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# **APPENDIX A**

## NOTICE OF PREPARATION AND RESPONSES

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## City of Reedley, California Notice of Preparation

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**DATE:**           **March 25, 2010**

**TO:**

<b>FROM:</b>	City of Reedley Planning Department	EMC Planning Group
	Lead Agency	Consultant
	1733 Ninth Street	301 Lighthouse Ave, Suite C
	Reedley, CA 93654	Monterey, CA 93940
	Contact: David Brletic, City Planner	Contact: Ron Sisseem, Principal Planner

**SUBJECT:    **Notice of Preparation of a Draft Program Environmental Impact Report –  
Reedley General Plan Update****

The City of Reedley will be the Lead Agency and will prepare an environmental impact report for the City of Reedley General Plan Update (“proposed project” or “Update”). The scope of the Update and issues related to the EIR are described below. Your agency may need to use the EIR to issue a permit or other approval for the proposed project. We need to know the views of your agency as to the scope and content of the EIR germane to your agency’s statutory responsibilities.

Please submit your response no later than **5:00 p.m. Friday, April 23, 2010** to:

Mr. David Brletic, City Planner  
City of Reedley Planning Department  
1733 Ninth Street  
Reedley, CA 93654  
(559) 637-4200 ext. 286 fax: (559) 637-2139 email: david.brletic@reedley.com

A public scoping meeting will be held at the City of Reedley Council Chambers, 845 “G” Street, Reedley, California 93654, at **3:00 p.m. on Wednesday, April 14, 2010**. The meeting is an opportunity for your agency to provide direct input on the scope of the EIR.

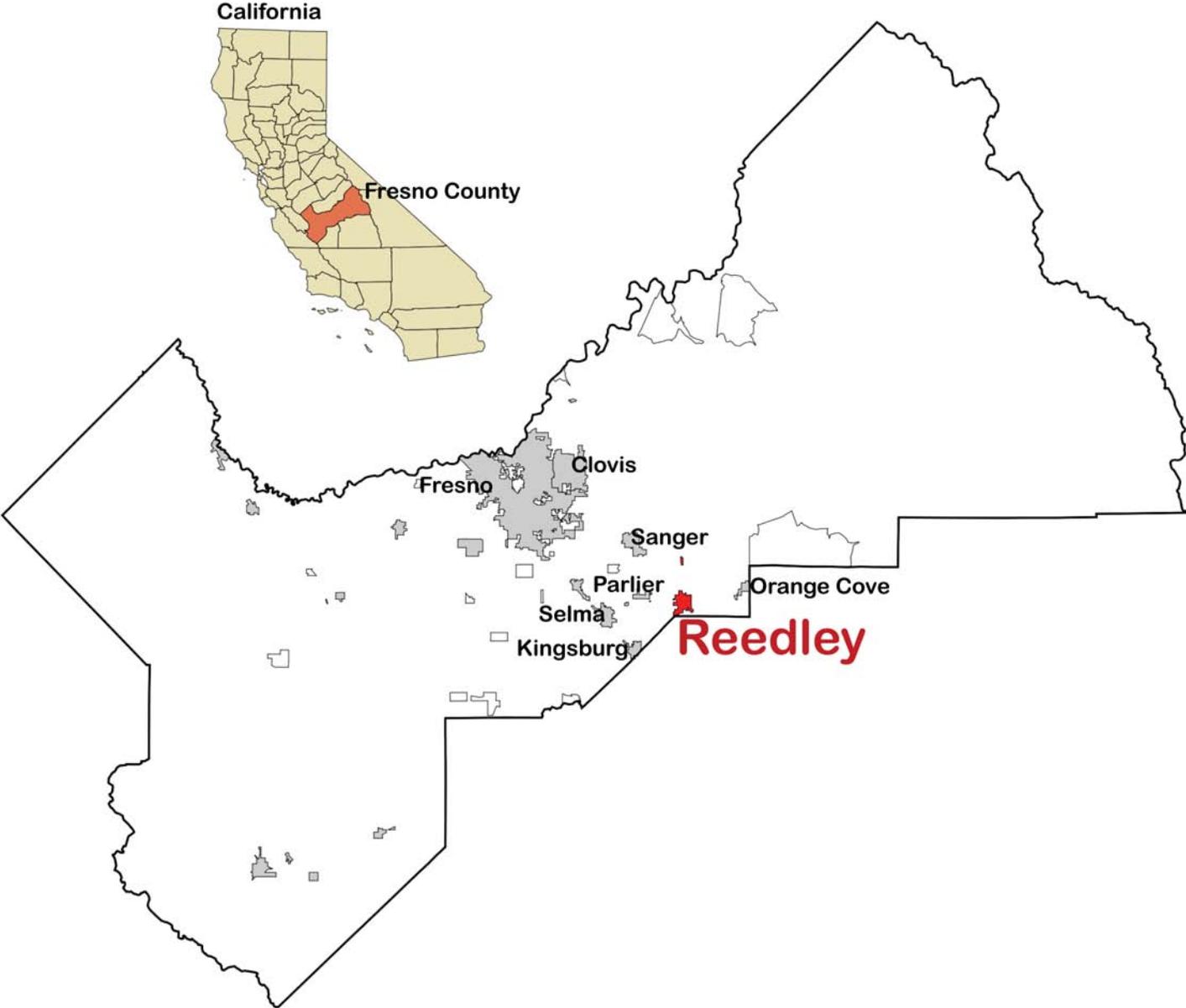
The location, project description, and probable environmental effects of the proposed project are described below.

**Project Title:**           City of Reedley General Plan Update

**Project Applicant:**    City of Reedley

**Project Location:**     City of Reedley, County of Fresno (see Figure 1)

**Figure 1 – Regional Location**



## Project Description

**General Plan Update Overview.** The Reedley General Plan was adopted in August of 1993, and is intended to guide development through 2012. To ensure continued compliance with state regulations and to incorporate long-term community desires and development needs, the City is preparing an Update to the 1993 General Plan. The primary components of the Update include the Land Use, Circulation, Conservation, Open Space and Recreation, Noise, and Safety elements. The Housing Element is updated every five years and is currently being prepared independent of, but coordinated with, the General Plan Update.

The General Plan Update text identifies physical conditions and the principal physical, social and economic issues facing the City. Objectives, policies, and standards are included that will guide development consistent with the City's vision. The General Plan Land Use Diagram (Figure 2) shows planned land uses and street and highway classifications. Other descriptive maps will also be included.

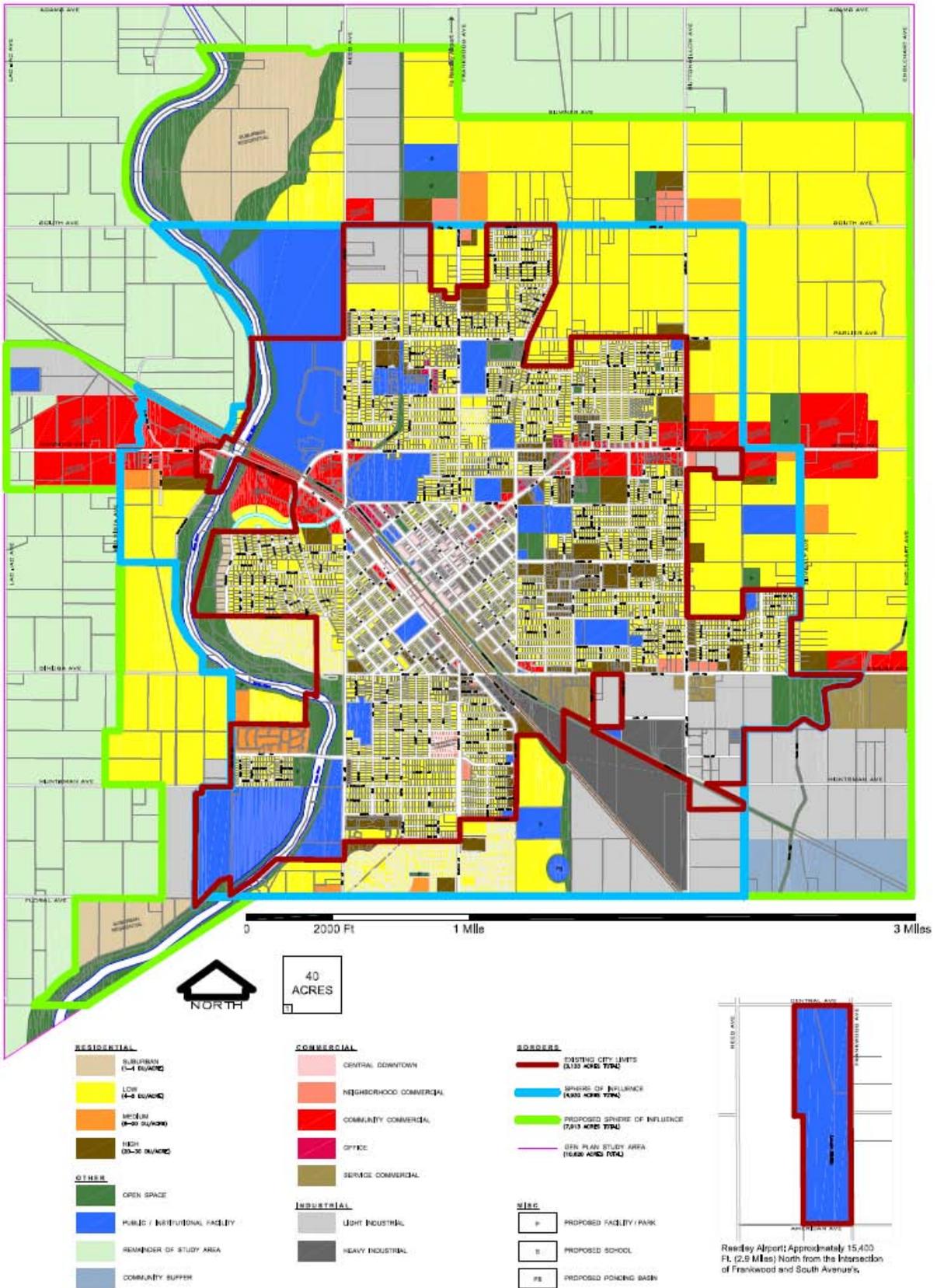
A key purpose of the Update is to consolidate a number of planning documents approved by the City since adoption of the 1993 General Plan, including the Reedley Specific Plan, the Reedley Rail Corridor Master Plan, the Southeast Reedley Industrial Area Specific Plan, the Reedley Sports Park Master Plan, and various utility master plans. The Kings River Corridor Specific Plan will remain as a separate policy document for this important wildlife, scenic, and recreation corridor.

The Reedley Specific Plan was adopted in 2001 to provide development direction for significant new areas of the City. As part of the specific plan process, the City Council adopted two guiding documents, the *Ahwahnee Principles* and *A Landscape of Choice*, both of which had substantial influence on development policy included in the Reedley Specific Plan. The principles contained in these documents, as well as the on-going San Joaquin Valley Blueprint process, will be important guides for policy included in the Update.

**Proposed Study Area and Development Potential.** The General Plan Update Study Area is generally bounded by Adams Avenue on the north, Floral Avenue on the south, Englehart Avenue on the east, and Lac Jac Avenue to the west. The Study Area encompasses approximately 10,620 acres. Within the Study Area, the City has identified new growth areas and designated an expanded Sphere of Influence (SOI) boundary. The General Plan Land Use Diagram shows the Study Area, planned land uses, the existing city limits, existing SOI, and the proposed SOI.

After adoption of the Update, the City will submit an application to amend the City's SOI to the Fresno Local Agency Formation Commission (LAFCO), which will be subject to subsequent hearings and adoption by LAFCO.

Figure 2 – Proposed Land Use Plan



The General Plan Update contains the following major features:

- The planning horizon is 20 years, or to the year 2030. Based on a 3 percent average annual growth rate, the 2030 population is expected to be approximately 49,160.
- The 2030 General Plan Update Study Area is approximately 480 acres smaller (4.5 percent) than contained in the 1993 General Plan Study Area. The difference results from reduction of the planning area around the Reedley Municipal Airport.
- The existing SOI encompasses 4,930 acres; the proposed SOI encompasses 7,913 acres, an increase of 2,983 acres (60 percent). Residential land use predominates within the expanded SOI, comprising approximately 1,800 acres of the total.
- Lands outside the expanded SOI would retain their existing Fresno County land use designations and zoning.
- The City proposes to substantially increase residential densities relative to those found in the 1993 General Plan. Within the existing city limits, the Update would increase residential capacity by approximately 418 dwelling units compared to existing densities. Within the existing SOI, the Update would increase residential capacity by approximately 2,710 dwelling units compared to existing densities.
- Commercial development capacity within the city limits would increase by approximately 130 acres, but would remain unchanged within the existing SOI. Industrial development capacity would decline by about seven acres within the city limits and about 22 acres within the existing SOI.
- Build out of the General Plan Update would result in a population holding capacity of approximately 29,000 within the existing city limits, 46,110 within the existing SOI, and 71,160 within the proposed expanded SOI boundary.

**Concurrent Utility Master Plans.** The City is preparing new sewer, water, and storm water master plans and an urban water management plan (UWMP). City utility master plans and the UWMP will utilize the planning horizon of 2030 as well as consistent population projections. The goal is to ensure that the master plans and UWMP reflect utility demands resulting from build out of the General Plan Update and that opportunities and constraints identified in the utility plans are considered in the Update process. Consistent land use and development projections, financial policies, and utility corridors will be used in all three utility planning efforts.

### **Probable Environmental Effects**

**Aesthetics.** The potential for new development to substantially degrade the existing visual character or quality of the site will be considered. The EIR will evaluate potential impacts on existing designated scenic vistas and new designated vistas to the extent such are proposed in the Update. Light and glare impacts will also be evaluated in light of proposed policies and the City's design guidelines.

**Agriculture.** Important Farmland is located within the Study Area and many parcels outside the existing city limits are under Williamson Act contract. Loss of Important Farmland land and conflict with Williamson Act contracts will be evaluated in the EIR through review of Update policies, CEQA thresholds of significance, Department of Conservation regulations, Fresno County General Plan policies, and LAFCO standards.

