevailing measurement standard utilized. The 2000 HCM methodology identifies LOS for roadway segments based on the roadway volume for the roadway's functional classification. For signalized and all-way stop-controlled intersections, LOS is calculated using the average control per vehicle, and for side street stop-controlled intersections, LOS is based on the average control delay for the worst-case (longest delayed) approach. Control delay is the delay experienced by a driver due to the type of traffic control implemented at an intersection, which may be delay due to a traffic signal, all-way stop control, or side-street stop control. Average control delay is total control delay at an intersection divided by the total number of vehicles traveling through the intersection.

Freeway and roadway segments were also analyzed for the PM peak hour. **Table 4.5-1** describes HCM 2000 criteria for peak-hour LOS by roadway function and shows the PM peak hour traffic volume thresholds for each LOS. Except as noted in the table, the thresholds represent two-way traffic volumes.

TABLE 4.5-1
HCM 2000 PM PEAK HOUR ROADWAY SEGMENT LOS THRESHOLDS

Facility Type	Level of Service					
	A	B	C	D	E	F
Minor 2-Lane Highway	90	200	680	1,410	1,740	>1,740
Major 2-Lane Highway	120	290	790	1,600	2,050	>2,050
4-Lane, Multilane Highway[1]	1,070	1,760	2,530	3,280	3,650	>3,650
Major 2-Lane Collector	–	–	550	1,180	1,520	>1,520
2-Lane Arterial	–	–	970	1,760	1,870	>1,870
4-Lane Arterial, Undivided	–	–	1,750	2,740	2,890	>2,890
4-Lane Arterial, Divided	–	–	1,920	3,540	3,740	>3,740

[1] The *Highway Capacity Manual 2000* (HCM) provides level of service (LOS) calculation methodologies for automobiles but does not provide any LOS methodologies for other transportation modes such as pedestrians or bicycles. However the next release of the HCM (2010) is expected to provide MMLOS (Multi-Modal Level of Service) methodologies for transit, bicycles, and pedestrians in addition to automobiles. HCM 2000 was used in this environmental assessment as it is considered state of the practice for assessing transportation impacts. However, once the HCM 2010 has been adopted, it would be the preferable method for assessing impacts for all future assessments in the city.

Facility Type	Level of Service					
	A	B	C	D	E	F
6-Lane Arterial, Divided	–	–	2,710	5,320	5,600	>5,600
8-Lane Arterial, Divided	–	–	3,720	7,110	7,470	>7.470
2-Lane Freeway[1]	1,110	2,010	2,880	3,570	4,010	>4,010
2-Lane Freeway + Auxiliary Lane[1]	1,410	2,550	3,640	4,490	5,035	>5,035
3-Lane Freeway[1]	1,700	3,080	4,400	5,410	6,060	>6,060
3-Lane Freeway + Auxiliary Lane[1]	2,010	3,640	5,180	6,350	7,100	>7,100
4-Lane Freeway[1]	2,320	4,200	5,950	7,280	8,140	>8,140
6-Lane Freeway	3,400	6,160	8,800	10,820	12,120	>12,120
6-Lane Freeway + Auxiliary Lane	3,740	6,720	9,580	11,760	13,160	>13,160

Source: TRB, 2000
Notes: [1] LOS capacity threshold is for one direction.
– LOS is not achievable due to type of facility.

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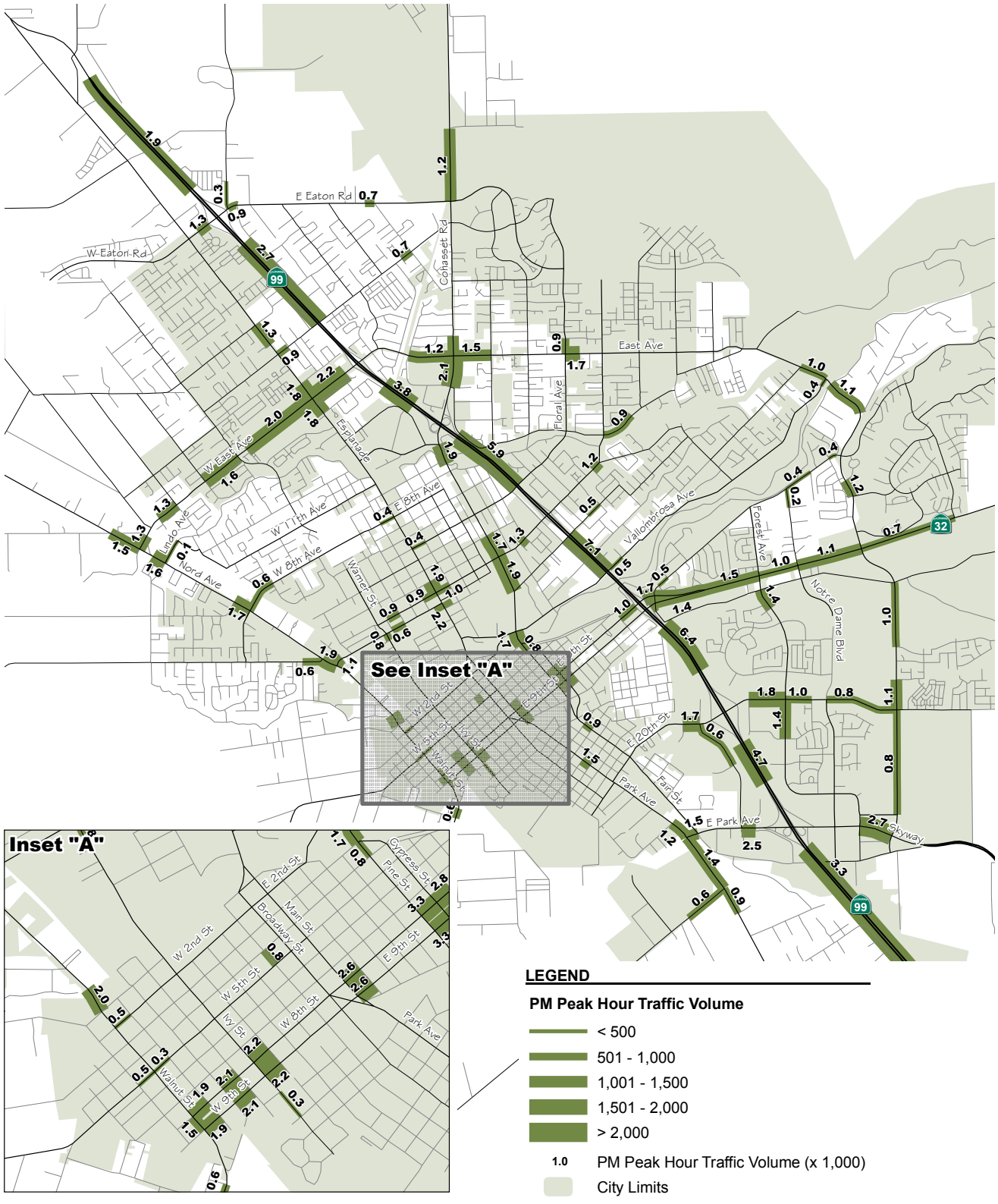

Source: Fehr & Peers, 2010

Not to scale

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Figure 4.5-2
Existing Traffic Volumes

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Tables 4.5-2 and **4.5-3** represent the LOS designation for a general description of traffic operations at signalized and unsignalized intersections, respectively.

TABLE 4.5-2
HCM 2000 SIGNALIZED INTERSECTION CRITERIA

LOS	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	Very low delay. Most vehicles do not stop.
B	> 10.0 to 20.0	Generally good progression of vehicles. Slight delays.
C	> 20.0 to 35.0	Fair progression of vehicles. Slight delays.
D	> 35.0 to 55.0	Noticeable congestion. Large portion of vehicles stopped.
E	> 55.0 to 80.0	Poor progression. High delays and frequent cycle failure.
F	> 80.0	Oversaturation. Forced flow. Extensive queuing.

Source: TRB, 2000

TABLE 4.5-3
HCM 2000 UNSIGNALIZED INTERSECTION CRITERIA

LOS	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	Little or no conflicting traffic for minor street approach.
B	> 10.0 to 15.0	Minor street approach begins to notice presence of available gaps.
C	> 15.0 to 25.0	Minor street approach begins experiencing delays for available gaps.
D	> 25.0 to 35.0	Minor street approach experiences queuing due to a reduction in available gaps.
E	> 35.0 to 50.0	Extensive minor street queuing due to insufficient gaps.
F	> 50.0	Insufficient gaps of suitable size to allow minor street traffic demand to cross safely through the major traffic stream.

Source: TRB, 2000

The intersection level of service analysis for all intersections was conducted using the Synchro 6.0 software package. This software reports the average control delay using HCM 2000 procedures along with an associated LOS.

Existing Traffic Conditions

The study freeway and roadway segments were analyzed during the PM peak hour. Study intersections were analyzed during both the AM and PM peak hour. **Tables 4.5-4** and **4.5-5** present the existing conditions analysis for freeway segments and roadway segments, respectively. The existing LOS policy for the City of Chico describes "acceptable" conditions based upon the type of roadway. The City of Chico currently strives to maintain LOS C on residential streets and LOS D or better on arterial streets and collector streets, at all intersections, and on principal arterials. LOS E is allowed on arterials that are served by transit. In the impact analysis discussions, both the City's existing and proposed 2030 General Plan LOS standards are assessed.

TABLE 4.5-4
FREEWAY LEVEL OF SERVICE – EXISTING CONDITIONS

Freeway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
SR 99 – North of Eaton Road	4-Lane Freeway	E	1,900	0.23	C
SR 99 – Eaton Road to East Avenue	4-Lane Freeway	E	2,700	0.33	B
SR 99 – East Avenue to Cohasset Road	4-Lane Freeway	E	3,800	0.47	B
SR 99 – Cohasset Road to East 1st Avenue	4-Lane Freeway	E	5,900	0.72	C
SR 99 – East 1st Avenue to SR 32	4-Lane Freeway	E	7,100	0.87	D
SR 99 – SR 32 to East 20th Street	4-Lane Freeway	E	6,400	0.79	D
SR 99 – East 20th Street to Skyway	4-Lane Freeway	E	4,700	0.58	C
SR 99 – South of Skyway	4-Lane Freeway	E	3,300	0.41	B

Note: V/C = volume to capacity

TABLE 4.5-5
ROADWAY LEVEL OF SERVICE – EXISTING CONDITIONS

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
SR 32 (Deer Creek Highway/8th Street/9th Street/Walnut Street/Nord Avenue)					
Deer Creek Highway					
Bruce Road to Yosemite Dr	2-Lane Arterial	E	700	0.37	C
El Monte Ave to Bruce Road	2-Lane Arterial	E	1,100	0.59	D
Forest Ave to El Monte Ave	2-Lane Arterial	E	1,000	0.53	D
Road merge at undivided highway to Forest Ave	2-Lane Arterial	E	1,500	0.8	D
E 8th St/Fir St to road merge at undivided highway	4-Lane Arterial, Divided	E	1,400	0.37	C
SR 99 NB Ramp to E 8th St/Fir St	4-Lane Arterial, Divided	E	1,700	0.45	C
8th Street/9th Street (one-way couplets functioning as divided arterial)					
SR 99 SB Ramp to Bartlett St (8th Street only, half-capacity)	4-Lane Arterial, Divided	E	1,000	0.53	D
Cypress St to Poplar St	4-Lane Arterial, Divided	E	2,800	0.75	D
Pine St to Cypress St	4-Lane Arterial, Divided	E	3,300	0.88	D