**Air Quality/Climate Change.** Build out of the General Plan Update will generate a significant number of vehicle trips and be the source of short-term, construction related air emissions. It will be important to quantify projected criteria emissions from build out and compare them to the emission projections of by the San Joaquin Valley Air Pollution Control District. Traffic generation data from the traffic impact analysis will be utilized as an input to assure the results are based on current traffic generation assumptions. The proposed project's impact on global climate change will be a key component of the EIR. The methodology used for impact analysis will be consistent with recent amendments to CEQA and guidance from the air district. The legislative context, sources of GHG emissions, quantification of GHG emissions, and policy and implementation measures proposed by the City to mitigate climate change impacts will be presented.

**Biological Resources.** The most important natural resource remaining in the Reedley area is the Kings River and associated riparian corridor. Major species of concern located within the Kings River corridor include Valley elderberry longhorn beetle, Swainson's hawk and other raptors, the western yellow-billed cuckoo and other migratory birds, and the western pond turtle. The EIR will address potential impacts associated with rare and endangered plant and animal species and habitats, protection of the Kings River corridor, and impacts to other plant or animal species significant to the City, (e.g. significant native or historic trees). Existing data, a reconnaissance-level analysis by a biologist to document potential habitat, and a search of the California Natural Diversity Database will be used as a basis to describe potential impacts.

**Cultural Resources.** Significant acreage proposed in the SOI expansion area lies along the archeologically sensitive Kings River. This section of the EIR will report the results of both an archival records search and a cultural resources assessment to be conducted by a qualified cultural resources consultant. The City will conduct an SB 18 consultation as part of the Update process.

**Geology and Soils.** This section will include a review of potential geologic and seismic hazards and identify the extent to which these may pose significant risk to public safety or the safety of new development. The analysis will be based on existing information available through the State Geologist, the USDA soil survey, and other environmental documents prepared in the City.

**Hazards and Hazardous Materials.** Potential impacts can largely be addressed through policy mitigation, especially in regard to the storage, transport, and use of hazardous materials. Mention must also be made of the potential for soil contamination and resulting potential hazards to public safety from the conversion of agricultural lands to urban uses.

Future development within the expanded SOI would be located closer to the Reedley Municipal Airport, increasing the potential for conflict between new development and the airport's safety zones. Consistent with CEQA Guidelines section 15152, the *Airport Land Use Planning Handbook* published by Caltrans' Division of Aeronautics will be utilized to evaluate noise and safety hazards associated with development within the boundaries of the airport land use plan.

**Hydrology and Flood Hazards.** As part of the urban water management plan being prepared currently with the Update, water supply availability, projected demand, and potential shortfalls will be described. The applicable FEMA FIRM map(s) will be reviewed to identify areas of flood hazards and flood hazard policies will be reviewed for adequacy. The storm water master plan being prepared currently with the Update will be used as a basis to evaluate potential impacts related to storm water management, disposal, and quality.

**Land Use and Planning.** Land use and growth policies enumerated in the Update will be described in relationship to policies of Fresno County, LAFCO, and other plans and policies that have a bearing on the City's development. The Update and its relationship to the Valley Blueprint process will also be discussed.

**Noise.** Potential impacts from exposure of sensitive uses to project generated traffic noise and potential future stationary sources will be evaluated based on standards of the City's noise element and CEQA guidelines. New policy mitigation may be required, especially in light of the City's desire to incorporate the Reedley Airport Land Use Plan noise compatibility standards into the Update. Consistent with CEQA Guidelines section 15152, the *Airport Land Use Planning Handbook* will be utilized in the evaluation of noise impacts associated with development within the boundaries of the airport land use plan.

**Public Services.** New development will place significant additional demand on public services that include police and fire protection services, schools, parks, and solid waste services. The change in demand on public services and whether or not that change will result in the need for new facilities whose construction could result in significant impacts will be evaluated.

**Traffic/Transportation.** Traffic generated by new development may significantly impact transportation facilities. This will likely result in the need for new or expanded transportation facilities and/or other measures, such as improved alternative transportation and demand management, to mitigate impacts. To evaluate traffic impacts, a traffic impact analysis will be prepared. The findings of the traffic impact analysis can be used to modify land use and circulation policies and implementation measures to mitigate impacts to the extent feasible. This discussion will be linked to the discussion/analysis of climate change impacts of the proposed project, especially in terms of SB 375.

**Utilities.** Impacts on wastewater treatment capacity and wastewater collection infrastructure, water supply and water supply infrastructure, and storm drainage infrastructure and capacity will be evaluated as will effects on other utility services, including electricity, natural gas, telephone, and cable services. A key issue for utilities is whether new development will trigger the need for utility expansions, the construction of which could result in significant impacts. The sewer, water, and storm water master plans being prepared by the City concurrently with the Update process will be the key sources of inputs for this analysis. The EIR will evaluate the potential impacts of constructing such infrastructure and identify policy mitigation for projected facilities that may have unique effects, if any.

**Other Issues.** Based on preliminary review, a number of potential effects are not anticipated to be significant, including mineral resources, recreational resources, and impacts from population and housing growth (such effects are evaluated as an inherent part of a program EIR). A brief analysis of each effect will be included in the EIR with an explanation of the less-than-significant determination. If, after further analysis, an effect is found to be potentially significant, it will be analyzed in detail in the EIR. The EIR will also include mandatory sections required by CEQA, including project alternatives, cumulative impacts, and growth inducing impacts.

Date: 3/15/10

Signature:   
Title: City Planner  
Telephone: (559) 637-4200, Ext. 286

Notice of Preparation has been provided to:

Alta Irrigation District  
Archaeological Information Center - California State University, Bakersfield  
A.T. & S.F.R.R.  
California Department of Transportation – District 06  
California Redevelopment Agency  
California Regional Water Quality Control Board - Central Valley Region  
Comcast  
Consolidated Irrigation District  
Consolidated Mosquito Abatement District  
Council of Fresno County Governments (COG)  
El Rio Reyes Trust  
Federal Aviation Administration, Airports District Office  
Fresno Local Agency Formation Commission  
Fresno County Administration Office  
Fresno County Agricultural Commissioner  
Fresno County Airport Land Use Commission  
Fresno County Assessor's Office  
Fresno County Auditor's Office  
Fresno County Board of Supervisors  
Fresno County Clerk  
Fresno County Economic Development Corporation  
Fresno County Farm Bureau  
Fresno County Fire Protection District  
Fresno County Health Department - Environmental Health Division  
Fresno County Library  
- Reedley Branch  
Fresno County Planning & Resource Management Department  
Fresno County Public Works and Development Services Department  
- Community Development & Planning Division  
Fresno County Recorder's Office  
Fresno County Recreation and Wildlife Commission  
Fresno County Superintendent of Schools  
Fresno County Tax Collector's Office  
Immanuel Schools  
Kings Canyon Unified School District  
Kings River Conservation District  
Kings River Conservancy  
Kings River Water Association  
League of California Cities  
National Bicycle & Pedestrian Clearinghouse  
Navalencia Resource Conservation District  
Pacific Gas & Electric Company  
Reedley Cemetery District  
Reedley Chamber of Commerce  
Reedley Downtown Association  
Reedley College  
San Joaquin River Committee

San Joaquin Valley Air Pollution Control District  
San Joaquin Valley Railroad Company  
Selma-Kingsburg-Fowler County Sanitation District  
Sierra Club, Tehipite Chapter  
Sierra-Kings District Hospital  
Southern California Gas Company  
Southern Pacific Transportation District  
St. LaSalle School  
State Center Community College District (S.C.C.C.D.)  
State Clearinghouse (*included: 15 Copies and the NOC*)  
State Farm Bureau Federation  
The City of Dinuba  
The City of Fowler  
The City of Kingsburg  
The City of Orange Cove  
The City of Parlier  
The City of Selma  
The City of Sanger  
Tulare County  
    -Planning and Development Department  
    -Resource Management Agency  
Tulare Valley Railroad Company  
U. S. Army Corps of Engineers  
U.S. Department of Commerce, Economic Development Administration  
U.S. Department of Int. Bureau of Land Management, Eagle Lake Resource Area  
U.S. Fish and Wildlife Service  
U.S. Postal Service  
U.S. Soil Conservation Service  
Verizon Wireless



# MEMORANDUM

CITY OF REEDLEY

Community Development Department  
1733 Ninth Street, Reedley, CA 93654

Phone: (559) 637-4200, Ext. 222; Fax: (559) 637-2139

DATE: May 6, 2010

TO: Bruce O'Neal, Land Use Associates, [b.oneal@comcast.net](mailto:b.oneal@comcast.net)  
Ron Sisseem, EMC Planning Group, Inc., [sissem@emcplanning.com](mailto:sisseem@emcplanning.com)  
Darlene Mata, DR Mata Consulting, [darlene.mata@reedley.ca.gov](mailto:darlene.mata@reedley.ca.gov)  
Rob Terry, Assistant Planner, [rob.terry@reedley.ca.gov](mailto:rob.terry@reedley.ca.gov)

FROM: David Brletic, City Planner, [david.brletic@reedley.ca.gov](mailto:david.brletic@reedley.ca.gov)

SUBJECT: Reedley General Plan Update Notice of Preparation Agency Comments

The attached letters and e-mails were received in response to the Notice of Preparation prepared for the City of Reedley General Plan Update:

1. State Clearinghouse letter dated March 24, 2010
2. Fresno Local Agency Formation Commission letter dated March 29, 2010
3. SKFCSD e-mail dated April 4, 2010
4. California Emergency Management Agency letter dated April 5, 2010
5. County of Fresno Department of Public Health letter dated April 9, 2010
6. State of California Public Utilities Commission letter dated April 15, 2010
7. U. S. Army Corps of Engineers e-mail dated April 20, 2010
8. California Department of Transportation letter dated April 20, 2010
9. California Energy Commission letter dated April 20, 2010
10. San Joaquin Valley Air Pollution Control District letter dated April 21, 2010
11. Department of Conservation Natural Resources Agency letter dated April 22, 2010
12. County of Fresno Department of Public Works and Planning letter dated April 30, 2010

10fw060



ARNOLD SCHWARZENEGGER  
GOVERNOR

STATE OF CALIFORNIA  
GOVERNOR'S OFFICE of PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT  
DIRECTOR

Notice of Preparation

March 24, 2010

To: Reviewing Agencies  
Re: City of Reedley General Plan Update  
SCH# 2010031106

Attached for your review and comment is the Notice of Preparation (NOP) for the City of Reedley General Plan Update draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

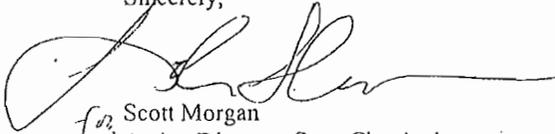
Please direct your comments to:

David Brletic  
City of Reedley  
1733 9th Street  
Reedley, CA 93654

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

  
for Scott Morgan  
Acting Director, State Clearinghouse

Attachments  
cc: Lead Agency

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2010031106  
**Project Title** City of Reedley General Plan Update  
**Lead Agency** Reedley, City of

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**Type** NOP Notice of Preparation  
**Description** The primary components of the Update to the 1993 GP include the Land Use, Circulation, Conservation, Open Space and Recreation, Noise and Safety elements. The plan also contains an increase in the Sphere of Influence from 4,930 acres to 7,913 acres. The planning horizon is 20 years, or to the year 2030 at which time the City would have approximately 50,000 residents. Build out of the General Plan Update would result in a population holding capacity of approximately 71,160 within the expanded SOI boundary. After adoption, the City will submit an application to amend the City's SOI to the Fresno LAFCO.

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**Lead Agency Contact**

**Name** David Brletic  
**Agency** City of Reedley  
**Phone** 559-637-4200 ext 286 **Fax**  
**email**  
**Address** 1733 9th Street  
**City** Reedley **State** CA **Zip** 93654

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**Project Location**

**County** Fresno  
**City** Reedley  
**Region**  
**Cross Streets** Manning Avenue/Reed Avenue  
**Lat / Long** 36° 35' 46" N / 119° 27' 1" W  
**Parcel No.** Multiple  
**Township** 15S **Range** 23E **Section** 27 **Base** MDB&M

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**Proximity to:**

**Highways**  
**Airports** Reedley Municipal Airport  
**Railways** San Joaquin Valley RR  
**Waterways** Kings River  
**Schools** Kings Canyon Unified  
**Land Use** 1993 General Plan

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**Project Issues** Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse

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**Reviewing Agencies** Resources Agency; Department of Conservation; Cal Fire; Department of Parks and Recreation; Central Valley Flood Protection Board; Department of Water Resources; Department of Fish and Game, Region 4; Office of Emergency Management Agency, California; Native American Heritage Commission; Caltrans, Division of Aeronautics; Caltrans, District 6; Regional Water Quality Control Bd., Region 5 (Fresno)

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**Date Received** 03/24/2010 **Start of Review** 03/24/2010 **End of Review** 04/22/2010

Resources Agency

- Resources Agency  
Nadell Gayou
- Dept. of Boating & Waterways  
Mike Sotelo
- California Coastal Commission  
Elizabeth A. Fuchs
- Colorado River Board  
Gerald R. Zimmerman
- Dept. of Conservation  
Rebecca Salazar
- California Energy Commission  
Eric Knight
- Cal Fire  
Allen Robertson
- Office of Historic Preservation  
Wayne Donaldson
- Dept of Parks & Recreation  
Environmental Stewardship Section
- Central Valley Flood Protection Board  
James Herota
- S.F. Bay Conservation & Dev't Comm.  
Steve McAdam
- Dept. of Water Resources  
Resources Agency  
Nadell Gayou
- Conservancy

Fish and Game

- Dept. of Fish & Game  
Scott Flint  
Environmental Services Division
- Fish & Game Region 1  
Donald Koch
- Fish & Game Region 1E  
Laurie Harnsberger

- Fish & Game Region 2  
Jeff Drongesen
- Fish & Game Region 3  
Charles Armor
- Fish & Game Region 4  
Julie Vance
- Fish & Game Region 5  
Don Chadwick  
Habitat Conservation Program
- Fish & Game Region 6  
Gabrina Gatchel  
Habitat Conservation Program
- Fish & Game Region 6 IM  
Brad Henderson  
Inyo/Mono, Habitat Conservation Program
- Dept. of Fish & Game M  
George Isaac  
Marine Region

Other Departments

- Food & Agriculture  
Steve Shaifer  
Dept. of Food and Agriculture
- Dept. of General Services  
Public School Construction
- Dept. of General Services  
Anna Garbelf  
Environmental Services Section
- Dept. of Public Health  
Bridgette Binning  
Dept. of Health/Drinking Water

Independent Commissions/Boards

- Delta Protection Commission  
Linda Flack
- Cal EMA (Emergency Management Agency)  
Dennis Castillo
- Governor's Office of Planning & Research  
State Clearinghouse
- Native American Heritage Comm.  
Debbie Treadway

- Public Utilities Commission.  
Leo Wong
- Santa Monica Bay Restoration  
Guangyu Wang
- State Lands Commission  
Marina Brand
- Tahoe Regional Planning Agency (TRPA)  
Cherry Jacques

Business, Trans & Housing

- Caltrans - Division of Aeronautics  
Sandy Hesnard
- Caltrans - Planning  
Terri Pencovic
- California Highway Patrol  
Scott Loetscher  
Office of Special Projects
- Housing & Community Development  
CEQA Coordinator  
Housing Policy Division

Dept. of Transportation

- Caltrans, District 1  
Rex Jackman
- Caltrans, District 2  
Marcelino Gonzalez
- Caltrans, District 3  
Bruce de Terra
- Caltrans, District 4  
Lisa Carboni
- Caltrans, District 5  
David Murray
- Caltrans, District 6  
Michael Navarro
- Caltrans, District 7  
Elmer Alvarez

- Caltrans, District 8  
Dan Kopulsky
- Caltrans, District 9  
Gayle Rosander
- Caltrans, District 10  
Tom Dumas
- Caltrans, District 11  
Jacob Armstrong
- Caltrans, District 12  
Chris Here

Cal EPA

- Air Resources Board
- Airport Projects  
Jim Lerner
- Transportation Projects  
Douglas Ito
- Industrial Projects  
Mike Tollstrup

- California Department of Resources, Recycling & Recovery  
Sue O'Leary
- State Water Resources Control Board  
Regional Programs Unit  
Division of Financial Assistance

- State Water Resources Control Board  
Student Intern, 401 Water Quality Certification Unit  
Division of Water Quality
- State Water Resources Control Board  
Steven Herrera  
Division of Water Rights

- Dept. of Toxic Substances Control  
CEQA Tracking Center
- Department of Pesticide Regulation  
CEQA Coordinator

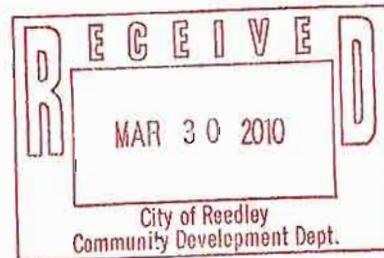
- RWQCB 1  
Cathleen Hudson  
North Coast Region (1)
- RWQCB 2  
Environmental Document Coordinator  
San Francisco Bay Region (2)
- RWQCB 3  
Central Coast Region (3)
- RWQCB 4  
Teresa Rodgers  
Los Angeles Region (4)
- RWQCB 5S  
Central Valley Region (5)
- RWQCB 5F  
Central Valley Region (5)  
Fresno Branch Office
- RWQCB 5R  
Central Valley Region (5)  
Redding Branch Office
- RWQCB 6  
Lahontan Region (6)
- RWQCB 6V  
Lahontan Region (6)  
Victorville Branch Office
- RWQCB 7  
Colorado River Basin Region (7)
- RWQCB 8  
Santa Ana Region (8)
- RWQCB 9  
San Diego Region (9)



# Fresno Local Agency Formation Commission

March 29, 2010

Mr. David Brletic, City Planner  
City of Reedley Planning Department  
1733 Ninth Street  
Reedley, CA 93654



Dear Mr. Brletic:

Subject: ***City of Reedley, General Plan Update, Notice of Preparation***

We have reviewed the *City of Reedley General Plan Update Notice of Preparation*. It is our understanding that this EIR may be used as the "Master" EIR for future land use entitlement permits and annexation activity. Future development and annexation proposals will require additional environmental review to determine compliance with the Master EIR. It should be noted that Fresno LAFCo's role in relationship to CEQA will be as a "responsible" agency to determine that all potential environmental impacts, mitigation measures, monitoring program(s), and findings have been properly addressed and adopted by the Lead Agency (City of Reedley) prior to taking action upon any annexation or sphere of influence proposal(s).

It should also be noted that Fresno LAFCo now only requires one paper copy and one electronic copy of the approved Initial Study and Negative Declaration, or Finding of Conformity and Notice of Determination be submitted with any future application. We would also appreciate receiving 1 paper and 1 electronic copy of the Final and Draft EIRs upon submittal of an initial annexation application to the City of Reedley.

We appreciate the opportunity to provide comments on the Notice of Preparation prepared for the General Plan Update.

Sincerely,

Jeff Witte, Executive Officer  
Fresno Local Agency Formation Commission

G:\LAFCO WORKING FILES\CEQA\Responses\Reedley GP Update NOP.doc

**Wiles, Frances**

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**From:** Brletic, David  
**Sent:** Monday, April 05, 2010 8:51 AM  
**To:** Wiles, Frances; Terry, Rob; Bruce O'Neal; Darlene Mata; Ron Sisseem  
**Subject:** FW: NOP Reedley General Plan Update

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**From:** Ruiz, Jaime [mailto:jruiz@skfcsd.org]  
**Sent:** Monday, April 05, 2010 8:20 AM  
**To:** Brletic, David  
**Cc:** Cazares, Veronica  
**Subject:** NOP Reedley General Plan Update

Mr. Brletic,

The District has "no comments" on the Notice of Preparation of a Draft Program Environmental Impact Report-Reedley General Plan Update.

If you have any questions, contact this office.

Jaime P. Ruiz  
Engineer Tech II

SKF CSD

Mailing Address: PO Box 158, Kingsburg, Ca 93631  
11301 E Conejo Avenue  
Kingsburg, Ca 93631

Phone .559-897-6500 extension 225

THIS MESSAGE CONTAINS CONFIDENTIAL INFORMATION INTENDED ONLY FOR THE USE OF THE INTENDED RECIPIENT(S) AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED. IF YOU ARE NOT THE INTENDED RECIPIENT, OR THE PERSON RESPONSIBLE FOR DELIVERING IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT READING, DISSEMINATING, DISTRIBUTING OR COPYING THIS MESSAGE IS STRICTLY PROHIBITED.



April 5, 2010

David Brletic  
City of Reedley  
173 9<sup>th</sup> Street  
Reedley, CA 93654

RE: Notice of Preparation for a Draft Environmental Impact Report for the City of Reedley's General Plan Update, SCH# 2010031106

Dear Mr. Brletic:

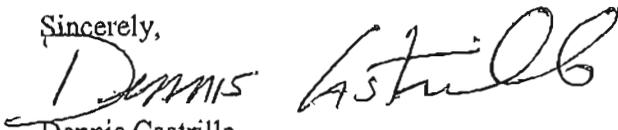
Thank you for the opportunity to comment on your Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the city's general plan update. In preparing the general plan and accompanying DEIR, the city should examine the sections of state planning law that involve potential hazards the city may face. For your information, I have underlined specific sections of state planning law where identification and analysis of hazards are discussed (see Attachment A).

Prior to the release of the draft general plan or within the DEIR, city staff or your consultants should examine each of the requirements in state planning law and determine if there are hazard issues within the community which the general plan should address. A table in the DEIR (or general plan) which identifies these specific issues and where they are addressed in the general plan would be helpful in demonstrating the city has complied with these requirements. If the DEIR determines that state planning law requirements have not been met, it should recommend that these issues be addressed in the general plan as a mitigation measure.

We note that state planning law includes a requirement for consultations with state agencies in regard to information related to hazards. Cal EMA would be happy to share all available information at our disposal to facilitate the city's ability to comply with state planning and environmental laws.

If you have any questions about these comments, please contact Andrew Rush at (916) 845-8269 or [andrew.rush@OES.ca.gov](mailto:andrew.rush@OES.ca.gov).

Sincerely,

  
Dennis Castrillo  
Environmental Officer

cc: State Clearinghouse

## Attachment A Hazards and State Planning Law Requirements

### General Plan Consistency

65300.5. In construing the provisions of this article, the Legislature intends that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.

### Seven Mandated Elements

65302. The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements:

(a) A land use element that designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources pursuant to paragraph (3) of subdivision (d). The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify and annually review those areas covered by the plan that are subject to flooding identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of Water Resources. The land use element shall also do both of the following:

(1) Designate in a land use category that provides for timber production those parcels of real property zoned for timberland production pursuant to the California Timberland Productivity Act of 1982, Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5.

(2) Consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace.

(A) In determining the impact of new growth on military readiness activities, information provided by military facilities shall be considered. Cities and counties shall address military impacts based on information from the military and other sources.

(B) The following definitions govern this paragraph:

(i) "Military readiness activities" mean all of the following:

(I) Training, support, and operations that prepare the men and women of the military for combat.

(II) Operation, maintenance, and security of any military installation.

(III) Testing of military equipment, vehicles, weapons, and sensors for proper operation or suitability for combat use.

(ii) "Military installation" means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the United States Department of Defense as defined in paragraph (1) of subsection (e) of Section 2687 of Title 10 of the United States Code.

(b) A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan.

(c) A housing element as provided in Article 10.6 (commencing with Section 65580).

(d) (1) A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element shall consider the effect of development within the jurisdiction, as described in the land use element, on natural resources located on public lands, including military installations. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies, including flood management, water conservation, or groundwater agencies that have developed, served, controlled, managed, or conserved water of any type for any purpose in the county or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or county.

(2) The conservation element may also cover all of the following:

(A) The reclamation of land and waters.

(B) Prevention and control of the pollution of streams and other waters.

(C) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.

(D) Prevention, control, and correction of the erosion of soils, beaches, and shores.

(E) Protection of watersheds.

(F) The location, quantity and quality of the rock, sand and gravel resources.

(3) Upon the next revision of the housing element on or after January 1, 2009, the conservation element shall identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.

(e) An open-space element as provided in Article 10.5 (commencing with Section 65560).

(f) (1) A noise element which shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Care Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

(A) Highways and freeways.

(B) Primary arterials and major local streets.

(C) Passenger and freight on-line railroad operations and ground rapid transit systems.

(D) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.

(E) Local industrial plants, including, but not limited to, railroad classification yards.

(F) Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment.

(2) Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive.

(3) The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.

(4) The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards.

(g) (1) A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wild land and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

(2) The safety element, upon the next revision of the housing element on or after January 1, 2009, shall also do the following:

(A) Identify information regarding flood hazards, including, but not limited to, the following:

(i) Flood hazard zones. As used in this subdivision, "flood hazard zone" means an area subject to flooding that is delineated as either a special hazard area or an area of moderate or minimal hazard on an official flood insurance rate map issued by the Federal Emergency Management Agency. The identification of a flood hazard zone does not imply that areas outside the flood hazard zones or uses permitted within flood hazard zones will be free from flooding or flood damage.

(ii) National Flood Insurance Program maps published by FEMA.

(iii) Information about flood hazards that is available from the United States Army Corps of Engineers.

(iv) Designated floodway maps that are available from the Central Valley Flood Protection Board.

(v) Dam failure inundation maps prepared pursuant to Section 8589.5 that are available from the Office of Emergency Services.

(vi) Awareness Floodplain Mapping Program maps and 200-year flood plain maps that are or may be available from, or accepted by, the Department of Water Resources.

(vii) Maps of levee protection zones.

(viii) Areas subject to inundation in the event of the failure of project or nonproject levees or floodwalls.

(ix) Historical data on flooding, including locally prepared maps of areas that are subject to flooding, areas that are vulnerable to flooding after wildfires, and sites that have been repeatedly damaged by flooding.

(x) Existing and planned development in flood hazard zones, including structures, roads, utilities, and essential public facilities.

(xi) Local, state, and federal agencies with responsibility for flood protection, including special districts and local offices of emergency services.

(B) Establish a set of comprehensive goals, policies, and objectives based on the information identified pursuant to subparagraph (A), for the protection of the community from the unreasonable risks of flooding, including, but not limited to:

- (i) Avoiding or minimizing the risks of flooding to new development.
  - (ii) Evaluating whether new development should be located in flood hazard zones, and identifying construction methods or other methods to minimize damage if new development is located in flood hazard zones.
  - (iii) Maintaining the structural and operational integrity of essential public facilities during flooding.
  - (iv) Locating, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities or identifying construction methods or other methods to minimize damage if these facilities are located in flood hazard zones.
  - (v) Establishing cooperative working relationships among public agencies with responsibility for flood protection.
- (C) Establish a set of feasible implementation measures designed to carry out the goals, policies, and objectives established pursuant to subparagraph (B).
- (3) After the initial revision of the safety element pursuant to paragraph (2), upon each revision of the housing element, the planning agency shall review and, if necessary, revise the safety element to identify new information that was not available during the previous revision of the safety element.
- (4) Cities and counties that have flood plain management ordinances that have been approved by FEMA that substantially comply with this section, or have substantially equivalent provisions to this subdivision in their general plans, may use that information in the safety element to comply with this subdivision, and shall summarize and incorporate by reference into the safety element the other general plan provisions or the flood plain ordinance, specifically showing how each requirement of this subdivision has been met.
- (5) Prior to the periodic review of its general plan and prior to preparing or revising its safety element, each city and county shall consult the California Geological Survey of the Department of Conservation, the Central Valley Flood Protection Board, if the city or county is located within the boundaries of the Sacramento and San Joaquin Drainage District, as set forth in Section 8501 of the Water Code, and the Office of Emergency Services for the purpose of including information known by and available to the department, the office, and the board required by this subdivision.
- (6) To the extent that a county's safety element is sufficiently detailed and contains appropriate policies and programs for adoption by a city, a city may adopt that portion of the county's safety element that pertains to the city's planning area in satisfaction of the requirement imposed by this subdivision.