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
Main St to Wall St	4-Lane Arterial, Divided	E	2,600	0.7	D
Ivy St to Hazel St	4-Lane Arterial, Divided	E	2,200	0.59	D
Orange St to Cherry St	4-Lane Arterial, Divided	E	2,100	0.56	D
Walnut St to Cedar St	4-Lane Arterial, Divided	E	1,900	0.51	C
Walnut Street					
W 8th St to W 9th St	4-Lane Arterial, Undivided	E	1,500	0.52	C
Bidwell Ave to W 1st St	4-Lane Arterial, Undivided	E	2,000	0.69	D
Nord Avenue					
W Sacramento Ave to W Sacramento Ave	2-Lane Arterial	E	1,900	1.02	F
Oak Way to W 8th Ave	2-Lane Arterial	E	1,700	0.91	D
Glenwood Ave to Glenwood Ave	2-Lane Arterial	E	1,600	0.86	D
East Ave to Kennedy Ave	2-Lane Arterial	E	1,500	0.8	D
1st Avenue					
Village Lane to Longfellow Ave	2-Lane Arterial	D	1,200	0.64	D
Calgary Lane to Mildred Ave	2-Lane Arterial	D	1,300	0.7	D
Esplanade to Oleander Ave	2-Lane Arterial	D	1,000	0.53	D
Magnolia Ave to Esplanade	2-Lane Arterial	D	900	0.48	C
Hobart St to Citrus Ave	2-Lane Arterial	D	900	0.48	C
2nd Street					
Walnut St to Cedar St	4-Lane Arterial, Undivided	E	500	0.17	C
5th Street					
Walnut St to Cedar St	2-Lane Arterial	E	300	0.16	C
Oak St to Walnut St	2-Lane Arterial	E	500	0.27	C
8th Avenue					
SR 32 (Nord Ave) to Greenwich Dr	2-Lane Arterial	D	600	0.32	C
Magnolia Ave to Esplanade	2-Lane Arterial	D	400	0.21	C
8th Street					
Ashford Way to Centennial Ave	Major 2-Lane Collector	D	400	0.26	C

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
El Monte Ave to Husa Lane	Major 2-Lane Collector	D	400	0.26	C
Vista Verde Ave to Park Vista Dr	Major 2-Lane Collector	D	500	0.33	C
20th Street					
Bruce Road to Notre Dame Blvd	2-Lane Arterial	D	800	0.43	C
Forest Ave to Huntington Dr	4-Lane Arterial, Divided	D	1,000	0.27	C
Business Lane to Forest Ave	4-Lane Arterial, Divided	D	1,800	0.48	C
Sierra Nevada Ct to Dr MLK JR Pkwy	4-Lane Arterial, Divided	D	1,700	0.45	C
Bruce Road/Chico Canyon Road					
E 20th St to Raley Blvd	2-Lane Arterial	D	800	0.43	C
Remington Dr to E 20th St	2-Lane Arterial	D	1,100	0.59	D
Humboldt Road to Picholine Way	2-Lane Arterial	D	1,000	0.53	D
Lakeside Village Commons to Lakewest Dr	4-Lane Arterial, Divided	D	1,200	0.32	C
Cohasset Road					
Eaton Rd to Thorntree Dr	2-Lane Arterial	D	1,200	0.64	D
East Ave to Lorinda Ln	4-Lane Arterial, Undivided	D	1,500	0.52	C
Pillsbury Rd to East Ave	4-Lane Arterial, Undivided	D	2,100	0.73	D
Dayton Road					
Archer Ave to Pomona Ave	2-Lane Arterial	D	600	0.32	C
East Avenue					
Floral Ave to Coleman Ct	4-Lane Arterial, Undivided	D	1,700	0.59	C
Cohasset Road to North Ave	4-Lane Arterial, Undivided	D	1,500	0.52	C
Pillsbury Rd to Cohasset Road	4-Lane Arterial, Divided	D	1,200	0.32	C
Connors Ave to Esplanade	4-Lane Arterial, Divided	D	2,200	0.59	D
Esplanade to Ilahee Lane	4-Lane Arterial, Divided	D	2,000	0.53	D
Cussick Ave to Alamo Ave	4-Lane Arterial, Divided	D	1,600	0.43	C

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
Guynn Ave to Streamside Ct	4-Lane Arterial, Divided	D	1,300	0.35	C
Kennedy Ave to SR 32	4-Lane Arterial, Divided	D	1,300	0.35	C
Eaton Road					
Michael Way to Burnap Ave	2-Lane Arterial	D	700	0.37	C
Hicks Lane to Silverbell Road	2-Lane Arterial	D	900	0.48	C
Constitution Drive to SR 99 SB Ramp	2-Lane Arterial	D	1,300	0.7	D
El Monte Avenue					
E 8th St to Kirk Way	Major 2-Lane Collector	D	200	0.13	C
Esplanade/Broadway Street/Main Street/Park Avenue/Midway					
Esplanade					
W Shasta Ave to Mandalay Ct	4-Lane Arterial, Undivided	D	1,300	0.45	C
Panama Ave to East Ave	4-Lane Arterial, Undivided	D	1,800	0.62	D
Connors Ave to White Ave	4-Lane Arterial, Undivided	D	1,800	0.62	D
E 2nd Ave to E 1st Ave	4-Lane Arterial, Undivided	D	1,900	0.66	D
E Washington Ave to W Sacramento	4-Lane Arterial, Undivided	D	2,200	0.76	D
Park Avenue					
E 16th St to E 17th St	4-Lane Arterial, Undivided	D	1,500	0.52	C
Meyers St to E Park Ave	4-Lane Arterial, Undivided	D	1,200	0.42	C
Midway					
E Park Ave to Hegan Lane	2-Lane Arterial	D	1,400	0.75	D
Hegan Lane to Sandrill Ct	2-Lane Arterial	D	900	0.48	C
Floral Avenue/ 5th Avenue					
Ravenshoe Way to East Ave	4-Lane Arterial, Undivided	D	900	0.31	C
Esplanade to Oleander Ave	2-Lane Arterial	D	400	0.21	C
Forest Avenue					
Humboldt Rd to Wildflower Ct	4-Lane Arterial, Undivided	D	1,400	0.48	C

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
E 20th St to Pkwy Village Dr/Barney Ln	4-Lane Arterial, Undivided	D	1,400	0.48	C
Hicks Lane					
Eaton Road to Calle Principal	Major 2-Lane Collector	D	300	0.2	C
E. Lassen Avenue					
Esplanade to San Jose St	Major 2-Lane Collector	D	900	0.59	D
Burnap Ave to Scenic Lane	Major 2-Lane Collector	D	700	0.46	D
W. Lindo Ave					
CA 32 (Nord Ave) to Trenta Dr	2-Lane Arterial	D	100	0.05	C
Mangrove Avenue/Pine Street					
Cohasset Road to E Lindo Ave	4-Lane Arterial, Undivided	D	1,900	0.66	D
E 3rd Ave to E 1st Ave	4-Lane Arterial, Undivided	D	1,700	0.59	C
E 1st Ave to Palmetto Ave	4-Lane Arterial, Undivided	D	1,900	0.66	D
Vallombrosa Ave to Woodland Ave/E 3rd St	4-Lane Arterial, Divided	E	1,700	0.45	C
Woodland Ave/E 3rd St to E 4th St (couplet, half-capacity)	4-Lane Arterial, Divided	E	800	0.21	C
Manzanita Avenue					
Vallombrosa Ave to Chico Canyon Rd	2-Lane Arterial	D	1,100	0.59	D
Hooker Oaks Ave to Vallombrosa Ave	2-Lane Arterial	D	1,000	0.53	D
Mariposa Ave to Lakewood Way	Major 2-Lane Collector	D	900	0.59	D
Martin Luther King Junior Parkway					
E 20th St to E 23rd St	Major 2-Lane Collector	D	600	0.39	D
Mulberry Street					
E 14th St to E 15th St	2-Lane Arterial	D	900	0.48	C
Palmetto Avenue					
Downing Ave to Bryant Ave	Major 2-Lane Collector	D	500	0.33	C
East Park Avenue/Skyway					

Roadway Segment	Facility Type	1994 General Plan LOS Threshold	PM Peak		
			Volume	V/C	LOS
Forest Ave to Dominic Dr	4-Lane Arterial, Divided	D	2,720	0.73	D
Country Dr to Gilman Way	4-Lane Arterial, Divided	D	2,470	0.66	D
Midway to Fair St	4-Lane Arterial, Divided	D	1,500	0.4	C
Forest Ave to Dominic Dr	4-Lane Arterial, Divided	D	2,720	0.73	D
Sacramento Avenue					
Hobart St to Citrus Ave	2-Lane Arterial	D	600	0.32	C
Columbus Ave to SR 32 (Nord Ave)	2-Lane Arterial	D	1,100	0.59	D
SR 32 (Nord Ave) to Oak Lawn Ave	Major 2-Lane Collector	D	600	0.39	D
Salem Street					
W 4th St to W 5th St	Major 2-Lane Collector	E	800	0.53	D
Vallombrosa Avenue					
Covell Park Ave to Manzanita Ave	2-Lane Arterial	D	400	0.21	C
Rey Way to Vallombrosa Circle	2-Lane Arterial	D	500	0.27	C
Warner Street/Ivy Street					
W Sacramento Ave to Stadium Way	2-Lane Arterial	E	800	0.43	C
W 10th St to W 11th St	2-Lane Arterial	E	300	0.16	C
Hegan Lane					
Midway to Skyway Ave	2-Lane Arterial	E	560	0.3	C

Note: V/C = volume to capacity

Table 4.5-6 presents the existing conditions analysis for study intersections.

TABLE 4.5-6
INTERSECTION LEVEL OF SERVICE – EXISTING CONDITIONS

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
East 1st Avenue & Mangrove Avenue	Signal	28.3	C	41.9	D
East 5th Street & Mangrove Avenue	Signal	36.9	D	21.4	C
East 20th Street & Park Avenue	Signal	10.9	B	15.4	B
East 20th Street & MLK Jr. Parkway	Signal	13.2	B	26	C
Cohasset Road & Eaton Road	Signal	22	C	26	C

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
Eaton Road & Hicks Lane	AWSC	14.2	B	18.2	C
Esplanade & Cohasset Road	Signal	12.6	B	18.9	B
Mangrove Avenue & Vallombrosa Avenue	Signal	42.9	D	**94.2**	**F**
Midway & Hegan Lane	Signal	27	C	11.1	B
Park Avenue & Midway	Signal	31.4	C	28.8	C

Under existing conditions, all freeway segments operate acceptably. The Mangrove Avenue/Vallombrosa Avenue intersection operates at LOS F during the PM peak hour.

TRAFFIC SAFETY

Recent accident history (January 1, 2004, to December 31, 2006) for the City of Chico was collected to identify locations in the city with the highest number of accidents (summarized in **Table 4.5-7** below).

TABLE 4.5-7
HISTORICAL TRAFFIC ACCIDENT DATA

Location	Number of Accidents
SR 99 at 1st Avenue	46
SR 99 at Estates Drive	39
SR 99 at SR 32	36
SR 99 at SR 149	27
Skyway at Honey Run Road	27
SR 99 at 20th Street	26
Skyway at Rocky Bluff Drive	25
SR 99 at Southgate Avenue	25
SR 99 at East Avenue	20
Nord Avenue at Sacramento Avenue	19
SR 99 at Neal Road	19
SR 99 at Garner Lane	18
Skyway at Media Way	17
SR 99 at Palmetto Avenue	16
Cohasset Road at East Avenue	15
SR 99 at Cohasset Road	15
SR 99 at Skyway	14
SR 99 at Hamilton-Nord-Cana Hwy	14
SR 99 at Meridian Road	13

Location	Number of Accidents
SR 99 at 8th Street	13
SR 32 at Meridian Road	12
SR 99 at Cana Hwy	12

Source: Butte County, 2006

TRANSIT SYSTEM

Public transportation in the City of Chico is provided by Butte County, Plumas County, Glenn County, Amtrak, and Greyhound Lines, Inc. These entities offer local bus service, regional motorcoach service, and passenger rail service in Chico.

Public Bus Service

B-Line – Butte County

The B-Line is operated by Butte County Association of Governments and offers 20 fixed-route bus lines in the county, including service in and between the communities of Chico, Oroville, and Paradise. Thirteen of the 20 routes stop in the City of Chico. Annually, the B-Line serves approximately 850,000 riders on its fixed routes in Chico.

Plumas Transit System – Plumas County

The Plumas County Transit System offers round-trip bus service between Quincy and Chico once a week on Wednesdays. The bus enters the City of Chico along SR 99 and travels to the Chico Mall, Wal-Mart, 2nd St and Normal Avenue, and the Greyhound/Amtrak station.