### **Consistency with Airport Land Use Plans**

**65302.3.** (a) The general plan, and any applicable specific plan prepared pursuant to Article 8 (commencing with Section 65450), shall be consistent with the plan adopted or amended pursuant to Section 21675 of the Public Utilities Code.

### **Review of Safety Element**

**65302.5.** (a) At least 45 days prior to adoption or amendment of the safety element, each county and city shall submit to the Division of Mines and Geology of the Department of Conservation

one copy of a draft of the safety element or amendment and any technical studies used for developing the safety element. The division may review drafts submitted to it to determine whether they incorporate known seismic and other geologic hazard information, and report its findings to the planning agency within 30 days of receipt of the draft of the safety element or amendment pursuant to this subdivision. The legislative body shall consider the division's findings prior to final adoption of the safety element or amendment unless the division's findings are not available within the above prescribed time limits or unless the division has indicated to the city or county that the division will not review the safety element. If the division's findings are not available within those prescribed time limits, the legislative body may take the division's findings into consideration at the time it considers future amendments to the safety element. Each county and city shall provide the division with a copy of its adopted safety element or amendments. The division may review adopted safety elements or amendments and report its findings. All findings made by the division shall be advisory to the planning agency and legislative body.

(1) The draft element of or draft amendment to the safety element of a county or a city's general plan shall be submitted to the State Board of Forestry and Fire Protection and to every local agency that provides fire protection to territory in the city or county at least 90 days prior to either of the following:

(A) The adoption or amendment to the safety element of its general plan for each county that contains state responsibility areas.

(B) The adoption or amendment to the safety element of its general plan for each city or county that contains a very high fire hazard severity zone as defined pursuant to subdivision (b) of Section 51177.

(2) A county that contains state responsibility areas and a city or county that contains a very high fire hazard severity zone as defined pursuant to subdivision (b) of Section 51177, shall submit for review the safety element of its general plan to the State Board of Forestry and Fire Protection and to every local agency that provides fire protection to territory in the city or county in accordance with the following dates as specified, unless the local government submitted the element within five years prior to that date:

(A) Local governments within the regional jurisdiction of the San Diego Association of Governments: December 31, 2010.

(B) Local governments within the regional jurisdiction of the Southern California Association of Governments: December 31, 2011.

(C) Local governments within the regional jurisdiction of the Association of Bay Area Governments: December 31, 2012.

(D) Local governments within the regional jurisdiction of the Council of Fresno County Governments, the Kern County Council of Governments, and the Sacramento Area Council of Governments: June 30, 2013.

(E) Local governments within the regional jurisdiction of the Association of Monterey Bay Area Governments: December 31, 2014.

(F) All other local governments: December 31, 2015.

(3) The State Board of Forestry and Fire Protection shall, and a local agency may, review the draft or an existing safety element and report its written recommendations to the planning agency within 60 days of its receipt of the draft or existing safety element. The State Board of Forestry and Fire Protection and local agency shall review the draft or existing safety element and may

offer written recommendations for changes to the draft or existing safety element regarding both of the following:

(A) Uses of land and policies in state responsibility areas and very high fire hazard severity zones that will protect life, property, and natural resources from unreasonable risks associated with wildland fires.

(B) Methods and strategies for wildland fire risk reduction and prevention within state responsibility areas and very high hazard severity zones.

(b) Prior to the adoption of its draft element or draft amendment, the board of supervisors of the county or the city council of a city shall consider the recommendations made by the State Board of Forestry and Fire Protection and any local agency that provides fire protection to territory in the city or county. If the board of supervisors or city council determines not to accept all or some of the recommendations, if any, made by the State Board of Forestry and Fire Protection or local agency, the board of supervisors or city council shall communicate in writing to the State Board of Forestry and Fire Protection or to the local agency, its reasons for not accepting the recommendations.

## **Open Space Plans**

65560. (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water that is essentially unimproved and devoted to an open-space use as defined in this section, and that is designated on a local, regional or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.



## County of Fresno

Department of Public Health  
Edward L. Moreno, M.D., M.P.H., Director-Health Officer

---

April 9, 2010

999999999  
LU0015586  
PE 2600

David Brletic  
City of Reedley  
1717 Ninth Street  
Reedley, CA 96654

Dear Mr. Brletic:

**SUBJECT: Notice of Preparation Draft Program Environmental Impact Report –  
Reedley General Plan Update**

Thank you for the opportunity to review the above project. The Fresno County Department of Public Health, Environmental Health Division concurs with the probable environmental effects outlined in the Notice of Preparation and has no additional comments at this time. However, we request to be included in the future routing of the Draft Environmental Impact Report

If I can be of further assistance, please contact me at (559) 445-3271.

Sincerely,

**Glenn Allen**  
Glenn Allen, R.E.H.S., M.S.  
Supervising Environmental Health Specialist  
Environmental Health Division

Digitally signed by Glenn Allen  
DN: cn=Glenn Allen, o=Environmental Health  
Division, ou=Public Health, email=glallen@co.fresno.  
ca.us, c=US  
Date: 2010.04.09 16:20:19 -0700

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Reedley NOP EIR Program EIR GP Update

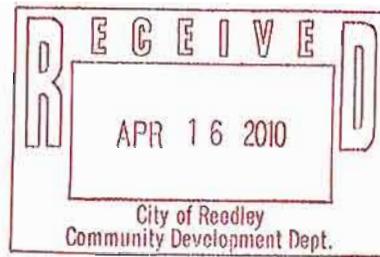
## PUBLIC UTILITIES COMMISSION

605 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



April 15, 2010

David Brletic  
City of Reedley  
1733 9<sup>th</sup> Street  
Reedley, CA 93654



Re: Notice of Preparation, Draft Environmental Impact Report (DEIR)  
City of Reedley General Plan Update EIR  
SCH# 2010031106

Dear Mr. Brletic:

As the state agency responsible for rail safety within California, the California Public Utilities Commission (CPUC or Commission) recommends that development projects proposed near rail corridors be planned with the safety of these corridors in mind. New developments and improvements to existing facilities may increase vehicular traffic volumes, not only on streets and at intersections, but also at at-grade highway-rail crossings. In addition, projects may increase pedestrian traffic at crossings, and elsewhere along rail corridor rights-of-way. Working with CPUC staff early in project planning will help project proponents, agency staff, and other reviewers to identify potential project impacts and appropriate mitigation measures, and thereby improve the safety of motorists, pedestrians, railroad personnel, and railroad passengers.

The traffic impact study within the traffic/circulation section of the DEIR needs to specifically consider safety issues to at-grade railroad crossings. In addition to the potential impacts of the proposed project itself, the DEIR needs to consider cumulative rail safety-related impacts created by other projects.

In general, the major types of impacts to consider are collisions between trains and vehicles, and between trains and pedestrians. The proposed project has the potential to increase vehicular and pedestrian traffic in the vicinity.

Measures to reduce adverse impacts to rail safety need to be considered in the DEIR. General categories of such measures include:

- Installation of grade separations at crossings, i.e., physically separating roads and railroad track by constructing overpasses or underpasses
- Improvements to warning devices at existing highway-rail crossings
- Installation of additional warning signage
- Improvements to traffic signaling at intersections adjacent to crossings, e.g., traffic preemption

David Brletic  
SCH # 2010031106  
April 15, 2010  
Page 2 of 2

- Installation of median separation to prevent vehicles from driving around railroad crossing gates
- Prohibition of parking within 100 feet of crossings to improve the visibility of warning devices and approaching trains
- Installation of pedestrian-specific warning devices and channelization and sidewalks
- Construction of pull out lanes for buses and vehicles transporting hazardous materials
- Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way
- Elimination of driveways near crossings
- Increased enforcement of traffic laws at crossings
- Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings

Commission approval is required to modify an existing highway-rail crossing or to construct a new crossing.

Thank you for your consideration of these comments. We look forward to working with the City on this project. If you have any questions in this matter, please contact me at (415) 713-0092 or email at [ms2@cpuc.ca.gov](mailto:ms2@cpuc.ca.gov).

Sincerely,



Moses Stites  
Rail Corridor Safety Specialist  
Consumer Protection and Safety Division  
Rail Transit and Crossings Branch  
515 L Street, Suite 1119  
Sacramento, CA 95814

## Wiles, Frances

---

**From:** Brletic, David  
**Sent:** Tuesday, April 20, 2010 10:06 AM  
**To:** Ron Sisseem; Bruce O'Neal; darlene@drmataconsulting.com; Mata, Darlene; Terry, Rob; Wiles, Frances  
**Subject:** FW: City of Reedley Draft Program EIR General Plan Update

David Brletic  
City Planner  
City of Reedley  
1733 9th Street  
Reedley, CA 93654  
559-637-4200, Ext. 286  
559-637-2139, Fax

---

**From:** Hanlon, Erin M SPK [mailto:Erin.M.Hanlon@usace.army.mil]  
**Sent:** Tuesday, April 20, 2010 9:59 AM  
**To:** Brletic, David  
**Subject:** City of Reedley Draft Program EIR General Plan Update

April 20, 2010

Regulatory Division SPK-2010-00520

David Brletic  
City of Reedley Planning Department  
1733 Ninth Street  
Reedley, California 93654

Dear Ms. Brletic:

I am responding to your March 25, 2010 request for comments on the City of Reedley General Plan Update. The study area is located in the City of Reedley near Section 35, Township 13 S, Range 21 E, Latitude 36.75874°, Longitude - 119.65444°, Fresno County, California. Your identification number is SPK-2010-00520.

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers, perennial or intermittent streams, lakes, ponds, wetlands, vernal pools, marshes, wet meadows, and seeps. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

To ascertain the extent of waters on individual project sites, the applicant should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetland Delineations", under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is also available on our website at the same location.

The range of alternatives considered for any project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation.

Please refer to identification number SPK-2010-00520 in any correspondence concerning the City of Reedley general plan. If you have any questions, please contact me at U.S. Army Corps of Engineers, Regulatory Division, 1325 J Street, Rm 1480, Sacramento, CA 95814, email [Erin.M.Hanlon@usace.army.mil](mailto:Erin.M.Hanlon@usace.army.mil), or telephone 916-557-5250. For more information regarding our program, please visit our website at [www.spk.usace.army.mil/regulatory.html](http://www.spk.usace.army.mil/regulatory.html).

Sincerely,  
Erin M. Hanlon  
Regulatory Project Manager, California South Branch

Erin M. Hanlon  
Regulatory Project Manager, Regulatory Division  
U.S. Army Corps of Engineers, Sacramento District,  
1325 J Street, Room 1480  
Sacramento, CA 95814-2922  
(916) 557-7759  
(Fax) 557-6877  
[erin.m.hanlon@usace.army.mil](mailto:erin.m.hanlon@usace.army.mil)

Our customer service hours are from 10 am-2:30 pm, M-F. E-mail and telephone calls will only be answered during this time.

Let us know how we're doing.  
<http://per2.nwp.usace.army.mil/survey.html>

Information on the Regulatory Program.  
<http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/index.html>

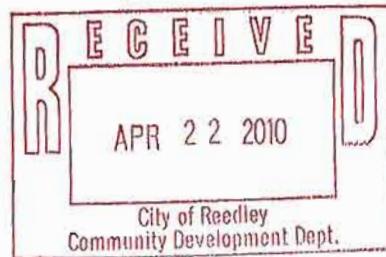
## DEPARTMENT OF TRANSPORTATION

1352 WEST OLIVE AVENUE  
 P.O. BOX 12616  
 FRESNO, CA 93778-2616  
 PHONE (559) 445-5868  
 FAX (559) 488-4088  
 TTY (559) 488-4066



*Flex your power!  
 Be energy efficient!*

April 20, 2010



2131-IGR/CEQA  
 6-FRE-GEN  
 NOP DRAFT EIR  
 REEDLEY GPU  
 SCH 2010031106

Mr. David Brletic  
 City of Reedley  
 1733 Ninth Street  
 Reedley, CA 93654

Dear Mr. Brletic:

We have completed our review of the Notice of Preparation (NOP) of a Draft Program EIR for the City of Reedley General Plan Update. Caltrans has the following comments:

It is indicated in the NOP that *new development may significantly impact transportation facilities*. Caltrans concurs with this statement and would like to point out that transportation facilities should also include State facilities as project-generated trips are expected to have impacts to the State Route (SR) 99 interchange at Manning Avenue. A Traffic Impact Study (TIS) is needed to assess the project-related impacts to the State Highway system and appropriate mitigation measures. Please have the preparer of the traffic study reference the Caltrans Guide for the Preparation of Traffic Impact Studies, dated December 2002, and send the scope of the TIS to Caltrans before the traffic study is conducted. Caltrans Guide, while advisory, contains Best Practices and gives insight into Caltrans' expectations when reviewing a traffic study. If the traffic consultant has any issues or concerns regarding the use of the Guide or its interpretation, please contact us so resolution can be reached.

Based upon Caltrans review of previous traffic studies, Caltrans has indicated the need for the following future improvements:

**SR 99/Manning Avenue Interchange:**

- Widen overcrossing to allow for left turn to northbound ramps.  
 - Estimated Cost \$1,146,000 (Mitigation Cost/Trip - \$1,860)
- Signalize northbound off-ramp.  
 - Estimated Cost \$173,000 (Mitigation Cost/Trip - \$420)
- Signalize southbound off-ramp.  
 - Estimated Cost \$173,000 (Mitigation Cost/Trip - \$250)

Mr. David Brletic  
April 20, 2010  
Page 2

Please send a response to our comments prior to staff's recommendations to the Planning Commission and the City Council. If you have any questions, please call me at (559) 445-5868.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Navarro', is written over a light blue rectangular background.

MICHAEL NAVARRO  
Office of Transportation Planning  
District 06

C: SCH

Enclosure



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GUIDE FOR THE PREPARATION

OF

TRAFFIC IMPACT STUDIES

---

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION

December 2002

## PREFACE

*The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS).*

*In the early 1990s, the Caltrans District 6 office located in Fresno identified a need to provide better quality and consistency in the analysis of traffic impacts generated by local development and land use change proposals that affect State highway facilities. At that time, District 6 brought together both public and private sector expertise to develop a traffic impact study guide. The District 6 guide has proven to be successful at promoting consistency and uniformity in the identification and analysis of traffic impacts generated by local development and land use changes.*

*The guide developed in Fresno was adapted for statewide use by a team of Headquarters and district staff. The guide will provide consistent guidance for Caltrans staff who review local development and land use change proposals as well as inform local agencies of the information needed for Caltrans to analyze the traffic impacts to State highway facilities. The guide will also benefit local agencies and the development community by providing more expeditious review of local development proposals.*

*Even though sound planning and engineering practices were used to adapt the Fresno TIS guide, it is anticipated that changes will occur over time as new technologies and more efficient practices become available. To facilitate these changes, Caltrans encourages all those who use this guide to contact their nearest district office (i.e., IGR/CEQA Coordinator) to coordinate any changes with the development team.*

## ACKNOWLEDGEMENTS

*The District 6 traffic impact study guide provided the impetus and a starting point for developing the statewide guide. Special thanks is given to Marc Birnbaum for recognizing the need for a TIS guide and for his valued experience and vast knowledge of land use planning to significantly enhance the effort to adapt the District 6 guide for statewide use. Randy Treece from District 6 provided many hours of coordination, research and development of the original guide and should be commended for his diligent efforts. Sharri Bender Ehlert of District 6 provided much of the technical expertise in the adaptation of the District 6 guide and her efforts are greatly appreciated.*

*A special thanks is also given to all those Cities, Counties, Regional Agencies, Congestion Management Agencies, Consultants, and Caltrans Employees who reviewed the guide and provided input during the development of this Guide for the Preparation of Traffic Impact Studies.*

## TABLE OF CONTENTS

<u>Contents</u>	<u>Page Number</u>
PREFACE and ACKNOWLEDGEMENTS	ii
I. INTRODUCTION	1
II. WHEN A TRAFFIC IMPACT STUDY IS NEEDED	1
A. Trip Generation Thresholds	2
B. Exceptions	2
C. Updating An Existing Traffic Impact Study	2
III. SCOPE OF TRAFFIC IMPACT STUDY	2
A. Boundaries of the Traffic Impact Study	2
B. Traffic Analysis Scenarios	2
IV. TRAFFIC DATA	4
A. Trip Generation	4
B. Traffic Counts	4
C. Peak Hours	4
D. Travel Forecasting (Transportation Modeling)	5
V. TRAFFIC IMPACT ANALYSIS METHODOLOGIES	5
A. Freeway Sections	5
B. Weaving Areas	5
C. Ramps and Ramp Junctions	5
D. Multi-lane Rural and Urban Highways	5
E. Two-lane Highways	5
F. Signalized Intersections	5
G. Unsignalized Intersections	5
H. Transit Capacity	5
I. Pedestrians	5
J. Bicycles	5
K. Caltrans Criteria/Warrants	5
L. Channelization	5
VI. MITIGATION MEASURES	6
Appendix "A" Minimum Contents of Traffic Impact Study	
Appendix "B" Methodology for Calculating Equitable Mitigation Measures	
Appendix "C" Measures of Effectiveness by Facility Type	

## I. INTRODUCTION

Caltrans desires to provide a safe and efficient State transportation system for the citizens of California pursuant to various Sections of the California Streets and Highway Code. This is done in partnership with local and regional agencies through procedures established by the California Environmental Quality Act (CEQA) and other land use planning processes. The intent of this guide is to provide a starting point and a consistent basis in which Caltrans evaluates traffic impacts to State highway facilities. The applicability of this guide for local streets and roads (non-State highways) is at the discretion of the effected jurisdiction.

Caltrans reviews federal, State, and local agency development projects<sup>1</sup>, and land use change proposals for their potential impact to State highway facilities. The primary objectives of this guide is to provide:

- guidance in determining if and when a traffic impact study (TIS) is needed,
- consistency and uniformity in the identification of traffic impacts generated by local land use proposals,
- consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals,
- lead agency<sup>2</sup> officials with the information necessary to make informed decisions regarding the existing and proposed transportation infrastructure (see Appendix A, Minimum Contents of a TIS)
- TIS requirements early in the planning phase of a project (i.e., initial study, notice of preparation, or earlier) to eliminate potential delays later,
- a quality TIS by agreeing to the assumptions, data requirements, study scenarios, and analysis methodologies prior to beginning the TIS, and
- early coordination during the planning phases of a project to reduce the time and cost of preparing a TIS.

## II. WHEN A TRAFFIC IMPACT STUDY IS NEEDED

The level of service<sup>3</sup> (LOS) for operating State highway facilities is based upon measures of effectiveness (MOEs). These MOEs (see Appendix “C-2”) describe the measures best suited for analyzing State highway facilities (i.e., freeway segments, signalized intersections, on- or off-ramps, etc.). Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” (see Appendix “C-3”) on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.

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<sup>1</sup> "Project" refers to activities directly undertaken by government, financed by government, or requiring a permit or other approval from government as defined in Section 21065 of the Public Resources Code and Section 15378 of the California Code of Regulations.

<sup>2</sup> "Lead Agency" refers to the public agency that has the principal responsibility for carrying out or approving a project. Defined in Section 21165 of the Public Resources Code, the "California Environmental Quality Act, and Section 15367 of the California Code of Regulations.

<sup>3</sup> "Level of service" as defined in the latest edition of the Highway Capacity Manual, Transportation Research Board, National Research Council.

## A. Trip Generation Thresholds

The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS “C” or “D”).
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis<sup>4</sup>:
  - a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS “E” or “F”).
  - b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
  - c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).

Note: A traffic study may be as simple as providing a traffic count to as complex as a microscopic simulation. The appropriate level of study is determined by the particulars of a project, the prevailing highway conditions, and the forecasted traffic.

## B. Exceptions

Exceptions require consultation between the lead agency, Caltrans, and those preparing the TIS. When a project’s traffic impact to a State highway facility can clearly be anticipated without a study and all the parties involved (lead agency, developer, and the Caltrans district office) are able to negotiate appropriate mitigation, a TIS may not be necessary.

## C. Updating An Existing Traffic Impact Study

A TIS requires updating when the amount or character of traffic is significantly different from an earlier study. Generally a TIS requires updating every two years. A TIS may require updating sooner in rapidly developing areas and not as often in slower developing areas. In these cases, consultation with Caltrans is strongly recommended.

## III. SCOPE OF TRAFFIC IMPACT STUDY

Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended before commencing work on the study to establish the appropriate scope. At a minimum, the TIS should include the following:

### A. Boundaries of the Traffic Impact Study

All State highway facilities impacted in accordance with the criteria in Section II should be studied. Traffic impacts to local streets and roads can impact intersections with State highway facilities. In these cases, the TIS should include an analysis of adjacent local facilities, upstream and downstream, of the intersection (i.e., driveways, intersections, and interchanges) with the State highway.

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<sup>4</sup> A “lesser analysis” may include obtaining traffic counts, preparing signal warrants, or a focused TIS, etc.

## B. Traffic Analysis Scenarios

Caltrans is interested in the effects of general plan updates and amendments as well as the effects of specific project entitlements (i.e., site plans, conditional use permits, sub-divisions, rezoning, etc.) that have the potential to impact a State highway facility. The complexity or magnitude of the impacts of a project will normally dictate the scenarios necessary to analyze the project. Consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to determine the appropriate scenarios for the analysis. The following scenarios should be addressed in the TIS when appropriate:

1. When only a general plan amendment or update is being sought, the following scenarios are required:
  - a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
  - b) Proposed Project Only with Select Zone<sup>5</sup> Analysis - Trip generation and assignment for build-out of general plan.
  - c) General Plan Build-out Only - Trip assignment and peak hour LOS analysis. Include current land uses and other pending general plan amendments.
  - d) General Plan Build-out Plus Proposed Project - Trip assignment and peak hour LOS analysis. Include proposed project and other pending general plan amendments.
2. When a general plan amendment is not proposed and a proposed project is seeking specific entitlements (i.e., site plans, conditional use permits, sub-division, rezoning, etc.), the following scenarios must be analyzed in the TIS:
  - a) Existing Conditions - Current year traffic volumes and peak hour LOS analysis of effected State highway facilities.
  - b) Proposed Project Only - Trip generation, distribution, and assignment in the year the project is anticipated to complete construction.
  - c) Cumulative Conditions (Existing Conditions Plus Other Approved and Pending Projects Without Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
  - d) Cumulative Conditions Plus Proposed Project (Existing Conditions Plus Other Approved and Pending Projects Plus Proposed Project) - Trip assignment and peak hour LOS analysis in the year the project is anticipated to complete construction.
  - e) Cumulative Conditions Plus Proposed Phases (Interim Years) - Trip assignment and peak hour LOS analysis in the years the project phases are anticipated to complete construction.
3. In cases where the circulation element of the general plan is not consistent with the land use element or the general plan is outdated and not representative of current or future forecasted conditions, all scenarios from Sections III. B. 1. and 2. should be utilized with the exception of duplicating of item 2.a.

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<sup>5</sup> "Select zone" analysis represents a project only traffic model run, where the project's trips are distributed and assigned along a loaded highway network. This procedure isolates the specific impact on the State highway network.

## IV. TRAFFIC DATA

Prior to any fieldwork, consultation between the lead agency, Caltrans, and those preparing the TIS is recommended to reach consensus on the data and assumptions necessary for the study. The following elements are a starting point in that consideration.

### A. Trip Generation

The latest edition of the Institute of Transportation Engineers' (ITE) TRIP GENERATION report should be used for trip generation forecasts. Local trip generation rates are also acceptable if appropriate validation is provided to support them.

1. Trip Generation Rates – When the land use has a limited number of studies to support the trip generation rates or when the Coefficient of Determination ( $R^2$ ) is below 0.75, consultation between the lead agency, Caltrans and those preparing the TIS is recommended.
2. Pass-by Trips<sup>6</sup> – Pass-by trips are only considered for retail oriented development. Reductions greater than 15% requires consultation and acceptance by Caltrans. The justification for exceeding a 15% reduction should be discussed in the TIS.
3. Captured Trips<sup>7</sup> – Captured trip reductions greater than 5% requires consultation and acceptance by Caltrans. The justification for exceeding a 5% reduction should be discussed in the TIS.
4. Transportation Demand Management (TDM) – Consultation between the lead agency and Caltrans is essential before applying trip reduction for TDM strategies.

NOTE: Reasonable reductions to trip generation rates are considered when adjacent State highway volumes are sufficient (at least 5000 ADT) to support reductions for the land use.

### B. Traffic Counts

Prior to field traffic counts, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to determine the level of detail (e.g., location, signal timing, travel speeds, turning movements, etc.) required at each traffic count site. All State highway facilities within the boundaries of the TIS should be considered. Common rules for counting vehicular traffic include but are not limited to:

1. Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions.
2. Vehicle counts should be conducted during the appropriate peak hours (see peak hour discussion below).
3. Seasonal and weekend variations in traffic should also be considered where appropriate (i.e., recreational routes, tourist attractions, harvest season, etc.).

### C. Peak Hours

To eliminate unnecessary analysis, consultation between the lead agency, Caltrans and those preparing the TIS is recommended during the early planning stages of a project. In general, the TIS should include a morning (a.m.) and an evening (p.m.) peak hour analyses. Other peak hours (e.g., 11:30 a.m. to 1:30 p.m., weekend, holidays, etc.) may also be required to determine the significance of the traffic impacts generated by a project.

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<sup>6</sup> "Pass-by" trips are made as intermediate stops between an origin and a primary trip destination (i.e., home to work, home to shopping, etc.).

<sup>7</sup> "Captured Trips" are trips that do not enter or leave the driveways of a project's boundary within a mixed-use development.

#### D. Travel Forecasting (Transportation Modeling)

The local or regional traffic model should reflect the most current land use and planned improvements (i.e., where programming or funding is secured). When a general plan build-out model is not available, the closest forecast model year to build-out should be used. If a traffic model is not available, historical growth rates and current trends can be used to project future traffic volumes. The TIS should clearly describe any changes made in the model to accommodate the analysis of a proposed project.

#### V. TRAFFIC IMPACT ANALYSIS METHODOLOGIES

Typically, the traffic analysis methodologies for the facility types indicated below are used by Caltrans and will be accepted without prior consultation. When a State highway has saturated flows, the use of a micro-simulation model is encouraged for the analysis (please note however, the micro-simulation model must be calibrated and validated for reliable results). Other analysis methods may be accepted, however, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to agree on the data necessary for the analysis.

- A. Freeway Segments – Highway Capacity Manual (HCM)\*, operational analysis
- B. Weaving Areas – Caltrans Highway Design Manual (HDM)
- C. Ramps and Ramp Junctions – HCM\*, operational analysis or Caltrans HDM, Caltrans Ramp Metering Guidelines (most recent edition)
- D. Multi-Lane Highways – HCM\*, operational analysis
- E. Two-lane Highways – HCM\*, operational analysis
- F. Signalized Intersections<sup>8</sup> – HCM\*, Highway Capacity Software\*\*, operational analysis, TRAFFIX<sup>TM\*\*</sup>, Synchro\*\*, see footnote 8
- G. Unsignalized Intersections – HCM\*, operational analysis, Caltrans Traffic Manual for signal warrants if a signal is being considered
- H. Transit – HCM\*, operational analysis
- I. Pedestrians – HCM\*
- J. Bicycles – HCM\*
- K. Caltrans Criteria/Warrants – Caltrans Traffic Manual (stop signs, traffic signals, freeway lighting, conventional highway lighting, school crossings)
- L. Channelization – Caltrans guidelines for Reconstruction of Intersections, August 1985, Ichiro Fukutome

\*The most current edition of the Highway Capacity Manual, Transportation Research Board, National Research Council, should be used.

\*\*NOTE: Caltrans does not officially advocate the use of any special software. However, consistency with the HCM is advocated in most but not all cases. The Caltrans local development review units utilize the software mentioned above. If different software or analytical techniques are used for the TIS then consultation between the lead agency, Caltrans and those preparing the TIS is recommended. Results that are significantly different than those produced with the analytical techniques above should be challenged.