Glenn Ride – Glenn County

Provided by Glenn County, the Glenn Ride bus provides seven daily weekday trips, two weekday express routes, and three daily Saturday trips that pass through the City of Chico. While Glenn Ride provides service between Butte and Glenn counties, the City of Chico is the only stop in Butte County. Glenn Ride provides service in the Glenn County cities of Willows, Artois, Orland, and Hamilton City before terminating the route at the Chico Amtrak/Greyhound station. The bus travels into the city along SR 32 and provides weekday service at two-hour headways and Saturday service at four-hour headways.

Paratransit

B-Line Paratransit, part of Butte Regional Transit, is designed to meet the needs of seniors and qualified disabled persons who are unable to utilize the B-Line Fixed Route Service. B-Line offers two types of paratransit services.

ADA Service provides transit service for certified Americans with Disabilities Act (ADA) individuals who cannot utilize the fixed-route system. The ADA service is intended to be equivalent to the fixed-route service.

Dial-A-Ride service is designed for individuals with disabilities not eligible for ADA and seniors over the age of 65. This service is provided on a space-available basis, with priority given to ADA-certified individuals.

Passenger Rail

The City of Chico is serviced by intercity passenger rail provided by Amtrak. Amtrak operates the Coast Starlight train originating in Seattle with major stops in Portland, Eugene, Sacramento, Oakland, and terminating in Los Angeles. Trains operate daily through Chico. The southbound route to Los Angeles stops at Chico at 3:50 AM while the northbound route to Seattle stops at 1:55 AM. The Chico Amtrak Station is fully accessible to wheelchairs and is located at 5th Street and Orange Street.

Motorcoach

Passenger motorcoach service through the City of Chico is provided by Greyhound Lines Inc. Greyhound provides three daily buses to Sacramento from Chico with stops in Oroville and Marysville. Travel time from Chico to Sacramento is approximately 2 hours and 15 minutes.

BICYCLE AND PEDESTRIAN FACILITIES

The City of Chico has maintained a strong commitment to incorporating bicycle transportation within the city. The City has been designated a Bronze Level Bicycle Friendly Community by the League of American Bicyclists.

The Chico Urban Area Bicycle Plan (2008) identifies existing and planned bikeway facilities in the City. The facilities identified in the Master Plan are defined as follows.

- Class I Bike Path. Provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal cross flows by motorists. Caltrans standards call for Class I bikeways to have a minimum of 8 feet of pavement with 2-foot graded shoulders on either side, for a total right-of-way of 12 feet. These bikeways must also be at least 5 feet from the edge of a paved roadway.

- Class II Bike Lane. Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted. Caltrans standards generally require a 5-foot bike lane from face of curb or edge of roadway with a 6-inch white stripe separating the roadway from the bike lane.

- Class III Bike Route. Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III bike routes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, there are no special markings required for a Class III bike route.

The City has the most extensive bikeway system in Butte County. Existing bicycle transportation facilities include 19.96 miles of Class I bicycle facilities, 24.99 miles of Class II bicycle lanes, and 16.32 miles of Class III routes, for a total of 61.27 miles. Existing Class I, II, and III bicycle facilities in the City are shown on **Figure 4.5-3**.

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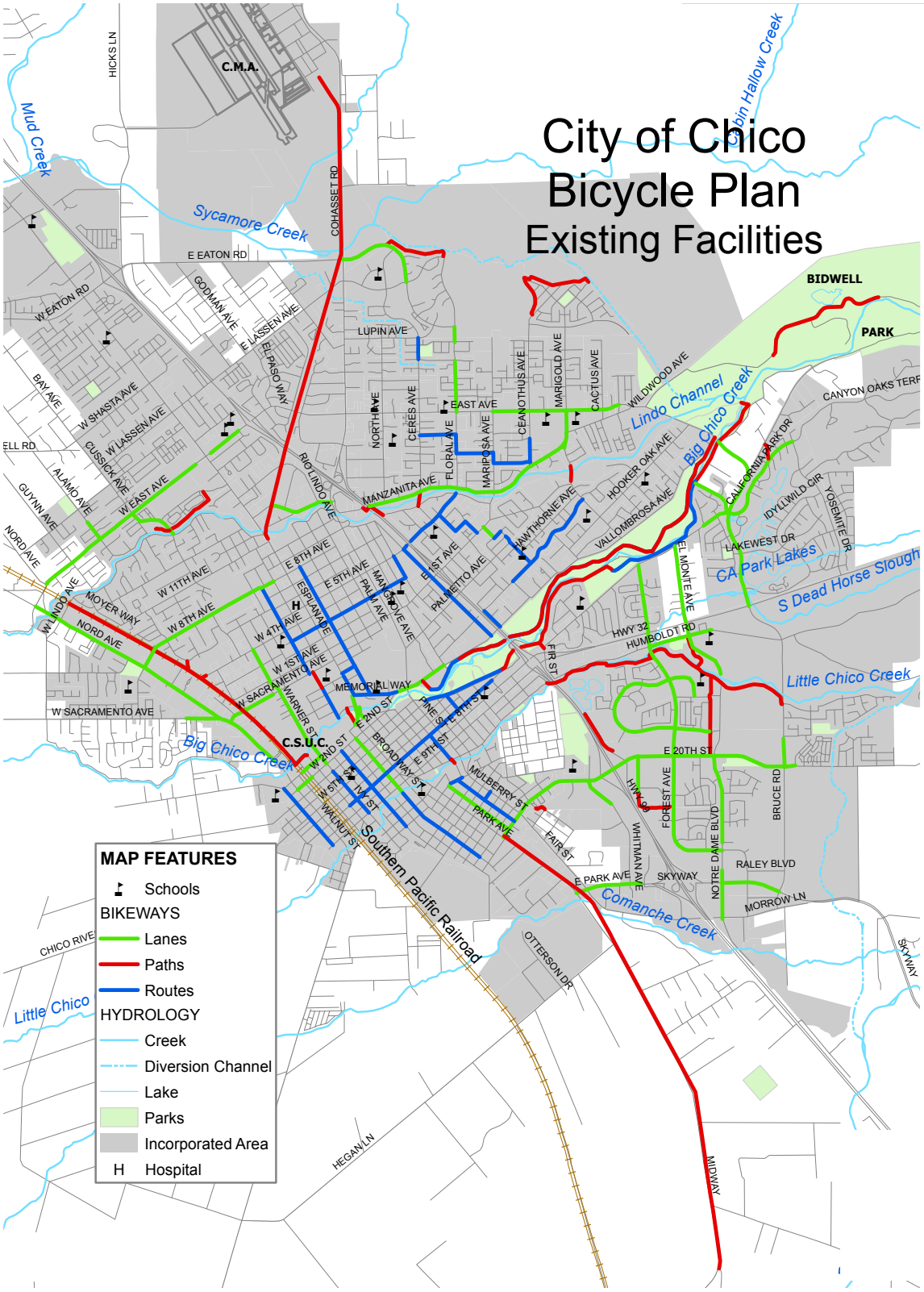

Source: City of Chico, 2007

Not to scale

Figure 4.5-3
Existing Bikeway Facilities

PMC

Freight Movement

In addition to the state highway system that provides freight transportation by way of truck, the City of Chico is also serviced by freight railways.

Rail Freight

The City of Chico is served by Amtrak and Union Pacific Railroad. On an average day, 24 to 50 trains move through Butte County on the Union Pacific tracks.

One important issue concerning freight rail transportation in Chico is at-grade roadway/rail crossings. The railroad line runs through the community parallel to SR 32 and Midway to the north and south, respectively. As a result, there are times of the day in which automobile traffic and emergency service vehicles are unable to access various parts of the city. These facilities are shown on **Figure 4.5-4**.

Highway Freight

All state highways within Chico have been designated as truck routes by Caltrans. Some roadway segments of the state highways are included in the National Network for Service Transportation Assistance Act of 1982 (STAA).

AVIATION SYSTEM

The City of Chico is serviced by two general aviation airports, Chico Municipal Airport and Ranchaero Airport.

Chico Municipal Airport

Chico Municipal Airport is a public general aviation airport that covers approximately 1,475 acres, containing two runways and one helipad. It is located in the northern part of the City. Aside from general aviation and air cargo, Chico Municipal Airport is served by United Airlines Express, providing four daily flights to San Francisco International Airport, as well as Cal-Fire. Chico Municipal Airport is owned and operated by the City. The reader is referred to Section 4.1, Land Use, and Section 4.4, Human Health/Risk of Upset, for further discussion of the airport.

Ranchaero Airport

Ranchaero Airport is a privately owned airport located on the western side of Chico, near Oak Park Avenue. Ranchaero Airport, which covers approximately 23 acres, is open to the public for general aviation. There is one asphalt paved runway that is rated in poor condition.

TRAVEL PATTERNS

Chico Travel Behavior

Within the City of Chico, most trips occur via private automobile. The 2000 U.S. Census "journey to work" data indicates that nearly 75 percent of city residents work within the city, a 9 percent increase from the 1990 Census. The average commute time is approximately 17 minutes.

Table 4.5-8 summarizes the commuting patterns identified in the 2000 Census.

TABLE 4.5-8
WORKERS' COMMUTING PATTERNS, 2000

Place of Work	Percentage of Workers	
	City of Chico	Butte County
City of Chico	75%	41%
Other Butte County Locations	18%	50%
Outside Butte County	7%	9%
Out of State	< 1%	< 1%
Total	100%	100%

Source: U.S. Census, 2000

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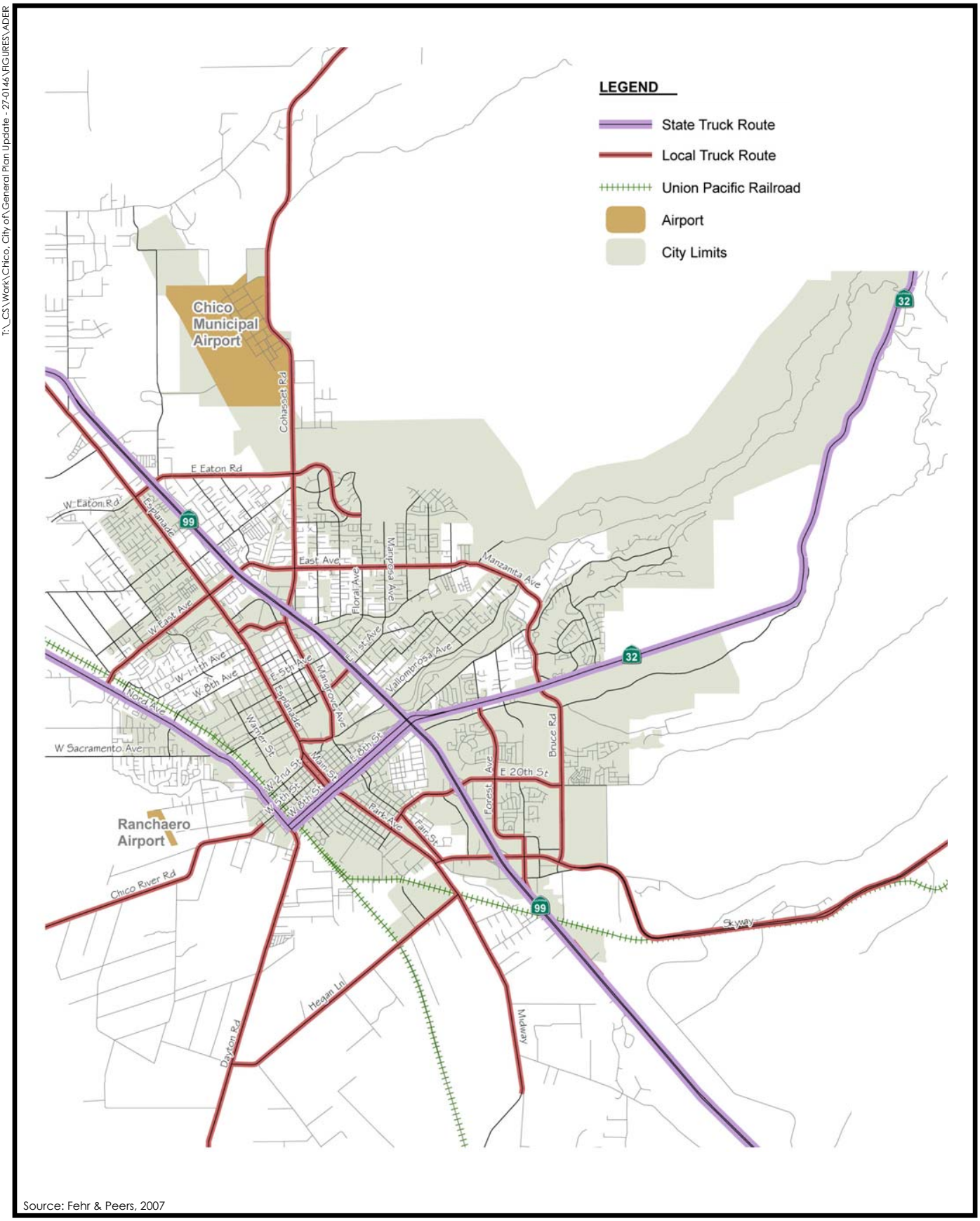