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<sup>8</sup> The procedures in the Highway Capacity Manual "do not explicitly address operations of closely spaced signalized intersections. Under such conditions, several unique characteristics must be considered, including spill-back potential from the downstream intersection to the upstream intersection, effects of downstream queues on upstream saturation flow rate, and unusual platoon dispersion or compression between intersections. An example of such closely spaced operations is signalized ramp terminals at urban interchanges. Queue interactions between closely spaced intersections may seriously distort the procedures in" the HCM.

## VI. MITIGATION MEASURES

The TIS should provide the nexus [Nollan v. California Coastal Commission, 1987, 483 U.S. 825 (108 S.Ct. 314)] between a project and the traffic impacts to State highway facilities. The TIS should also establish the rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)] between the mitigation measures and the traffic impacts. One method for establishing the rough proportionality or a project proponent's equitable responsibility for a project's impacts is provided in Appendix "B." Consultation between the lead agency, Caltrans and those preparing the TIS is recommended to reach consensus on the mitigation measures and who will be responsible.

Mitigation measures must be included in the traffic impact analysis. This determines if a project's impacts can be eliminated or reduced to a level of insignificance. Eliminating or reducing impacts to a level of insignificance is the standard pursuant to CEQA and the National Environmental Policy Act (NEPA). The lead agency is responsible for administering the CEQA review process and has the principal authority for approving a local development proposal or land use change. Caltrans, as a responsible agency, is responsible for reviewing the TIS for errors and omissions that pertain to State highway facilities. However, the authority vested in the lead agency under CEQA does not take precedence over other authorities in law.

If the mitigation measures require work in the State highway right-of-way an encroachment permit from Caltrans will be required. This work will also be subject to Caltrans standards and specifications. Consultation between the lead agency, Caltrans and those preparing the TIS early in the planning process is strongly recommended to expedite the review of local development proposals and to reduce conflicts and misunderstandings in both the local agency CEQA review process as well as the Caltrans encroachment permit process.

# **APPENDIX “A”**

## **MINIMUM CONTENTS**

### **OF A**

## **TRAFFIC IMPACT STUDY**

# MINIMUM CONTENTS OF TRAFFIC IMPACT STUDY REPORT

- I. EXECUTIVE SUMMARY
- II. TABLE OF CONTENTS
  - A. List of Figures (Maps)
  - B. List of Tables
- III. INTRODUCTION
  - A. Description of the proposed project
  - B. Location of project
  - C. Site plan including all access to State highways (site plan, map)
  - D. Circulation network including all access to State highways (vicinity map)
  - E. Land use and zoning
  - F. Phasing plan including proposed dates of project (phase) completion
  - G. Project sponsor and contact person(s)
  - H. References to other traffic impact studies
- IV. TRAFFIC ANALYSIS
  - A. Clearly stated assumptions
  - B. Existing and projected traffic volumes (including turning movements), facility geometry (including storage lengths), and traffic controls (including signal phasing and multi-signal progression where appropriate) (figure)
  - C. Project trip generation including references (table)
  - D. Project generated trip distribution and assignment (figure)
  - E. LOS and warrant analyses - existing conditions, cumulative conditions, and full build of general plan conditions with and without project
- V. CONCLUSIONS AND RECOMMENDATIONS
  - A. LOS and appropriate MOE quantities of impacted facilities with and without mitigation measures
  - B. Mitigation phasing plan including dates of proposed mitigation measures
  - C. Define responsibilities for implementing mitigation measures
  - D. Cost estimates for mitigation measures and financing plan
- VI. APPENDICES
  - A. Description of traffic data and how data was collected
  - B. Description of methodologies and assumptions used in analyses
  - C. Worksheets used in analyses (i.e., signal warrant, LOS, traffic count information, etc.)

# **APPENDIX “B”**

**METHODOLOGY FOR**

**CALCULATING EQUITABLE**

**MITIGATION MEASURES**

## METHOD FOR CALCULATING EQUITABLE MITIGATION MEASURES

The methodology below is neither intended as, nor does it establish, a legal standard for determining equitable responsibility and cost of a project's traffic impact, the intent is to provide:

1. A starting point for early discussions to address traffic mitigation equitably.
2. A means for calculating the equitable share for mitigating traffic impacts.
3. A means for establishing rough proportionality [Dolan v. City of Tigard, 1994, 512 U.S. 374 (114 S. Ct. 2309)].

The formulas should be used when:

- A project has impacts that do not immediately warrant mitigation, but their cumulative effects are significant and will require mitigating in the future.
- A project has an immediate impact and the lead agency has assumed responsibility for addressing operational improvements

NOTE: This formula is not intended for circumstances where a project proponent will be receiving a substantial benefit from the identified mitigation measures. In these cases, (e.g., mid-block access and signalization to a shopping center) the project should take full responsibility to toward providing the necessary infrastructure.

### EQUITABLE SHARE RESPONSIBILITY: Equation C-1

NOTE:  $T_E < T_B$ , see explanation for  $T_B$  below.

$$P = \frac{T}{T_B - T_E}$$

Where:

- P = The equitable share for the proposed project's traffic impact.
- T = The vehicle trips generated by the project during the peak hour of adjacent State highway facility in vehicles per hour, vph.
- $T_B$  = The forecasted traffic volume on an impacted State highway facility at the time of general plan build-out (e.g., 20 year model or the furthest future model date feasible), vph.
- $T_E$  = The traffic volume existing on the impacted State highway facility plus other approved projects that will generate traffic that has yet to be constructed/opened, vph.

### EQUITABLE COST: Equation C-2

$$C = P (C_T)$$

Where:

- C = The equitable cost of traffic mitigation for the proposed project, (\$). (Rounded to nearest one thousand dollars)
- P = The equitable share for the project being considered.
- $C_T$  = The total cost estimate for improvements necessary to mitigate the forecasted traffic demand on the impacted State highway facility in question at general plan build-out, (\$).

### NOTES

1. Once the equitable share responsibility and equitable cost has been established on a per trip basis, these values can be utilized for all projects on that State highway facility until the forecasted general plan build-out model is revised.
2. Truck traffic should be converted to passenger car equivalents before utilizing these equations (see the Highway Capacity Manual for converting to passenger car equivalents).

3. If the per trip cost is not used for all subsequent projects, then the equation below will be necessary to determine the costs for individual project impact and will require some additional accounting.

**Equation C-2.A**

$$C = P (C_T - C_C)$$

Where:

- C = Same as equation C-2.
- P = Same as equation C-2.
- C<sub>T</sub> = Same as equation C-2.
- C<sub>C</sub> = The combined dollar contributions paid and committed prior to current project's contribution. This is necessary to provide the appropriate cost proportionality. Example: For the first project to impact the State highway facility in question since the total cost (C<sub>T</sub>) estimate for improvements necessary to mitigate the forecasted traffic demand, C<sub>C</sub> would be equal to zero. For the second project however, C would equal P<sub>2</sub>(C<sub>T</sub> - C<sub>1</sub>) and for the third project to come along C would equal P<sub>3</sub>[C<sub>T</sub> - (C<sub>1</sub> + C<sub>2</sub>)] and so on until build-out or the general plan build-out was recalculated.

# **APPENDIX “C”**

**MEASURES OF EFFECTIVENESS**

**BY**

**FACILITY TYPE**

## MEASURES OF EFFECTIVENESS BY FACILITY TYPE

TYPE OF FACILITY	MEASURE OF EFFECTIVENESS (MOE)
Basic Freeway Segments	Density (pc/mi/ln)
Ramps	Density (pc/mi/ln)
Ramp Terminals	Delay (sec/veh)
Multi-Lane Highways	Density (pc/mi/ln)
Two-Lane Highways	Percent-Time-Following Average Travel Speed (mi/hr)
Signalized Intersections	Control Delay per Vehicle (sec/veh)
Unsignalized Intersections	Average Control Delay per Vehicle (sec/veh)
Urban Streets	Average Travel Speed (mi/hr)

Measures of effectiveness for level of service definitions located in the most recent version of the Highway Capacity Manual, Transportation Research Board, National Research Council.

**Transition between LOS "C" and LOS "D" Criteria**  
(Reference Highway Capacity Manual)

**BASIC FREEWAY SEGMENTS @ 65 mi/hr**

LOS	Maximum Density (pc/mi/ln)	Minimum Speed (mph)	Maximum v/c	Maximum Service Flow Rate (pc/hr/ln)
A	11	65.0	0.30	710
B	18	65.0	0.50	1170
C	26	64.6	0.71	1680
D	35	59.7	0.89	2090
E	45	52.2	1.00	2350

**SIGNALIZED INTERSECTIONS and RAMP TERMINALS**

LOS	Control Delay per Vehicle (sec/veh)
A	≤ 10
B	> 10 - 20
C	> 20 - 35
D	> 35 - 55
E	> 55 - 80
F	> 80

**MULTI-LANE HIGHWAYS @ 55 mi/hr**

LOS	Maximum Density (pc/mi/ln)	Minimum Speed (mph)	Maximum v/c	Maximum Service Flow Rate (pc/hr/ln)
A	11	55.0	0.29	600
B	18	55.0	0.47	990
C	26	54.9	0.68	1430
D	35	52.9	0.88	1850
E	41	51.2	1.00	2100

..... Dotted line represents the transition between LOS "C" and LOS "D"

### TWO-LANE HIGHWAYS

LOS	Percent Time-Spent-Following	Average Travel Speed (mi/hr)
A	≤ 35	> 55
B	> 35 - 50	> 50 - 55
C	> 50 - 65	> 45 - 50
D	> 65 - 80	> 40 - 45
E	> 80	≤ 40

### URBAN STREETS

Urban Street Class	I	II	III	IV
Range of FFS	55 to 45 mi/hr	45 to 35 mi/hr	35 to 30 mi/hr	35 to 25 mi/hr
Typical FFS	50 mi/hr	40 mi/hr	35 mi/hr	30 mi/hr
LOS	Average Travel Speed (mi/hr)			
A	> 42	> 35	> 30	> 25
B	> 34 - 42	> 28 - 35	> 24 - 30	> 19 - 25
C	> 27 - 34	> 22 - 28	> 18 - 24	> 13 - 19
D	> 21 - 27	> 17 - 22	> 14 - 18	> 9 - 13
E	> 16 - 21	> 13 - 17	> 10 - 14	> 7 - 9
F	≤ 16	≤ 13	≤ 10	≤ 7

..... Dotted line represents the transition between LOS "C" and LOS "D"

GRAY DAVIS  
Governor

MARIA CONTRERAS-SWEET  
Secretary  
Business, Transportation and Housing Agency

JEFF MORALES  
Director  
California Department of Transportation

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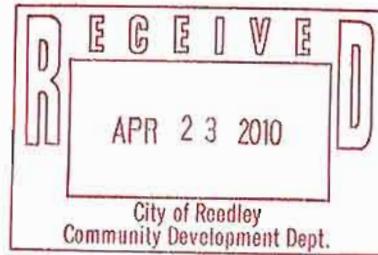
## CALIFORNIA ENERGY COMMISSION

1518 NINTH STREET  
SACRAMENTO, CA 95814-5512  
www.energy.ca.gov



April 20, 2010

David Brletic  
City of Reedley  
1733 9th Street  
Reedley, CA 93654



Dear Mr. Brletic:

The California Energy Commission has received the City of Reedley's Notice of Preparation titled City of Reedley General Plan Update, SCH 2010031106 that was submitted on 3/24/2010 for comments due by 4/22/2010. After careful review, the Energy Commission has found the following:

We would like to assist in reducing the energy usage involved in your project. Please refer to the enclosed Appendix F of the California Environmental Quality Act for how to achieve energy conservation.

In addition, the Energy Commission's *Energy Aware Planning Guide* is also available as a tool to assist in your land use planning. For further information on how to utilize this guide, please visit [www.energy.ca.gov/energy\\_aware\\_guide/index.html](http://www.energy.ca.gov/energy_aware_guide/index.html).

Thank you for providing us the opportunity to review/comment on your project. We hope that our comments will be helpful in your environmental review process.

If you have any further questions, please call Gigi Tien at (916) 651-0566.

Sincerely,

A handwritten signature in blue ink that reads "Bill Pfanner".

BILL PFANNER  
Supervisor, Local Energy & Land Use Assistance Unit  
Special Projects Office  
Fuels and Transportation Division  
California Energy Commission  
1516 Ninth Street, MS 23  
Sacramento, CA 95814

Enclosure

## *Appendix F*

# ENERGY CONSERVATION

### I. Introduction

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

- (1) decreasing overall per capita energy consumption,
- (2) decreasing reliance on natural gas and oil, and
- (3) increasing reliance on renewable energy sources.

In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, lifetime costs may be determined more by energy efficiency than by initial dollar costs.

### II. EIR Contents

Potentially significant energy implications of a project should be considered in an EIR. The following list of energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances, specific items may not apply or additional items may be needed.

#### A. Project Description may include the following items:

1. Energy consuming equipment and processes which will be used during construction, operation, and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.
2. Total energy requirements of the project by fuel type and end use.
3. Energy conservation equipment and design features.
4. Initial and life-cycle energy costs or supplies.
5. Total estimated daily trips to be generated by the project and the additional energy consumed per trip by mode.

#### B. Environmental Setting may include existing energy supplies and energy use patterns in the region and locality.

#### C. Environmental Impacts may include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, opera-

tion, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

#### D. Mitigation Measures may include:

1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.
2. The potential of siting, orientation, and design to minimize energy consumption, including transportation energy.
3. The potential for reducing peak energy demand.
4. Alternate fuels (particularly renewable ones) or energy systems.
5. Energy conservation which could result from recycling efforts.

#### E. Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.

#### F. Unavoidable Adverse Effects may include wasteful, inefficient and unnecessary consumption of energy during the project construction, operation, maintenance and/or removal that cannot be feasibly mitigated.

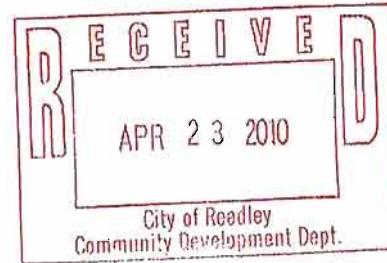
#### G. Irreversible Commitment of Resources may include a discussion of how the project preempts future energy development or future energy conservation.

#### H. Short-Term Gains versus Long-Term Impacts can be compared by calculating the energy costs over the lifetime of the project.

#### I. Growth Inducing Effects may include the estimated energy consumption of growth induced by the project.

April 21, 2010

Mr. David Brletic  
City of Reedley Planning Department  
1733 Ninth Street  
Reedley, CA 93654



**Project: City of Reedley General Plan Update**

**District CEQA Reference No: 20100193**

Dear Mr. Brletic:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation for the City of Reedley General Plan Update. The project includes primarily updates to the Land Use, Circulation, Conservation, Open Space and Recreation, Noise, and Safety elements of the 1993 General Plan, but also involves consolidation of a number of planning documents approved by the City of Reedley since adoption of the 1993 General Plan. The project encompasses a study area of 10,620 acres. The District offers the following comments:

- 1) AB 170 (Reyes) requires cities and counties in the San Joaquin Valley to include an air quality element or air quality implementation strategies in their general plans. To assist the City in addressing AB 170 (Reyes) requirements, the District has prepared its Air Quality Guidelines for General Plans (AQGGP). The AQGGP and additional resources useful in preparing the General Plan can be found on the District's website at [http://www.valleyair.org/transportation/Guidelines\\_for\\_General\\_Plans.htm](http://www.valleyair.org/transportation/Guidelines_for_General_Plans.htm).
- 2) The District recommends that the air quality section of the EIR include the following discussions:
  - 2a) **A description of federal, state, and local regulatory environment and existing air quality conditions impacting the area.** The District is currently designated as extreme non-attainment of the federal national ambient air quality standard for ozone and non-attainment for PM2.5. More information on the District's federal and state attainment status can be found on the District's web page at <http://www.valleyair.org/aqinfo/attainment.htm>.

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

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Northern Region  
4800 Enterprise Way  
Madesto, CA 95356-8718  
Tel: (209) 557-8400 FAX: (209) 557-8475

Central Region (Main Office)  
1900 E. Gettysburg Avenue  
Fresno, CA 93728-0244  
Tel: (559) 230-6000 FAX: (559) 230-6081

Southern Region  
34946 Flyover Court  
Bakersfield, CA 93308-0725  
Tel: 661-392-5500 FAX: 661-392-5585

- 2b) **A description of the project, including a discussion of existing and post-project emissions.** The discussion should include a description of the methodology, model assumptions, inputs and results used in characterizing the project's impact on air quality. The discussion should also include emissions from short-term activities such as construction, and emissions from long-term activities, such as operational, and area wide emission sources.
- 2c) **A discussion of cumulative air impacts.** The discussion should identify any impacts that would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment.
- 2d) **A discussion of greenhouse gas (GHG) emissions.** It is suggested that the EIR include a discussion of GHG emissions generated by the project and the effect they will have, if any, on global climate change.
- 2e) **A discussion of the potential health impact of Toxic Air Contaminants (TACs), if any, to near-by receptors.** Accurate quantification of health risks and operational emissions requires detailed site specific information, e.g. type of emission source, proximity of the source to sensitive receptors, and trip generation information. The required level of detail is typically not available until project specific approvals are being granted. Thus, the District recommends that as future projects are identified the potential health risks be further reviewed, including those projects that would otherwise appear to be exempt from CEQA requirements.

Special consideration should be given when approving projects that could expose sensitive receptors to TACs. Prior to conducting a Health Risk Assessment (HRA), an applicant may perform a prioritization on all sources of emissions to determine if it is necessary to conduct an HRA. A prioritization is a screening tool used to identify projects that may have significant health impacts. If the project has a prioritization score of 10 or more, the project has the potential to exceed the District's significance threshold for health impacts of 10 in a million. If the prioritization score indicates that TACs are a concern, the District recommends that an HRA be performed. If an HRA is to be performed, it is recommended that the project proponent contact the District to review the proposed modeling approach. For more information on conducting a prioritization or HRA please contact Mr. Leland Villavazo, Supervising Air Quality Specialist, at [hramodeler@valleyair.org](mailto:hramodeler@valleyair.org). Additional information on TACs can be found on the District's Air Quality Modeling page at [http://www.valleyair.org/busind/pto/Tox\\_Resources/AirQualityMonitoring.htm](http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm).

- 2f) **A discussion of nuisance odors.** If there is evidence that the project could result in sensitive receptors being exposed to objectionable odors, the District recommends that potential odor impacts be included in the discussion. The discussion should include potential impacts as a result project location. Special

consideration should be given when siting new odor sources near existing receptors or when siting new receptors near existing sources. The District recommends that as individual projects are identified the odor impacts be further evaluated, including those that would be exempt from CEQA requirements.

2g) **A discussion of all feasible measures that will reduce air quality impacts.**

Given the size of the project, it is reasonable to conclude that mobile source emissions resulting from growth and development would have significant impacts on air quality. To reduce the project related impacts on air quality the General Plan should include design standards that reduce vehicle miles traveled (VMT). VMT can be reduced through encouragement of mixed-use development, walkable communities, etc. Recommended design elements can be found on the District's website at <http://www.valleyair.org/ISR/ISROnSiteMeasures.htm>.

3) Future development within the area will contribute to the overall decline in air quality due to increased traffic and ongoing operational emissions. New development may require further environmental review and mitigation. The District makes the following recommendations regarding future development.

3a) Individual development projects would be subject to District Rule 9510 (Indirect Source Review) if upon full build-out the project would include or exceed any one of the following:

- 50 dwelling units
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;
- 20,000 square feet of medical office space;
- 39,000 square feet of general office space; or
- 9,000 square feet of educational space; or
- 10,000 square feet of government space; or
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above

District Rule 9510 is intended to mitigate a project's impact on air quality through project design elements or by payments of applicable off-site mitigation fees. Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval, and to pay any applicable off-site mitigation fees before issuance of the first building permit. If approval of the subject project constitutes the last discretionary approval by your agency, the District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees before issuance of the first building permit, be made a condition of project approval. Information about how to comply with District Rule 9510 can be found online at: <http://www.valleyair.org/ISR/ISRHome.htm>.

- 3b) Individual development projects may also be subject to the following District rules: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).
- 3c) The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found online at: [www.valleyair.org/rules/1ruleslist.htm](http://www.valleyair.org/rules/1ruleslist.htm).
- 3d) Referral documents for new development projects should include a project summary detailing, at a minimum, the land use designation, project size, and proximity to sensitive receptors and existing emission sources.

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call Patia Siong at (559) 230-5930 and provide the reference number at the top of this letter.

Sincerely,

David Warner  
Director of Permit Services

  
for Arnaud Marjollet  
Permit Services Manager

DW:ps



# DEPARTMENT OF CONSERVATION

## DIVISION OF LAND RESOURCE PROTECTION

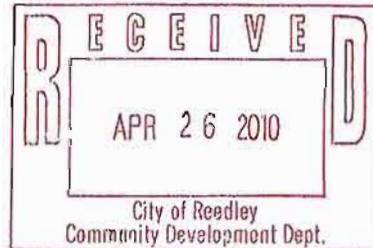
801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0650 • FAX 916 / 327-3430 • TDD 916 / 324-2655 • WEBSITE [conservation.co.gov](http://conservation.co.gov)

April 22, 2010

**VIA FACSIMILE (559) 637-2139**

Mr. David Brletic, City Planner  
City of Reedley Planning Department  
1733 Ninth Street  
Reedley, CA 93654



Subject: Notice of Preparation for a DEIR for the City of Reedley General Plan Update - SCH# 2010031106

Dear Mr. Brletic:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation for a DEIR for the City of Reedley General Plan Update. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed General Plan Update and Sphere of Influence (SOI) expansion's potential impacts on agricultural land and resources.

**Project Description:**

The City of Reedley is preparing to update the 1993 General Plan. To ensure compliance with State regulations and to incorporate long-term community development needs, the City is planning to consolidate a number of specific plans and master plans originally approved by the City in 1993.

The study area for the General Plan Update encompasses approximately 10,620 acres. Within the study area, the City has identified new growth areas and designated an expanded SOI boundary. The City has identified Important Farmland within the study area and the proposed expanded SOI boundary contains many parcels that are under Williamson Act contracts. Reviewing Farmland Mapping and Monitoring Program data, the Division has identified: Prime Farmland, Farmland of Statewide Importance, and Farmland of Local Importance.

**Division Comments:**

The Division understands that mitigation may not reduce impacts on agricultural land and activities below a significant level, but feasible mitigation is available to partially

reduce impacts. One way to accomplish this would be to require a mitigation program or policy to be incorporated into the General Plan Update for future specific project development (feasible mitigations are further discussed below). The Division also recommends that the DEIR address the following items to provide a comprehensive discussion of potential impacts of the General Plan Update and SOI expansion on agricultural land and activities:

#### Agricultural Setting of the Project

- Location and extent of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and other types of farmland in and adjacent to the General Plan Update and SOI expansion area.
- Current and past agricultural use of the General Plan Update and SOI expansion area. Please include data on the types of crops grown, and crop yields and farm gate sales values.

~~To help describe the full agricultural resource value of the soils in the study area, the~~ Department recommends the use of economic multipliers to assess the total contribution of the site's potential or actual agricultural production to the local, regional and state economies. Two sources of economic multipliers can be found at the University of California Cooperative Extension Service and the United States Department of Agriculture (USDA).

#### Project Impacts on Agricultural Land

When determining the agricultural value of the land, it's important to recognize that the agricultural value of a property may have been reduced over the years due to inactivity, but it does not mean that there is no longer any agricultural value. The *inability* to farm the land for agriculture, rather than the choice not to do so, is what could constitute a reduced agricultural value. The Division recommends the following discussion under the Agricultural Resources section of the Draft EIR:

- Type, amount, and location of farmland conversion resulting directly and indirectly from the General Plan Update and SOI expansion and growth inducement, respectively. Specifically, how much land will be re-designated for urban uses?
- Impacts on current and future agricultural operations; e.g., land-use conflicts, increases in land values and taxes, vandalism, etc.
- Incremental project impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed General Plan Update and SOI expansion, as well as impacts from past, current, and likely projects in the future.
- Under California Code of Regulations Section 15064.7, impacts on agricultural resources may also be both quantified and qualified by use of established thresholds

of significance. As such, the Division has developed a California version of the USDA Land Evaluation and Site Assessment (LESA) Model. The California LESA model is a semi-quantitative rating system for establishing the environmental significance of project-specific impacts on farmland. The model may also be used to rate the relative value of alternative locations and land uses for the General Plan Update and SOI expansion. The LESA Model is available on the Division's website at:

[http://www.consrv.ca.gov/DLRP/gh\\_les.htm](http://www.consrv.ca.gov/DLRP/gh_les.htm)

### Mitigation Measures

Although direct conversion of agricultural land is often deemed an unavoidable impact in California Environmental Quality Act (CEQA) analyses, mitigation measures must be considered. The loss of agricultural land from the implementation of the General Plan Update and SOI expansion represents a permanent reduction in the State's agricultural land resources. As such, the Department recommends a requirement for permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land resulting from development of the General Plan Update and SOI expansion. As mentioned above, this can be accomplished by incorporating a program or policy into the General Plan which would require partial mitigation for loss of agricultural resources from specific future projects within the study area. If growth inducing or cumulative agricultural impacts are involved, the Department recommends that this ratio of conservation easements to lost agricultural land be increased. Mitigation for the loss of Prime Farmland is suggested at a 2:1 ratio due to its importance to the State of California.

Conservation easements will protect a portion of those remaining agricultural land resources and lessen General Plan Update and SOI expansion impacts on agricultural resources in accordance with California Environmental Quality Act (CEQA) Guideline §15370. The Department highlights this measure because of its acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. If the City decides that future growth will require an agricultural mitigation bank, then it should consider creating or locating one before growth occurs so that it is in place and available prior to development. The proposed conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands can also be conducted regionally or statewide, and need not be limited to lands

within the General Plan Update and SOI expansion's surrounding area. Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

### Williamson Act Lands

Under California Code of Regulations Section 15206(b)(3), a project is deemed to be of statewide, regional or area-wide significance if it would result in the cancellation of a Williamson Act for any parcel of 100 or more acres. The public agency responsible for such a project, must submit a Draft Environmental Impact Report or Negative Declaration to the appropriate metropolitan area council of governments for review and comment. In either of these two CEQA documents, the Department recommends that the following information be provided and/or discussed:

- An agricultural preserve is a zone authorized by the Williamson Act and established by the local government to designate qualified land to be placed under the Williamson Act's 10-year contracts. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. Therefore, the CEQA document should discuss any proposed general plan re-designation or re-zoning within agricultural preserves affected by the General Plan Update and SOI expansion.
- A map detailing the location of agricultural preserves and contracted land within each preserve. The CEQA document should also tabulate the number of Williamson Act acres, according to land type (e.g., prime or non-prime agricultural land), which could be impacted directly or indirectly by the General Plan Update and SOI expansion.
- A discussion of Williamson Act contracts that may be terminated as a result of the General Plan Update and SOI expansion. The CEQA document should discuss the probable impacts on nearby agricultural resources resulting from the termination of adjacent Williamson Act contracts. For example, a termination of a Williamson Act contract may have a growth-inducing impact. In other words, a termination may not only lift a barrier to development, but also result in higher property taxes, and thus, an incentive to shift to a more intensive land use, such as urban development.
- As a general rule, land can only be withdrawn from a Williamson Act contract through the nine-year non-renewal process. Immediate termination via cancellation is reserved for "extraordinary circumstances" (See Sierra Club v. City of Hayward (1981) 28 Cal.3d 840, 852-855). Under Government Code section 51282, the city or county must approve a request for cancellation and base that approval on specific findings that are supported by substantial evidence. If cancellations are likely to result from the General Plan Update and SOI expansion, then the Department recommends that a discussion of the required findings be included in the CEQA document. Under Government Code Section 51243, if a city annexes land under a

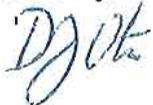
Mr. David Brletic  
April 22, 2010  
Page 5 of 5

Williamson Act contract, the city must succeed to all rights, duties, and powers of the County under the contract. However, under Section 51243.5, a city may exercise its option not to succeed to the contract if certain conditions are met. LAFCO must notify the Department within 10 days of a city's proposal to annex land under a contract (Government Code Section 56753.5). Additionally, LAFCO must not approve a change to a sphere of influence or annexation of contracted land to a city unless certain conditions are met (see Government Code Sections 51296.3, 56426, 56426.5, 56749 and 56856.5).