Source: Fehr & Peers, 2007

Not to scale

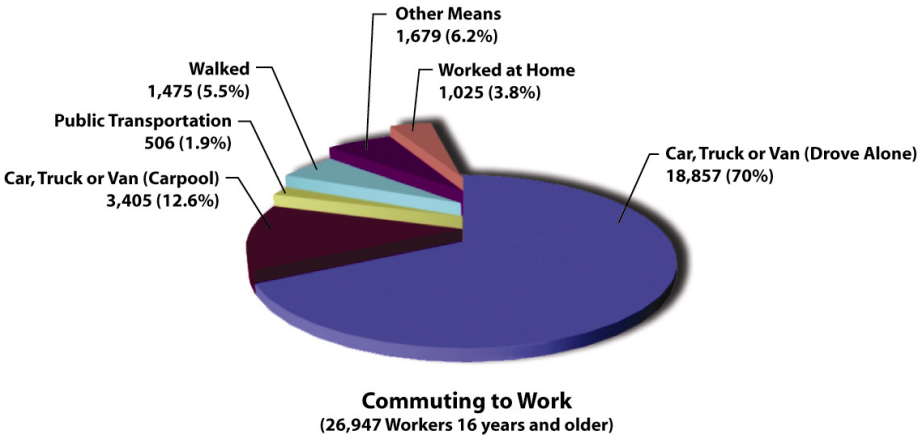
N

Figure 4.5-4
Existing Goods Movement and Aviation Facilities

PMC®

Data from the 2000 U.S. Census also documents the methods used by commuters in Chico. **Chart 4.5-1** shows that 82 percent of all working city residents travel from home to work by automobile, of which 12 percent travel in a carpool of two or more people. Walking, bicycling, and public transit modes account for 13 percent of the total work trips by Chico residents, while 4 percent of people work from home. Subsequent data collected in 2006-2008 through the American Community Survey indicates that commuting patterns in Chico have not changed considerably.

CHART 4.5-1
METHODS OF COMMUTING IN CHICO



4.5.2 REGULATORY FRAMEWORK

Transportation policies, laws, and regulations that would apply to the Circulation Element of the proposed General Plan Update are summarized below. This information provides a context for the impact discussion related to the proposed General Plan Update's consistency with applicable regulatory conditions.

STATE

State of California Transportation Concept Reports

Caltrans prepares a Transportation Concept Report (TCR) for each of its facilities. The TCR is a long-term planning document that each Caltrans district prepares for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period. These are indicated in the "route concept." In addition to the 20-year route concept level, the TCR includes an "ultimate concept," which is the ultimate goal for the route beyond the 20-year planning horizon.

- Most of State Route 32 in the Study Area has a route concept level of LOS E except for the segment east of Forest Avenue, which is LOS D. The route concept in the project area includes the following improvements:

  – Planned

  - Widen SR 32 to four lanes from Fir Street to Yosemite Drive.

  - Conceptual

  - Near Nord Avenue, widen to four lanes as needed.

  - Nord Avenue is designated a "complete street," and improvements will be considered for all modes of transportation. Future concepts will be determined based on the Community Plan for Nord Avenue.

  - Add signal modifications at SR 32/SR 99 ramps and at Fir Street/SR 32.

- Most of State Route 99 in the Study Area has a route concept level of LOS E except for the segment south of Skyway, which is LOS D. The route concept in this area includes adding an auxiliary lane in each direction.

It is important that Caltrans is included in the General Plan Update and supporting environmental review process to ensure that its planning process includes and addresses Chico's circulation plans.

REGIONAL

Butte County General Plan

The Butte County General Plan is currently being updated. Key policies regarding transportation and circulation that are applicable to the Planning Area outside of the city limits include:

- Regional land use and transportation planning (policies 1.1, 3.4, 3.5, 3.7, 3.8, 7.1 through 7.3, 8.1 through 8.3, 9.1, 11.1, 11.2)

- Provisions for transit (Policy 4.1)

- Provisions for bicycles and pedestrians (policies 3.1 through 3.3, 3.6, 5.1 through 5.5, 9.2, 10.1, 10.2)

- Level of service standards (LOS C for county roadways and route concept LOS for Caltrans facilities) and mitigation of traffic impacts (policies 6.1 through 6.6)

Butte County Bikeway Master Plan

The Bikeway Master Plan, prepared in 1998, identifies existing and planned bicycle routes through and near the Planning Area. The Master Plan also contains design, safety, and traffic control standards for use in constructing and/or upgrading facilities. Updates to the existing and planned routes were released in 2007. The proposed facilities are described below.

Proposed Bicycle Facilities in the City of Chico

1) Class I bike path along abandoned Sacramento Northern Railroad tracks from East Park Avenue to south city limits near Hegan Lane (to connect with existing bikeways at either end)

2) Class I bike path along Union Pacific Railroad line from East Avenue to Big Chico Creek

3) Class I bike path along east side of SR 99 from Big Chico Creek to Skyway/Notre Dame Boulevard

4) Class I bike path along abandoned railroad right-of-way from Union Pacific Railroad tracks near the end of West 20th Street east along SR 99 to the Skyway

5) Class II bike lane along Madrone Avenue from Lindo Channel to Bidwell Park; Class I bike path through Bidwell Park from Madrone Avenue to Forest Avenue; Class II bike lane along Forest Avenue from Bidwell Park to Notre Dame Boulevard

6) Class I/II bike lane along Eaton Road from SR 32 to Manzanita Avenue; Class II bike lane along Manzanita Avenue, Chico Canyon Road, and Bruce Road to the Skyway

7) Class II bike lane on Warner Street from W. 4th Avenue to W. 6th Avenue; Class I bike path on Warner Street from W. 6th Avenue to W. 8th Avenue; Class II bike lane on Holly Avenue from W. 8th Avenue to East Avenue

8) Class I bike path along Little Chico Creek from Bruce Road to the Butte Creek Diversion Channel

9) Class I bike path along Butte Creek Diversion Channel from Little Chico Creek south to Butte Creek

10) Class I bike path along Potter Drive from Warfield Lane to Honey Run Road

11) Class I bike path along Sycamore Creek Diversion Channel from Wildwood Avenue to West Sacramento Avenue

12) Class I bike path connecting existing path on northwest side of SR 99 at Little Chico Creek to 20th Street Park facility

13) Class I bike path adjacent to proposed Eaton Road extension from Esplanade to SR 32

14) Class I bike path from Chico Municipal Airport to Keefer Road

15) Class I bike path adjacent to Wildwood Avenue in Bidwell Park connecting to existing path at the golf course

16) Class I bike path adjacent to or on Humboldt Road from Bruce Road to SR 32

17) Class I bike path adjacent to east side of SR 99 along drainage easement from Garner Lane to Panama Avenue

Butte County Association of Governments 2008 Regional Transportation Plan

The *Butte County 2008 Regional Transportation Plan (RTP)* (2008) is a long-range planning document for identifying and programming roadway improvements throughout Butte County. The RTP identifies goals, policies, and actions over three horizons: group 1 (2008–2010), group 2 (2011–2018), and group 3 (2019–2025). Projects are also grouped as constrained or unconstrained. The constrained projects list includes only projects that are budgeted and completely funded within the RTP and have undergone air quality conformity analyses, while unconstrained projects list are within the region's vision but cannot be implemented within

current fiscal constraints. A summary of projects in the Planning Area that are identified in the RTP are as follows:

- Add new auxiliary lanes along SR 99 between Skyway and First Avenue (under construction)
- Widen SR 32 between Fir Street and Yosemite Drive (local funds group 2)
- Widen Cohasset Road to four lanes between Boeing Avenue and Eaton Road (local funds group 1)
- Along Eaton Road, construct a new two-lane road between SR 32 and the current western terminus; widen Eaton Road to four lanes between the new western extension and Lassen Avenue; build a new four-lane road between Floral Avenue and Manzanita Avenue (local funds group 1)
- Widen Bruce Road to four lanes between SR 32 and Skyway (local funds group 2)
- Widen Midway to four lanes between Park Avenue and Hegan Lane (local funds group 2)
- Construct a new two-lane road between the current southern terminus of Fair Street and Enter Avenue (local funds group 2)
- Widen Manzanita Avenue to four lanes between East Avenue and Chico Canyon Road (local funds group 3)
- Widen Esplanade to four lanes between Nord Highway and Eaton Road (local funds group 3)

LOCAL

Nord Avenue Corridor Plan

In 2006, BCAG prepared a corridor plan for Nord Avenue, a segment of SR 32 in Chico. The purpose was to create a vision for this roadway and prepare a plan for improvements and implementation. The overall concept for the Corridor Plan was to make Nord Avenue a complete street, with pedestrian and bicycle facilities in addition to vehicle travel lanes. Recommendations also include adding traffic calming measures, expanding the local roadway network, and making this roadway network more cohesive.

Chico Urban Area Bicycle Plan

In 2008, the City of Chico adopted its fourth version of the Chico Urban Area Bicycle Plan. The purpose of Bicycle Plan is to assess the needs of bicyclists within the City of Chico and to try to assure needed facilities will be provided in the future. The plan describes the following six goals:

1) Provide safe and direct routes for cyclists between and through residential neighborhoods, commercial areas, schools, and other major destinations within the Chico Urban Area.

2) Improve safety, efficiency, and comfort for bicyclists and pedestrians through traffic engineering and law enforcement efforts and provide for shaded through-routes where possible.

3) Provide adequate bicycle parking facilities.

4) Provide and plan for bicycle and pedestrian access to new development, including on-site access for new residential development.

5) Promote bicycling as a part of the intermodal transportation system.

6) Improve bicycling safety through driver and cyclist educational programs.

The Chico Urban Area Bicycle Plan addresses Chico land use patterns, commute patterns, current bicycling issues, existing bicycle facilities, planned facilities, support facilities such as parking, intermodal connections, hygienic facilities, current safety concerns, and funding sources.

4.5.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The standards of significance used for the impact analysis of the proposed General Plan Update were developed by considering the State CEQA Guidelines Appendix G, which include thresholds related to traffic volume increase, change in air traffic patterns, and hazards due to design features.

Significant impacts of the proposed General Plan Update were considered based on the following standards of significance, which address and include the CEQA Appendix G criteria:

1) **Existing 1994 General Plan LOS Standards**: Maintain traffic LOS C on residential streets and LOS D or better on arterial and collector streets, at all intersections, and on principal arterials during peak hours. Accept LOS E for arterials served by transit.

2) **Proposed 2030 General Plan LOS Standards** (draft 2030 General Plan Update Policy CIRC-1.4):

    - Maintain LOS D or better for City roadways and intersections at the peak PM period. LOS E is an acceptable threshold for City roadways and intersections under the following circumstances:

        - Downtown streets within the boundaries identified in Figure DT-1 of the Downtown Element.

        - Arterials served by scheduled transit.

        - Arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.

        - Utilize Caltrans LOS standards for Caltrans' facilities.

The LOS standard for State Route 32 is LOS E except for the segment east of Forest Avenue, which is LOS D. The LOS standard for State Route 99 is LOS E except for the segment south of Skyway, which is LOS D.

- There are not LOS standards for private roads.

3) Conflict with policies, plans, or programs supporting alternative transportation or increase demands for transit facilities greater than planned capacity.

4) Increase demand in air traffic patterns or change the airport location that results in substantial safety risks.

5) The project is considered to have a significant effect on bike and pedestrian facilities if it would result in adverse affects to existing bikeways or pedestrian facilities that would discourage their use or result in safety issues.

6) Result in roadway or traffic hazards.

7) Result in inadequate emergency access.

The proposed General Plan Update would not increase the demand in air traffic patterns or alter the location of airports in the Planning Area. Thus, standard of significance 3 is not addressed in this section. The reader is referred to Section 4.1, Land Use, and Section 4.4, Human Health/Risk of Upset, regarding other potential safety impacts related to airports.

ENVIRONMENTAL EFFECTS OF PROPOSED GENERAL PLAN UPDATE CIRCULATION IMPROVEMENTS

As noted above and in Section 3.0, Project Description, the proposed General Plan Update identifies roadway connections (see **Figure 3.0-4**), bikeway and trail improvements, and transit system improvements. The anticipated environmental effects of these circulation improvements are programmatically considered in this Draft EIR based on available environmental documentation, field review at a reconnaissance level, and review of aerial photography. The anticipated environmental effects are listed below. Subsequent site-specific environmental review of circulation improvements would be conducted once the improvements have been designed and exact alignments have been established, and would consider the following potential impacts:

- Temporary construction-related land use conflicts on adjacent uses associated with noise, construction traffic/access conflicts, and visual impacts.

- Conversion of agricultural land from roadway extension and widening.

- Temporary construction traffic impacts from construction vehicles and construction traffic control.

- Hazardous material exposure impacts from construction of facilities (roadways, trails, and transit).

- Air quality impacts from construction and operation of facilities (roadways, trails, and transit).

- Noise impacts from construction and operation of facilities (roadways, trails, and transit).

- Soil erosion and geologic stability impacts from construction and operation of facilities (roadways, trails, and transit).

- Water quality (surface water and groundwater) and drainage impacts from construction and operation of facilities (roadways, trails, and transit).

- Biological resource impacts associated with construction and operation of facilities (roadways, trails, and transit). This would include direct and indirect impacts to special-status species, vernal pools, and wildlife corridors.

- Cultural and paleontological resource impacts associated with construction activities that could impact undiscovered resources.

- Conflicts with existing and planned alignments of infrastructure facilities (water supply, wastewater conveyance, electrical distribution, natural gas, telephone, and cable).

- Visual impacts with the construction of urban-type circulation improvements (e.g., four-lane and larger roadways, transit facilities, urban interchanges).

The reader is referred to Sections 4.1 through 4.14 of this Draft EIR regarding these impacts.

PROPOSED GENERAL PLAN UPDATE DEVELOPMENT ASSUMPTIONS

For the purposes of the analysis for traffic and circulation impacts, a quantitative transportation/traffic impact analysis was conducted for the "analysis scenarios," or the growth that could occur by year 2030. This development scenario is based on expected build-out conditions within the Planning Area, as proposed by the General Plan Update, and anticipated development conditions within Butte County by year 2030. This analysis incorporates the roadway system identified in the proposed General Plan Update as being implemented by year 2030 (see **Figure 3.0-4**).

TRANSPORTATION ANALYSIS METHODOLOGY AND RESULTS

The City of Chico travel demand forecasting (TDF) model was used to develop peak hour traffic volume forecasts for the study area freeways, roadways, and intersections for the analysis scenarios.

Traffic Operations Analysis Methodology

The transportation impact analysis is focused on potential LOS impacts that would occur from increased travel demand associated with new land development under the proposed General Plan Update. Preparation of the transportation analysis for the roadway system followed the steps described below. For other components of the transportation system, the policies and implementation measures were evaluated against the significance thresholds.

Levels of Service

For this analysis, level of service (LOS) was determined by comparing existing and forecast traffic volumes for selected roadway segments and intersections with peak hour LOS capacity thresholds. A description of the LOS concept can be seen under the Analysis Methodology section under Roadway Segments and Intersections described above. All LOS calculations for roadway segments and intersections utilized the HCM 2000 methodologies.

The HCM 2000 roadway segment peak-hour LOS thresholds are shown in **Table 4.5-1** while the HCM 2000 signalized and unsignalized intersection thresholds are shown in **Table 4.5-2** and **Table 4.5-3,** respectively.

TDF Model Development

The City of Chico VISUM travel demand forecasting model was used to develop peak-hour volume forecasts for the study facilities for the analysis scenario (year 2030 conditions, with build-out of proposed General Plan Update). The City's model was validated to year 2007 conditions, the future model incorporates build-out of the proposed General Plan Update (from both the land use and transportation network perspective), and forecasts were adjusted using NCHRP 255 procedures.

Land Use Data

Land use data for the Planning Area was developed by the City of Chico in 2009. The land use data was provided by traffic analysis zone (TAZ) for proposed General Plan Update build-out conditions. TAZs are geographic polygons used to organize land use data for input into a travel demand forecasting model. The TAZs are defined by natural borders such as roads, waterways, and topography that typically represent areas of homogenous travel behavior.

Land use outside the Planning Area was consistent with the year 2030 horizon from the Butte County Association of Governments model.

Roadway Network Modifications

Roadway improvements included in the forecasting model outside the Planning Area are based on Tier 1 (funded) roadway improvements identified in the Butte County 2008 RTP. Roadway improvements within the city limits are based on the proposed General Plan Update roadway network shown in **Figure 3.0-4**. The proposed General Plan Update Circulation Element includes 17 future connections. While factored in the analysis, most of these roadway connections are not necessary to meet City LOS standards. Rather, these roadway connections improve connectivity, increase travel choice, reduce VMT, support economic development, accommodate efficient goods movement, and support other community goals.

Proposed General Plan Update Policy Provisions Associated with Transportation and Circulation

The following proposed General Plan Update policies and actions address transportation and circulation:

Action CIRC-1.1.1 (Road Network) – Develop the Circulation Plan shown in Figure CIRC-1 over the life of the General Plan as needed to accommodate development.

Policy CIRC-1.2 (Project-level Circulation Improvements) – Require new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian and bicycle facilities.

Policy CIRC-1.3 (Citywide Circulation Improvements) – Collect the fair share cost of circulation improvements necessary to address

cumulative transportation impacts, including roadway, transit, pedestrian and bicycle facilities, through the City's development impact fee program.

Policy CIRC-1.4 (Level of Service Standards) – Until a Multimodal Level of Service (MMLOS) methodology is adopted by the City, maintain LOS D or better for roadways and intersections at the peak PM period, except as specified below:

- *LOS E is an acceptable threshold for City streets and intersections under the following circumstances:*
  - *Downtown streets within the boundaries identified in Figure DT-1 of the Downtown Element.*
  - *Arterials served by scheduled transit.*
  - *Arterials not served by scheduled transit, if bicycle and pedestrian facilities are provided within or adjacent to the roadway.*
- *Utilize Caltrans LOS standards for Caltrans' facilities.*
- *There are no LOS standards for private roads.*
- *Exceptions to the LOS standards above may be considered by the City Council where reducing the level of service would result in a clear public benefit. Such circumstances include, but are not limited to, the following:*
  - *If improvements necessary to achieve the LOS standard results in impacts to a unique historical resource, a highly sensitive environmental area, requires infeasible right-of-way acquisition, or some other unusual physical constraint exists.*
  - *If the intersection is located within a corridor that utilizes coordinated signal timing, in which case, the operation of the corridor as a whole should be considered.*

Policy CIRC-1.5 (Multimodal Level of Service Program) – Support implementation of a Multimodal Level of Service (MMLOS) assessment methodology.

Action CIRC-1.5.1 (Traffic Analysis) – Monitor the development of MMLOS standards by the Transportation Research Board and other jurisdictions. When a valid methodology for Chico is identified, develop and adopt Transportation Impact Analysis (TIA) guidelines that include MMLOS standards specific to Chico to supersede the LOS standards. The MMLOS standards will apply to City-maintained roadways and will allow for flexibility as necessary to recognize site specific constraints, such as

protecting sensitive resources, or ensuring pedestrian and bicycle safety.

Policy CIRC-1.6 (Multimodal LOS Standards) – After adoption of MMLOS standards, maintain adequate MMLOS at intersections and along roadway segments as defined in the City's Transportation Impact Analysis Guidelines called for in Action CIRC-1.5.1.

Action CIRC-1.6.1 (Collect Multimodal Data) – Collect and analyze multimodal volume data for the City's intersections and roadway segments, paying particular attention to higher traffic volume intersections. Use this information on multimodal travel behavior to update, refine, and recalibrate, if necessary, the City's Travel Demand Forecasting Model, which projects future traffic volumes.

Action CIRC 1.6.2 (Travel Demand Model) – Enhance the City's Travel Demand Forecasting Model to include the effects of smart growth on travel behavior and measure how changes in land uses and transportation facilities can reduce Vehicle Miles Traveled (VMT) and greenhouse gas emissions.

Action CIRC-1.7.1 (Truck Routes) – In consultation with Butte County, the Butte County Association of Governments, and Caltrans, continue to designate and provide signed truck routes through the City, and ensure that City roadways are maintained.

Policy CIRC-1.8 (Regional Transportation Planning) – Continue to participate in Butte County Association of Governments' (BCAG) efforts to coordinate regional transportation planning with other jurisdictions, and continue to consult with Caltrans on transportation planning, operations, and funding to develop the City's circulation system.

Action CIRC-1.8.1 (BCAG Collaboration) – Consult with BCAG on the development of the Regional Transportation Plan, and provide all information necessary for the Countywide traffic model to accurately reflect City development.

Action CIRC-1.8.2 (Sustainable Communities Strategy) – Participate in BCAG's effort to prepare the regional Sustainable Communities Strategy.

Action CIRC-1.8.3 (Caltrans Highway Improvements) – Consult with BCAG and Caltrans regarding the prioritization and timely construction of programmed freeway and interchange improvements on the state highway system.

Policy CIRC-1.9 (Dedicated Funding Sources) – Identify outside sources of funding, and maximize the use of federal and other matching funding sources to provide ongoing maintenance, operation, and management of the City's circulation network.

Policy CIRC-2.1 (Complete Streets) – Develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles; provides opportunities to reduce air pollution and greenhouse gas emissions; and reinforces the role of the street as a public space that unites the City.

Action CIRC-2.1.1 (Complete Street Standards) – With consideration of street classification and function, design new streets to accommodate all modes of travel, including transit, bicycles, pedestrians, vehicles, and,parking.

Action CIRC-2.1.2 (Retrofitting Existing Streets) – Retrofit and upgrade existing streets, as funding allows, to include complete street amenities where appropriate, prioritizing improvements in locations that will improve the overall connectivity of the City's network of bicycle and pedestrian facilities or result in increased safety.

Action CIRC-2.1.3 (Multimodal Connections) – Provide connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles.

Policy CIRC-2.2 (Circulation Connectivity and Efficiency) – Provide for greater street connectivity and efficiency for all transportation modes.

Action CIRC-2.2.1 (Connectivity in Project Review) – New development shall include the following internal circulation features:

- *A grid or modified grid-based primary street system. Cul-de-sacs are discouraged, but may be approved in situations where difficult site planning issues, such as odd lot size, topography, or physical constraints exist or where their use results in a more efficient use of land, however in all cases the overall grid pattern of streets should be maintained;*
- *Traffic-calming measures, where appropriate;*
- *Roundabouts as alternative intersection controls, where appropriate;*
- *Bicycle and pedestrian connections to adjacent streets, trails, public spaces, and bicycle paths; and*
- *Short block lengths consistent with City design standards.*

Action CIRC-2.2.2 (Traffic Management) – Perform routine, ongoing evaluation of the street traffic control system, with emphasis on traffic

management, such as signal timing and coordination or the use of roundabouts, to optimize traffic flow along arterial corridors and reduce vehicle emissions.

Action CIRC-2.2.3 (Traffic-Calming Measures) – Install appropriate traffic-calming devices, such as bulbing and reduced street widths, to discourage speeding and "cut-through" traffic on existing local streets.

Policy CIRC-3.1 (Bikeway Master Plan) – Implement and update the Chico Urban Area Bicycle Plan (CUABP) consistent with the goals and policies of the General Plan.

Action CIRC-3.1.1 (Add Bicycle Facilities) – Incorporate bicycle facilities identified in the CUABP into public road construction projects and private development projects.

Action CIRC-3.1.2 (Bicycle Crossings) – Identify and pursue funding to construct crossings at creeks, railroads, and roadways consistent with the CUABP to improve bicycle and pedestrian connectivity.

Action CIRC-3.1.3 (Regional Bicycle Trail Coordination) – Consult with Butte County, Butte County Association of Governments, and other agencies regarding implementation of a regional bikeway system.

Action CIRC-3.1.4 (Bikeway Map) – Promote bicycle use by providing an updated map of Chico's bikeways to bicycle stores, CSU Chico, and other key meeting places for bicyclists.

Policy CIRC-3.2 (CSU Chico Bicycle Access) – Continue to encourage CSU Chico to reintroduce opportunities for safe bicycle access into, around and through the main campus area.

Policy CIRC-3.3 (New Development and Bikeway Connections) – Ensure that new residential and non-residential development projects provide connections to the nearest bikeways.

Action CIRC-3.3.1 (Bikeway Requirements) – Require pedestrian and bicycle connections to the Citywide bikeway system every 500 feet, where feasible, as part of project approval and as identified in the Chico Urban Area Bicycle Plan.

Policy CIRC-3.4 (Bicycle Safety) – Improve safety conditions, efficiency, and comfort for bicyclists through traffic engineering, maintenance and law enforcement.

Action CIRC-3.4.1 (Construction and Maintenance) – Continue to ensure that all new and improved streets have bicycle-safe drainage grates

and are free of hazards such as uneven pavement and gravel. Maintain a program for the sweeping and repair of bikeways.

Action CIRC-3.4.2 (Signing, Markings, and Lighting) – Continue to provide signage and markings to warn vehicular traffic of the existence of merging or crossing bicycle traffic where bikeways make transitions into or across roadways. Delineate and sign bikeways in accordance with Caltrans' standards and install, where feasible, lighting for safety and comfort.

Action CIRC-3.4.3 (Bike Safety in Schools) – Consult with the Chico Unified School District, CSU Chico, and Butte College regarding development of an educational campaign promoting bicycle safety and safe routes to school programs.

Action CIRC-3.4.4 (Bicycle Detection at Traffic Signals) – Continue to install bicycle detector loops at high volume bicycle/automobile intersections that have actuated signals.

Policy CIRC-3.5 (Funding Bicycle Improvements) – Consider bikeway improvements when establishing funding priorities for the City and adopting the Capital Improvement Program.

Action CIRC-3.5.1 (Other Funding Sources) – Continue to pursue funding sources, including state and federal grants, for new bicycle facilities.

Policy CIRC-3.6 (Bicycle Parking) – Provide adequate bicycle parking and support facilities.

Action CIRC-3.6.1 (Secure Bicycle Parking and Facilities) – Update the Municipal Code requirements for bicycle parking, and include where appropriate, requirements for bicycle-support facilities, such as personal lockers and showers.

Policy CIRC-4.1 (Pedestrian Master Planning) – Continue to integrate and highlight pedestrian access and dual use bicycle and pedestrian pathways in the Chico Urban Area Bicycle Plan.

Policy CIRC-4.2 (Continuous Network) – Provide a pedestrian network in existing and new neighborhoods that facilitates convenient and continuous pedestrian travel free of major impediments and obstacles.

Action CIRC-4.2.1 (Housing or Destination Connections) – Amend the Municipal Code to require new subdivisions and large-scale developments to include safe pedestrian walkways that provide direct links between streets and major destinations such as transit stops, schools, parks, shopping centers, and jobs.

Action CIRC-4.2.2 (Neighborhood Planning of Street Improvements) – Continue to use the neighborhood planning process to identify neighborhood priorities for the improvement of existing streets, including pedestrian facilities.

Policy CIRC-4.3 (Pedestrian-Friendly Streets) – Ensure that streets in areas with high levels of pedestrian activity (such as employment centers, residential areas, mixed-use areas, and schools) support safe pedestrian travel by providing elements such as detached sidewalks, bulb-outs, enhanced pedestrian crossings, and medians.

Action CIRC-4.3.1 (Safe Pedestrian Crossings) – As funding allows, improve pedestrian safety at intersections and other crossing locations by providing safe, well-marked pedestrian crossings, bulb-outs, audible warnings, or median refuges that reduce crossing widths.

Action CIRC-4.3.2 (Expand Sidewalk Infrastructure) – As funding allows, continue installation of sidewalk and pedestrian enhancement infrastructure in areas not currently served.

Policy CIRC-5.1 (Transit Planning) – Consult with and encourage the Butte County Association of Governments (BCAG) to implement a comprehensive transit system that serves Chico's current and future needs.

Action CIRC-5.1.1 (Transit Master Plan) – Participate in BCAG's transit master planning efforts to help ensure that transit routes coincide with Chico's major destinations for employment and shopping, concentrations of housing, key institutions, and other land uses likely to supply riders for public transit.

Action CIRC-5.1.2 (Intercity Bus Service) – In consultation with BCAG, Greyhound, and Amtrak, monitor demand for intercity bus transit service.

Action CIRC-5.1.3 (Transit Center) – Maintain the Downtown Transit Center as the key hub for intracity public transportation.

Action CIRC-5.1.4 (Enhanced B-Line) – In consultation with BCAG, pursue funding sources and partnerships to support an enhanced B-Line with more frequent headways.

Policy CIRC-5.2 (Central City Transit Route) – Encourage the creation of a pilot program Central City Transit Route that is frequently served by branded transit vehicles connecting heavily visited City locations, such as CSU Chico, Enloe Medical Center, shopping, entertainment areas and Downtown.

Action CIRC-5.2.1 (Transit Oriented Development) – Support new development and redevelopment within the Central City and Corridor Opportunity Sites to support ridership.

Action CIRC-5.2.2 (Central City Route Marketing) – Bolster community support, awareness, and ridership of a Central City Transit Route by encouraging BCAG to solicit public input on the naming and exterior design of transit vehicles.

Policy CIRC-5.3 (Transit Connectivity in Projects) – Ensure that new development supports public transit.

Action CIRC-5.3.1 (Roadway Transit Features) – When planning or retrofitting roadways, consult with BCAG regarding the inclusion of transit stops, shelters, bus turnouts, and other transit improvements.

Action CIRC-5.3.2 (Transit Improvements for New Development) – During the project review process, consult with BCAG to determine appropriate requirements for the installation of stops and streetscape improvements if needed to accommodate transit.

Policy CIRC-7.1 (Rail Services) – Consult with other agencies and private entities to identify ways to maintain, improve, and expand rail services to safely meet existing and future needs of residents and businesses.

Action CIRC-7.1.1 (Passenger Rail Service) – Investigate opportunities to partner with other agencies in exploring the feasibility of expanding passenger rail service to Chico as part of a statewide system.

Action CIRC-7.1.2 (Existing Railroad Crossings) – Continue ongoing partnerships to improve the condition and safety of railroad crossings by upgrading surface conditions and providing adequate signs and signals.

Action CIRC-7.1.3 (New Grade-Separated Crossings) – Explore the feasibility of constructing new grade-separated crossings based on state criteria and funding availability at the following locations:

- *State Route 32 at 8th and 9th streets (included in the Regional Transportation Plan);*
- *West 8th Avenue;*
- *West East Avenue; and*
- *West Second Street.*

Action CIRC-7.1.4 (Train Depot) – Upgrade the historic Train Depot to serve as the regional transit hub for Greyhound and Amtrak and consult with Union Pacific Railroad regarding an upgrade of the depot landing adjacent to the tracks.

Policy CIRC-9.1 (Reduce Peak-Hour Trips) – Strive to reduce single occupant vehicle trips through the use of travel demand management strategies.

Action CIRC-9.1.1 (City Travel Demand Management) – Implement a City of Chico Travel Demand Management Plan that provides incentives for City employees to commute in modes other than single-occupant vehicles.

Action CIRC-9.1.2 (Employer Trip Reduction Programs) – Encourage employers to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting and work-at-home programs, and preferential parking for carpools/vanpools.

The impact analysis provided below utilizes these proposed policies and actions to determine whether implementation of the proposed General Plan Update would result in significant transportation impacts. The analyses identify and describe how specific policies and actions as well as other City regulations and standards provide enforceable requirements and/or performance standards that improve transportation and avoid or minimize significant impacts.

PROJECT IMPACTS AND MITIGATION MEASURES

City Roadway Facilities (Standard of Significance 1)

Impact 4.5.1 Implementation of the proposed General Plan Update would result in acceptable traffic operations on City roadway facilities. This would be a **less than significant** impact.

The peak-hour roadway and freeway segment traffic volumes shown in **Tables 4.5-9** and **4.5-10** were compared to the freeway and roadway segment thresholds summarized in **Table 4.5-1** to analyze traffic operations on the Study Area roadway segments for the year 2030 future analysis scenario. The peak-hour signalized and unsignalized intersection delays shown in **Table 4.5-11** were compared to the HCM 2000 control delay in **Tables 4.5-2** and **4.5-3** to analyze traffic operations on the study intersections for the year 2030 future analysis scenario.

TABLE 4.5-9
FREEWAY LEVEL OF SERVICE – PROPOSED GENERAL PLAN UPDATE YEAR 2030 CONDITIONS

Freeway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
SR 99 – North of Eaton Road	4-Lane Freeway	E	3,320	0.41	B
SR 99 – Eaton Road to East Avenue	4-Lane Freeway	E	4,840	0.6	C
SR 99 – East Avenue to Cohasset Road	4-Lane Freeway + Auxiliary Lanes	E	6,290	0.62	C
SR 99 – Cohasset Road to East 1st Avenue	4-Lane Freeway + Auxiliary Lanes	E	8,470	0.84	D
SR 99 – East 1st Avenue to SR 32	4-Lane Freeway + Auxiliary Lanes	E	10,380	1.03	F

Freeway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
SR 99 – SR 32 to East 20th Street	4-Lane Freeway + Auxiliary Lanes	E	8,830	0.88	D
SR 99 – East 20th Street to Skyway	4-Lane Freeway + Auxiliary Lanes	E	6,430	0.64	C
SR 99 – South of Skyway	4-Lane Freeway	D	3,920	0.49	B

Note: V/C = volume to capacity

TABLE 4.5-10
ROADWAY LEVEL OF SERVICE – PROPOSED GENERAL PLAN UPDATE YEAR 2030 CONDITIONS

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
SR 32 (Deer Creek Highway/8th Street/9th Street/Walnut Street/Nord Avenue)					
Deer Creek Highway					
Bruce Road to Yosemite Dr	4-Lane Arterial	D	1,410	0.49	C
El Monte Ave to Bruce Road	4-Lane Arterial, Divided	D	2,920	0.78	D
Forest Ave to El Monte Ave	4-Lane Arterial, Divided	D	2,820	0.75	D
Start of undivided highway to Forest Ave	4-Lane Arterial, Divided	E	3,320	0.89	D
E 8th St/Fir St to road merge at undivided highway	4-Lane Arterial, Divided	E	3,220	0.86	D
CA 99 NB Ramp to E 8th St/Fir St	4-Lane Arterial, Divided	E	3,490	0.93	D
8th Street/9th Street (one-way couplets functioning as divided arterial)					
SR 99 SB Ramp to Bartlett St (8th Street only, half-capacity)	4-Lane Arterial, Divided	E	1,130	0.6	D
Cypress St to Poplar St	4-Lane Arterial, Divided	E	3,000	0.8	D
Pine St to Cypress St	4-Lane Arterial, Divided	E	3,700	0.99	E
Main St to Wall St	4-Lane Arterial, Divided	E	2,610	0.7	D
Ivy St to Hazel St	4-Lane Arterial, Divided	E	2,300	0.61	D
Orange St to Cherry St	4-Lane Arterial, Divided	E	2,380	0.64	D

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
Walnut St to Cedar St	4-Lane Arterial, Divided	E	2,170	0.58	D
Walnut Street					
W 8th St to W 9th St	4-Lane Arterial, Undivided	E	1,710	0.59	C
Bidwell Ave to W 1st St	4-Lane Arterial, Undivided	E	2,240	0.78	D
Nord Avenue					
W Sacramento Ave to W Sacramento Ave	2-Lane Arterial	E	2,020	1.08	F
Oak Way to W 8th Ave	2-Lane Arterial	E	1,830	0.98	E
Glenwood Ave to Glenwood Ave	2-Lane Arterial	E	1,790	0.96	E
East Ave to Kennedy Ave	2-Lane Arterial	E	1,620	0.87	D
1st Avenue					
Village Lane to Longfellow Ave	2-Lane Arterial	D	1,410	0.75	D
Calgary Lane to Mildred Ave	2-Lane Arterial	D	1,390	0.74	D
Esplanade to Oleander Ave	2-Lane Arterial	D	1,100	0.59	D
Magnolia Ave to Esplanade	2-Lane Arterial	D	940	0.5	C
Hobart St to Citrus Ave	2-Lane Arterial	D	920	0.49	C
2nd Street					
Walnut St to Cedar St	4-Lane Arterial, Undivided	E	600	0.21	C
5th Street					
Walnut St to Cedar St	2-Lane Arterial	E	370	0.2	C
Oak St to Walnut St	2-Lane Arterial	E	570	0.3	C
8th Avenue					
CA 32 (Nord Ave) to Greenwich Dr	2-Lane Arterial	D	860	0.46	C
Magnolia Ave to Esplanade	2-Lane Arterial	D	730	0.39	C
8th Street					
Ashford Way to Centennial Ave	Major 2-Lane Collector	D	610	0.4	D
El Monte Ave to Husa Lane	Major 2-Lane Collector	D	610	0.4	D
Vista Verde Ave to Park Vista Dr	Major 2-Lane Collector	D	600	0.39	D
20th Street					

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
Bruce Road to Notre Dame Blvd	4-Lane Arterial, Divided	D	2,100	0.56	D
Forest Ave to Huntington Dr	4-Lane Arterial, Divided	D	1,760	0.47	C
Business Lane to Forest Ave	4-Lane Arterial, Divided	D	2,550	0.68	D
Sierra Nevada Ct to Dr MLK JR Pkwy	4-Lane Arterial, Divided	D	1,740	0.47	C
Bruce Road/Chico Canyon Road					
E 20th St to Raley Blvd	4-Lane Arterial, Divided	D	1,890	0.51	C
Remington Dr to E 20th St	4-Lane Arterial, Divided	D	2,290	0.61	D
Humboldt Road to Picholine Way	4-Lane Arterial, Divided	D	2,910	0.78	D
Lakeside Village Commons to Lakewest Dr	4-Lane Arterial, Divided	D	1,770	0.47	C
Cohasset Road					
Eaton Rd to Thorntree Dr	4-Lane Arterial, Undivided	D	1,960	0.68	D
East Ave to Lorinda Lane	4-Lane Arterial, Undivided	D	1,820	0.63	D
Pillsbury Rd to East Ave	4-Lane Arterial, Undivided	D	2,380	0.82	D
Dayton Road					
Archer Ave to Pomona Ave	2-Lane Arterial	D	680	0.36	C
East Avenue					
Floral Ave to Coleman Ct	4-Lane Arterial, Undivided	D	1,800	0.62	D
Cohasset Road to North Ave	4-Lane Arterial, Undivided	D	1,530	0.53	C
Pillsbury Rd to Cohasset Road	4-Lane Arterial, Divided	D	1,210	0.32	C
Connors Ave to Esplanade	4-Lane Arterial, Divided	D	2,530	0.68	D
Esplanade to Ilahee Lane	4-Lane Arterial, Divided	D	2,260	0.6	D
Cussick Ave to Alamo Ave	4-Lane Arterial, Divided	D	1,620	0.43	C

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
Guynn Ave to Streamside Ct	4-Lane Arterial, Divided	D	1,400	0.37	C
Kennedy Ave to SR 32	4-Lane Arterial, Divided	D	1,520	0.41	C
Eaton Road					
Michael Way to Burnap Ave	4-Lane Arterial, Divided	D	1,460	0.39	C
Hicks Lane to Silverbell Road	4-Lane Arterial, Divided	D	2,790	0.75	D
Constitution Drive to SR 99 SB Ramp	4-Lane Arterial, Divided	D	2,410	0.64	D
El Monte Avenue					
E 8th St to Kirk Way	Major 2-Lane Collector	D	330	0.22	C
Esplanade/Broadway Street/Main Street/Park Avenue/Midway					
Esplanade					
W Shasta Ave to Mandalay Ct	4-Lane Arterial, Undivided	D	1,840	0.64	D
Panama Ave to East Ave	4-Lane Arterial, Undivided	D	2,050	0.71	D
Connors Ave to White Ave	4-Lane Arterial, Undivided	D	1,890	0.65	D
E 2nd Ave to E 1st Ave	4-Lane Arterial, Undivided	D	2,020	0.7	D
E Washington Ave to W Sacramento	4-Lane Arterial, Undivided	D	2,440	0.84	D
Park Avenue					
E 16th St to E 17th St	4-Lane Arterial, Undivided	D	1,720	0.6	C
Meyers St to E Park Ave	4-Lane Arterial, Undivided	D	1,880	0.65	D
Midway					
E Park Ave to Hegan Lane	2-Lane Arterial	D	1,530	0.82	D
Hegan Lane to Sandrill Ct	2-Lane Arterial	D	1,070	0.57	D
Floral Avenue/5th Avenue					
Ravenshoe Way to East Ave	4-Lane Arterial, Undivided	D	1,000	0.35	C
Esplanade to Oleander Ave	2-Lane Arterial	D	600	0.32	C

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
Forest Avenue					
Humboldt Rd to Wildflower Ct	4-Lane Arterial, Undivided	D	2,030	0.7	D
E 20th St to Pkwy Village Dr/Barney Lane	4-Lane Arterial, Undivided	D	1,780	0.62	D
Hicks Lane					
Eaton Road to Calle Principal	4-Lane Arterial, Undivided	D	1,170	0.4	C
E. Lassen Avenue					
Esplanade to San Jose St	Major 2-Lane Collector	D	1,040	0.68	D
Burnap Ave to Scenic Ln	Major 2-Lane Collector	D	830	0.55	D
W. Lindo Ave					
SR 32 (Nord Ave) to Trenta Dr	2-Lane Arterial	D	160	0.09	C
Mangrove Avenue/Pine Street					
Cohasset Road to E Lindo Ave	4-Lane Arterial, Undivided	D	2,080	0.72	D
E 3rd Ave to E 1st Ave	4-Lane Arterial, Undivided	D	1,890	0.65	D
E 1st Ave to Palmetto Ave	4-Lane Arterial, Undivided	D	1,960	0.68	D
Vallombrosa Ave to Woodland Ave/E 3rd St	4-Lane Arterial, Divided	E	1,840	0.49	C
Woodland Ave/E 3rd St to E 4th St (couplet, half-capacity)	4-Lane Arterial, Divided	E	810	0.22	C
Manzanita Avenue					
Vallombrosa Ave to Chico Canyon Rd	2-Lane Arterial	D	1,580	0.84	D
Hooker Oaks Ave to Vallombrosa Ave	2-Lane Arterial	D	1,370	0.73	D
Mariposa Ave to Lakewood Way	Major 2-Lane Collector	D	990	0.65	D
Martin Luther King Junior Parkway					
Dr MLK JR Pkwy - E 20th St to E 23rd St	Major 2-Lane Collector	D	640	0.42	D
Mulberry Street					
E 14th St to E 15th St	4-Lane Arterial, Undivided	D	970	0.34	C
Palmetto Avenue					

Roadway Segment	Facility Type	Proposed General Plan Update LOS Threshold	PM Peak		
			Volume	V/C	LOS
Downing Ave to Bryant Ave	Major 2-Lane Collector	D	540	0.36	C
East Park Avenue/Skyway					
Forest Ave to Dominic Dr	4-Lane Arterial, Divided	D	3,100	0.83	D
Country Dr to Gilman Way	4-Lane Arterial, Divided	D	3,540	0.95	D
Midway to Fair St	4-Lane Arterial, Divided	D	1,600	0.43	C
Sacramento Avenue					
Hobart St to Citrus Ave	2-Lane Arterial	D	700	0.37	C
Columbus Ave to SR 32 (Nord Ave)	2-Lane Arterial	D	1,200	0.64	D
SR 32 (Nord Ave) to Oak Lawn Ave	Major 2-Lane Collector	D	650	0.43	D
Salem Street					
W 4th St to W 5th St	Major 2-Lane Collector	E	840	0.55	D
Vallombrosa Avenue					
Covell Park Ave to Manzanita Ave	2-Lane Arterial	D	470	0.25	C
Rey Way to Vallombrosa Circle	2-Lane Arterial	D	650	0.35	C
Warner Street/Ivy Street					
W Sacramento Ave to Stadium Way	2-Lane Arterial	E	1050	0.56	D
W 10th St to W 11th St	2-Lane Arterial	E	970	0.52	C
Hegan Lane					
Midway to Skyway Ave	2-Lane Arterial	E	700	0.37	C

Note: V/C = volume to capacity

Table 4.5-11 presents the year 2030 conditions analysis for intersections.

TABLE 4.5-11
INTERSECTION LEVEL OF SERVICE – PROPOSED GENERAL PLAN UPDATE YEAR 2030 CONDITIONS

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
East 1st Avenue & Mangrove Avenue	Signal	31	C	54.8	D
East 5th Avenue & Mangrove Avenue	Signal	62.3	E	29.9	C
East 20th Street & Park Avenue	Signal	13.8	B	22.2	C

Intersection	Traffic Control	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
East 20th Street & MLK Jr. Parkway	Signal	15.7	B	36.1	D
Cohasset Road & Eaton Road	Signal	24.7	C	24.8	C
Eaton Road & Hicks Lane	AWSC	32.7	C	43.2	D
Esplanade & Cohasset Road	Signal	11.8	B	21.7	C
Mangrove Avenue & Vallombrosa Avenue	Signal	35.6	D	60.1	E
Midway & Hegan Lane	Signal	34.6	C	16.8	B
Park Avenue & Midway	Signal	44.3	D	41.8	D

The analysis presented in **Table, 4.5-9**, **Table 4.5-10**, and **Table 4.5-11** represents the development potential of the proposed Land Use Diagram within a year 2030 horizon. This represents a conservative assumption of development by 2030 since build-out of the land uses in the planning area will likely be much longer. While factored in the analysis, most of the future 17 roadway connections identified in the Circulation Element are not necessary to meet City LOS standards. Rather, these roadway connections improve connectivity, increase travel choice, reduce VMT, support economic development, accommodate efficient goods movement, and support other community goals. New streets would be designed to accommodate all modes of travel, including transit, bicycles, and vehicles (Action CIRC-2.1.1). In addition, proposed General Plan Update Policy CIRC-1.2 requires new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including roadway, transit, pedestrian and bicycle facilities. The City shall perform routine and ongoing evaluation of the street traffic control system with the goal of efficient traffic management, such as signal timing and coordination or the use of roundabouts to optimize traffic flow along arterial corridors (Action CIRC-2.2.2).

As shown in **Table 4.5-10**, all of the City roadway facilities will operate acceptably during the PM peak hour. While **Table 4.5-11** identifies that the intersection of Mangrove Avenue and Vallombrosa Avenue would operate at LOS E. This is consistent with both the City's current LOS standard, and the proposed LOS standards set forth in draft Circulation Element due to the fact that Mangrove is served by scheduled transit. This would be a **less than significant** impact. No mitigation measures are required.

State Highway Facilities (Standard of Significance 1)

Impact 4.5.2 Implementation of the proposed General Plan Update would result in an increase in traffic volumes on state facilities that would operate below Caltrans LOS thresholds under year 2030 conditions. This would be a **significant** impact.

Based on **Tables 4.5-9** and **4.5-10**, the segment of SR 99 between East 1st Avenue and SR 32 and the segment of SR 32 (Nord Avenue) between West Sacramento Avenue (west) and West Sacramento Avenue (east) would operate unacceptably at LOS F during the PM peak hour under year 2030 conditions.

Widening SR 99 to three lanes without or with auxiliary lanes (northbound and southbound) between East 1st Avenue and SR 32 would result in acceptable LOS E or better operations on this

segment of SR 99. The auxiliary lane improvements for this segment of SR 99 are an identified BCAG project anticipated to proceed in the upcoming several years. However, given state funding shortfalls, and the fact that the City is not in control of the timing or implementation of this improvement, there is uncertainty regarding the ultimate timing of the improvement.

This portion of SR 32 between West Sacramento Avenue (west) and West Sacramento Avenue (east) was part of a collaborative planning process (The Nord Avenue Corridor Plan) that included BCAG, Caltrans, Butte County and the City of Chico. The planning process aimed to develop a complete street concept that balanced the efficient movement of people along a state highway that traverses a built community. Recommendations from the process included the addition of traffic calming measures and expanding the local roadway network to improve accessibility.

The resulting LOS is attributed to cumulative traffic assuming build-out of the proposed General Plan Update combined with cumulative traffic generated in the rest of Butte County. The proposed General Plan Update includes Policy CIRC-1.3 that identifies the collection of the fair share cost of improvements necessary to address cumulative transportation impacts, including roadway, transit, pedestrian, and bicycle facilities through the City's development impact fee program. In addition, the City of Chico and Caltrans have entered into a funding agreement for mitigating local developments' impact to state facilities. Further, Action CIRC-1.8.3 commits the City to continue to consult with BCAG and Caltrans regarding the prioritization and timely construction of programmed freeway and interchange improvements on the state highway system. The policies and actions included in the proposed General Plan Update are intended to mitigate the City's impact to state facilities due to planned development as the result of the proposed General Plan Update. However, implementation of future improvements on state facilities is uncertain because the future improvements of Caltrans facilities do not fall under the jurisdiction (or control) of the City. So while the collaborative Nord Avenue Corridor Plan identifies strategies to address some of the movement and noise considerations of this constrained state highway corridor, no final solution to address cumulative LOS impacts has been developed for this roadway.

Given the uncertainty of the type and/or timing of improvements to these two segments of state facilities, this impact is considered **significant and unavoidable**.

Transit System (Standard of Significance 2)

Impact 4.5.3 Implementation of the proposed General Plan Update would result in an increase in demand for public transit services in the Planning Area. However, implementation of proposed General Plan Update policy provisions would not conflict with policies, plans, or programs supporting alternative transportation or increase demand for transit facilities greater than planned capacity. This is considered a **less than significant** impact.

BCAG administers Butte County's countywide public transit system (B-Line) that provides both inter-city and intra-city transit service. In the City of Chico, B-line provides fixed-route and paratransit transit services. The proposed General Plan includes numerous policies and actions to support BCAG's transit planning efforts like the annual Transit Needs assessment and longer range planning efforts through the regional planning efforts (Policy CIRC-5.1, Action CIRC-5.1.1, and Action CIRC-5.1.2). In addition, the General Plan Update contains Action CIRC-5.3.1 which states that during the planning or retrofitting of roadways, the City is required to consult with BCAG regarding the inclusion of transit stops, shelters, bus turnouts, and other transit improvements, and Action CIRC-5.3.2 which requires consultation with BCAG during the review

process for new development in order to determine the need for the installation of stops and streetscape improvements to accommodate transit.

Funding for transit operations and maintenance includes two sources from the Transportation Development Act (TDA) that are based in part on local sales tax revenue, with allocation based on population and transit operator revenue. Historically, TDA funds have kept pace with inflation. In addition, since a portion of the funding is indexed to population, it is reasonable to expect that funding for expanded transit service will be available to maintain a balance of demand and capacity. Action CIRC-5.1.4 states that the City, in consultation with BCAG, will pursue funding sources and partnerships to support an enhanced B-Line with more frequent headways and Policy CIRC-5.3 ensures that new development support public transit.

The proposed General Plan Update's consistency with local transit plans as well as implementation of the proposed policies and actions described above would reduce this impact to a **less than significant** level and no mitigation is necessary.

Bicycle and Pedestrian System (Standards of Significance 4)

Impact 4.5.4 Implementation of the proposed General Plan Update would result in an increase in the demand for pedestrian and bicycle infrastructure. However, implementation of proposed General Plan would not result in adverse affects to existing bikeways or pedestrian facilities that would discourage their use or result in safety issues. This is considered a **less than significant** impact.

Implementation of the proposed General Plan Update would result in increased pedestrian and bicycle use in the Planning Area. However, the proposed General Plan Update would be consistent with proposed pedestrian and bicycle facilities in the area and would allow for a mix of residential densities and commercial uses to promote options for movement other than the use of motor vehicles. The General Plan Update aims to develop an integrated, multimodal circulation system that accommodates transit, bicycles, pedestrians, and vehicles (Policy CIRC-2.1, Actions CIRC-2.1.1 through Action CIRC-2.1.3, Policy CIRC-2.2, and Action CIRC-2.2.1). Furthermore, Action CIRC-3.1.1 mandates the incorporation of bicycle facilities identified in the Chico Urban Area Bicycle Plan into public road construction projects and private development projects. Similarly, General Plan Update Policy CIRC-3.3 ensures that new residential and non-residential development projects provide connections to the nearest bikeways while Action CIRC-3.3.1 requires pedestrian and bicycle connections to the Citywide bikeway system every 500 feet, where feasible.

In addition to these policies and actions, the City has developed a Public Facilities Assessment (PFA) associated with development under the proposed General Plan Update that identifies public facility and infrastructure needs and how they might be financed, including roadway and bicycle facility improvements.

The intent of the proposed General Plan Update is to accommodate anticipated growth through compact, walkable, infill, new complete neighborhoods and mixed-use development, as well as focusing redevelopment along transit corridors and at other key locations. The proposed General Plan Update and its Land Use Diagram would provide for this growth, minimize outward expansion of the city's boundaries. The proposed mixed of land uses within the Planning Area and consistency with planned bicycle and pedestrian facilities as well as implementation of the proposed General Plan Update policies and action listed above would reduce this impact to a **less than significant** level and no mitigation is necessary.

Roadway or Traffic Hazards (Standard of Significance 5)

Impact 4.5.5 Implementation of the proposed General Plan Update would result in an increase in traffic volumes that could result in the greater potential for roadway or traffic hazards. This is considered a **less than significant** impact due to policy provisions of the proposed General Plan Update.

The implementation of the proposed General Plan Update would increase the amount of vehicle traffic that will require improvement and expansion of the City's roadway system. However, new and upgraded roadways will be designed according to applicable federal, state, and local design appropriate standards, which will minimize traffic hazards. As previously mentioned, there are several new roadway connections and improvements throughout the Planning Area proposed under the General Plan Update (see **Figure 3.0-4**). An enhanced roadway network that accommodates forecasted travel demand would also address potential traffic hazards. Policy CIRC-1.2 requires new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including impacts resulting from traffic hazards. Policy CIRC-1.9 identifies outside sources of funding, and seeks to provide ongoing maintenance, operation, and management of the City's circulation network and as funding allows, pedestrian safety at intersection and other crossing locations will be improved by provided safe, well-marked pedestrian crossings, bulb-outs, audible warning or median refuges that reduce crossing widths (Action CIRC-4.3.1). Action CIRC-2.2.1 states that new development shall include traffic calming measures where appropriate, which reduces hazardous roadways. Action CIRC-2.2.2 would provide for a routine, ongoing evaluation of the street traffic control system, with emphasis on traffic management, thus leading to less hazardous roadways. In relation to railroad safety, Action CIRC-7.1.2 would maintain ongoing partnerships to improve the condition and safety of railroad crossings by upgrading surface conditions and providing adequate signs and signals.

The implementation of the proposed General Plan Update would increase the amount of vehicle traffic which will require improvement and expansion of the City's roadway system. However, new and upgraded roadways will be designed according to applicable federal, state, and local design appropriate standards. The proposed General Plan Update does not contain any provisions which would exacerbate a hazardous situation associated with roadway hazards. Thus, this impact is **less than significant**.

Emergency Access (Standard of Significance 6)

Impact 4.5.6 Implementation of the proposed General Plan Update would result in an increase in traffic volumes, which could increase the potential opportunities for safety conflicts as well as potential conflicts with emergency access. However, implementation of the proposed General Plan Update would not result in inadequate emergency access. Therefore, this impact is considered **less than significant.**

While implementation of the proposed General Plan Update would increase the amount of vehicle traffic, implementation of the proposed roadway system under the proposed General Plan Update would increase the capacity of the roadway network to accommodate forecasted travel demand as well as largely maintain adequate traffic operations (LOS) in the City (see Impacts 4.5.1 and 4.5.2). In addition, there are several new roadway connections that offer emergency access options, as well as new north-south and east-west routes throughout the Planning Area (Action CIRC-1.1.1) (see **Figure 3.0-4**). An enhanced roadway network that accommodates forecasted travel demand would also accommodate the need for emergency

access. Policy CIRC-1.2 requires new development to finance and construct internal and adjacent roadway circulation improvements as necessary to mitigate project impacts, including impacts to roadway emergency access. Policy CIRC-2.2 aims to provide for greater street connectivity and efficiency for all transportation modes, which would benefit emergency access and Action CIRC-2.1.3 would provide for connections between and within existing and new neighborhoods for bicycles, pedestrians, and automobiles, including emergency response automobiles. Policy CIRC-1.9 identifies outside sources of funding, and seeks to provide ongoing maintenance, operation, and management of the City's circulation network.

In addition to General Plan policy and actions, the City has developed the Public Facilities Assessment (PFA) associated with development under the proposed General Plan Update that identifies public facility and infrastructure needs and how they might be financed, including roadway improvements. Because implementation of the proposed roadway system within the proposed General Plan Update and implementation of proposed policy provisions would improve city roadway connectivity, allowing for better emergency vehicle access to residences as well as evacuation routes for area residents, this impact is considered **less than significant**. No mitigation measures are required.

4.5.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

CUMULATIVE SETTING

The setting for this cumulative analysis includes existing, proposed, planned, and approved projects in the Planning Area. The cumulative setting also assumes anticipated and planned development outside of the City's Planning Area and in Butte County. Development in this region (further identified in Section 4.0) would change the intensity of land uses in the region and increase housing, employment, shopping, and recreational opportunities. This analysis also accounts for regional traffic volume conditions anticipated for year 2030 for regional routes in the City of Chico.

The following cumulative analysis is focused on cumulative traffic impacts to local roadway and state highways where City generated traffic would contribute to future traffic volumes from Butte County and other regional traffic. Impacts to transit service, bicycle/pedestrian facilities, roadway safety and emergency access addressed above are area-specific impacts to the City and are not expected to result to be adversely impacted by cumulative conditions.

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Traffic Impacts on Local Roadways and State Highways (Standard of Significance 1)

Impact 4.5.7 When considered with existing, proposed, planned, and approved development in the region, implementation of the proposed General Plan Update would contribute to cumulative traffic volumes in the region that result in significant impacts to level of service and operations. This is considered a **cumulatively considerable** impact.

The traffic impact analyses provided in Impact 4.5.1 and 4.5.2 are based on cumulative conditions (year 2030 that take into account anticipated traffic volumes from development in the region. However, the proposed General Plan Update would still add substantial traffic volumes on local roadways and state highway facilities that would result in significant traffic impacts within the Planning Area as well as in adjoining jurisdictions in Butte County. Improvements to regional transportation facilities associated with cumulative traffic conditions

are intended to be addressed through implementation of regional programs, such as the Butte County Regional Transportation Plan. Impacted facilities include segments of SR 32 and SR 99.

Implementation of proposed General Plan Update policies and action items would assist in reducing its cumulative contribution to regional traffic effects (see Impact 4.5.1 and 4.5.2 regarding specific policies and action that address traffic impacts). However, this impact would still be considered **cumulatively considerable** and **significant and unavoidable** as the City does not have authority over improvements outside of the City's jurisdiction (e.g., facilities in Butte County and Caltrans facilities), and the City cannot ensure that these improvements would be completed. With the exception of funding sources for regional traffic improvements associated with the BCAG RTP, there are no other regional traffic mitigation programs in which the City could participate to minimize its regional traffic impact.

REFERENCES

Butte County. 2006. *Butte County Traffic Accident History for Chico, January 1, 2004 to December 31, 2006*. http:/gis.buttecounty.net/interactivemaps/website/traffic_accidents06/viewer.htm

Butte County. 2007. *Butte County Bikeway Master Plan* (2007 Updated).

Butte County Association of Governments (BCAG). 2006. *Nord Avenue Corridor Plan*.

Butte County Association of Governments (BCAG). 2008. *Butte County Association of Governments 2008 Regional Transportation Plan.*

City of Chico. 2008. *Chico Urban Area Bicycle Plan.*

Transportation Research Board (TRB). 2000. *Highway Capacity Manual 2000.*

U.S. Census. 2000. *DP-3. Profile of Selected Economic Characteristics: 2000 Census*.