- If portions of the planning area are under Williamson Act contracts (and will continue to be under contract after the General Plan Update and SOI expansion are approved) the CEQA document should discuss the proposed uses for those lands. Uses of contracted land must meet compatibility standards identified in Government Code Sections 51238 - 51238.3. Otherwise, contract termination (see paragraph above) must occur prior to the initiation of the land use.

Thank you for giving us the opportunity to comment on this Notice of Preparation for the City of Reedley General Plan Update. As noted above, the Board of Supervisors is required to make findings on any subdivision of Williamson Act lands. Please provide this Department with the date of any hearings for this particular action, and any staff reports pertaining to it. If you have questions regarding our comments, or require technical assistance or information on agricultural land conservation, please contact Meri Meraz, Environmental Planner, at 801 K Street, MS 18-01, Sacramento, California 95814, or by phone at (916) 445-9411.

Sincerely,



Dan Otis  
Program Manager  
Williamson Act Program

cc: State Clearinghouse

Fresno County Farm Bureau  
1274 W Hedges Avenue  
Fresno, CA 93728  
Fax: (559) 237-3396

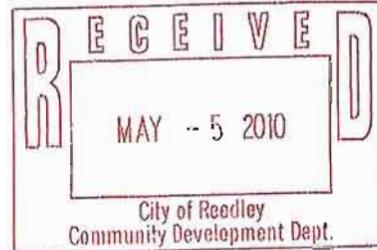


# County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING  
ALAN WEAVER, DIRECTOR

April 30, 2010

David Brletic, Planner  
City of Reedley  
Development Department  
1733 Ninth Street  
Reedley, CA 93654



Subject: City of Reedley - Notice of Preparation Draft Environmental Impact Report for the City of Reedley General Plan Update

Dear Mr. Brletic:

The County of Fresno appreciates the opportunity to review and comment on the City of Reedley's Notice of Preparation (NOP) for the Reedley General Plan Update. In addition to the Probable Environmental Effects identified in the City's NOP, the County requests that the following also be included in the Environmental Impact Report analysis as follows:

### **County-wide Services:**

The City's General Plan Update and proposed Sphere of Influence (SOI) expansion will have a direct fiscal impact on the County. Developments within the proposed SOI expansion area will result in an additional population of approximately 25,000. The additional population will increase demand for health services, social services, and justice and library systems that are provided by Fresno County.

In addition, the increased population will also impact and necessitate expansion of the County transportation system, recreational facilities, and other County facilities to accommodate the increased growth. While the County has recently adopted a county-wide impact fee addressing the need for new county-wide facilities and infrastructure, these fees combined with other revenues shared by the City will not offset all service delivery costs. The Environmental Impact Report (EIR) should address how all of these impacts will be mitigated by the City.

### **Transportation and Circulation:**

Individual projects within the proposed SOI that require environmental review should be reviewed by the County of Fresno, Department of Public Works and Planning, Design Division to ensure that the proposed project does not significantly impact County transportation facilities. Projects that significantly impact County transportation facilities should pay their proportionate share for traffic mitigation to reduce significant impacts to a less than significant level.

A Traffic Impact Study (TIS) is needed to determine the impacts to the transportation facilities. Since the TIS may need to incorporate streets and roads within the County's jurisdiction, the

DEVELOPMENT SERVICES DIVISION

County requests to be involved from the beginning stages of the TIS preparation. Furthermore, the County requests to be included in the traffic scoping meeting with the traffic engineering consultant and to review the draft TIS.

**Land Use and Agriculture:**

The two areas designated as Suburban Residential within the proposed SOI boundary is for very low density Residential development (1-4 DU/Acre). This designation is a very inefficient use of Prime Agricultural land for Residential purposes and the City is encouraged to either eliminate this designation or increase the number of Dwelling units per acre.

The proposed update expands the SOI from 4,930 acres to 7,931 acres; an increase of approximately 2,983 acres (60 %). This expansion is to accommodate approximately 1,800 acres of Residential development and 1,183 acres of industrial and commercial developments. The majority of the 1,800 acres of land planned for Residential development within the proposed SOI is to accommodate low density Residential development (4-8 DU/Acre). The EIR should address the possibility of more medium and high density designations to reduce the SOI expansion area thus reducing the need to convert Prime Agricultural lands to non-agricultural uses.

In addition, the County requests that the City reconsider the appropriateness of the location of the Community Commercial areas located on the western and eastern fringes of the City along Manning Avenue. The County is concerned that build-out of these areas will increase pressure to further expand the City's growth areas to the east and to the west. The County suggests that these two areas be located further inward towards the City core area.

**Williamson Act:**

The NOP did not list the amount of acreage or parcels subject to Williamson Act contracts but it did state that the study area includes land subject to Williamson Act contracts. The EIR should identify all Williamson Act Contracted lands within the current and proposed SOI area, including any that are subject to non-renewal. Any proposed annexations of parcels subject to Williamson Act Contracts or development of non-agricultural uses on parcels subject to Williamson Act Contracts will require cancellation of the Contracts prior to development.

As the City evaluates impacts associated with conversion of agricultural lands (including cancellation of Williamson Act Contracts), the County suggests that rather than identifying significant unavoidable impacts leading to the adoption of a Statement of Overriding Consideration, as often is the case, that the City consider feasible mitigation measures to compensate for the loss of agriculture land including mitigation measures that require development to either acquire and dedicate land at a one-to-one ratio for long-term agricultural preservation or pay in-lieu fees to accomplish the same.

**Master Tax Sharing Agreement / Memorandum of Understanding:**

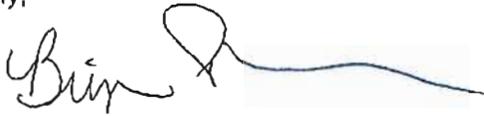
The City's proposed General Plan Update would require expansion of the SOI and an amendment to the Amended and Restated Memorandum of Understanding (MOU) executed between the County of Fresno, the City of Reedley and the Reedley Redevelopment Agency on October 3, 2006.

As stated in previous meetings, County staff is generally supportive of the overall City SOI boundaries, however, given the size of the proposed SOI expansion area, the City will need to justify why an area of this size is needed to accommodate growth of the City for the next 20 years, particularly in light of historical growth rates, inventory of vacant lands within the current city limits and the proposed "Suburban" and extensive "Low Density" Residential designations.

In addition, the County is concerned with the proposed irregular SOI boundaries located along Manning Avenue out to Lac Jac (Commercial/ Industrial area designation) as well as the "Suburban Residential" area located adjacent to the Kings River south west of the City. These areas would create unusual and irregular boundaries and the County would likely not support these areas.

Fresno County appreciates the opportunity to provide its comments on the NOP and we look forward to receiving the Draft Environmental Impact Report incorporating the issue, impacts and deficiencies noted above. If you have any questions, please contact me at (559) 262- 4454.

Sincerely,

A handwritten signature in blue ink, appearing to read "Briza Sholars", followed by a long horizontal line extending to the right.

Briza Sholars, Planner  
Development Services Division

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- c: Bernard Jimenez, Division Manager, Development Services
- Theresa Acosta-Mena, Senior Planner
- Stan Nakagawa, Design Division
- Mohammad Khorsand, Policy Planning

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## **APPENDIX B**

### LAFCO ORGANIZATION/REORGANIZATION POLICIES

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# **GPU POLICIES CITED IN THE LAFCo POLICY CONSISTENCY SECTION OF 1.0**

## **Orderly Formation**

### **Goals**

LU 2.5B Minimize urban sprawl and leapfrog development.

LU 2.5C Facilitate orderly transition from rural/agricultural uses to urban land uses.

LU 2.5D Designate growth areas that can be served by existing and planned infrastructure. Encourage a concentrated urban land uses pattern which provides for the economically efficient provision of urban services and maintains Downtown as the core of the City.

LU 2.6I New development shall be designed around “activity nodes” to be designated Neighborhood Commercial. Such nodes would contain a mix of limited commercial, office and public uses (geared to the neighborhood), surrounded by residential development.

LU 2.5.6 Seek LAFCO approval of a Sphere of Influence that reflects the goals and policies of the General Plan.

LU 2.5.7 Require contiguous development within the Sphere of Influence unless it can be demonstrated that the development of contiguous property is infeasible.

LU 2.5.8 Implement an annexation policy that is based on annexing land for residential development only when at least 80 percent of the residentially designated land inside city limits is developed.

LU 2.5.12 New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties which are closer to the built-up area

LU 2.5.13 The City should promote and provide urban services to development within the City as a means of controlling and directing growth.

LU 2.7.6 Guide new development into compact neighborhoods around commercial centers, public open space and schools.

LU 2.7.7 Maintain adequate facilities for water and storm drain services to service existing residents and future development.

COSP 4.9.9 The City shall provide for an orderly outward expansion of new urban development so that it is contiguous with existing development, allows for the incremental expansion of infrastructure and public services, and minimizes impacts on the environment.

## **Agricultural Preservation**

### **Goals**

LU 2.5A Establish urban growth management policies which seek to minimize the premature conversion of productive and potentially productive agricultural land to urban uses.

LU 2.5.1: Within areas outside the city limits, the City should encourage Fresno County to:

- Maintain an exclusive agricultural zone district.
- Maintain a minimum permitted lot size for agricultural land which assures that the land can be used for agricultural purposes.

LU 2.5.2: Development standards shall incorporate measures to protect and preserves agricultural land.

LU 2.5.4: Adopt a right-to-farm ordinance.

LU 2.5.5 Consider evaluating and adopting an agricultural land mitigation policy.

LU 2.5.9 Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the planning area and the Reedley Sphere of Influence.

LU 2.5.11 The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.

## **LAFCO POLICY CONSISTENCY EXCERPTS**

**SOURCE: FRESNO LOCAL AGENCY FORMATION COMMISSION  
COMMISSION POLICIES, STANDARDS AND PROCEDURES MANUAL  
(Adopted April 3, 1986) REVISED AUGUST 8, 2012**

### **Encouraging Orderly Formation and Development of Agencies**

**Policy 101.01.** The sphere of influence determined by the Commission shall take into account the provision of an adequate level and range of services to each community within the county. Likewise any governmental reorganization recommended by the Commission shall encourage the provision of adequate services to each community. The sphere of influence shall give consideration of those areas of the county which currently do not have adequate services, and recommendations for governmental reorganization or formation of new agencies shall be made by the Commission where justified.

**Policy 101.02.** Any proposal for a change of organization or reorganization shall contain sufficient information to determine that adequate services, facilities, and improvements can be provided and financed by the agencies responsible for the provision of such services, facilities, and improvements.

**Policy 101.05.** Among the purposes of the Commission are discouraging urban sprawl, preserving open-space and prime agricultural lands, efficiently providing government services, and encouraging the orderly formation and development of local agencies based upon local conditions and circumstances.

**Policy 101.06.** One of the objects of the Commission is to make studies and to obtain and furnish information which will contribute to the logical and reasonable development of local agencies in the County and to shape the development of local agencies so as to advantageously provide for the present and future needs of the County and its communities. When the formation of a new government entity is proposed, the Commission shall make a determination as to whether existing agencies can feasibly provide the needed service or services in a more efficient and accountable manner. If a new single-purpose agency is deemed necessary, the Commission shall consider reorganization with other single-purpose agencies that provide related services (Government Code Section. 56301).

**Encouraging Consistency with Spheres of Influence and Recommended Reorganization of Agencies (Government Code Section 56425)**

**Policy 102.01.** All proposals reviewed by the Commission, including changes of organization or reorganization, shall be consistent with the agency adopted spheres of influence and Commission policies. Within

the sphere of influence each agency should implement an orderly, phased annexation program. A proposal should not be approved solely because the area falls within the sphere of influence of an agency. The sphere of influence is one factor among several considered in reviewing proposals.

**Policy 102.03** Within their sphere of influence cities should be the provider of urban services due to their higher visibility, their substantially broader sources of revenue, and their historical and legal right to provide services and controls to citizens within their boundaries, particularly land use planning services and controls. Consequently, landowners and residents within a city's sphere of influence should look to the city for the provision of urban services and controls through annexation or formal agreement.

### **Transition Agreements**

**Policy 102.04.** The Commission is governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, as amended (Gov. Code, secs. 56000, the “Act”). The Act provides that it shall be liberally construed to effectuate its purposes. (Gov. Code, sec. 56107). Under the Act, it is the policy of the state to encourage orderly growth and development, which are essential to the social, fiscal, and economic well being of the state. (Gov. Code, sec. 56001). The Commission’s primary purpose under the Act is to discourage urban sprawl and to encourage orderly formation and development of local agencies based on local conditions and circumstances. (Gov. Code, secs. 56001, 56301, 56425(a)).

The State of California Supreme Court described the Commission as an agency with “large discretionary powers.” (*Bozung v. Local Agency Formation Commission of Ventura County* (1975) 13 Cal.3d 263, 288 interpreting a prior Act).

The Commission has both the power and duty to review and approve or disapprove with or without amendment, wholly, partially, or conditionally, proposals for changes of organization or reorganization, consistent with written policies, procedures, and guidelines adopted by the Commission (Gov. Code, sec. 56375). The Commission may adopt standards for any of the factors enumerated in Government Code, section 56668. (Gov. Code, sec. 56375). In approving or disapproving a proposed change in organization or reorganization, one of the factors that the

Commission shall consider is the effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the County. (Gov. Code, sec. 56668(c)).

Since the late 1980s, the Commission, based on local conditions and circumstances, has had the long-standing practice of imposing transition agreements (discussed below) between cities and affected fire protection districts as a condition of approving reorganizations where there are annexations to the cities and detachments from the affected fire protection districts, and such reorganizations significantly and adversely affect such fire protection districts. Several cities and fire protection districts have such transition agreements in place, and continue to keep them in force and effect.

At its hearings on the adoption of these amendments, testimony was presented before the Commission that these reorganizations may not only affect fire protection districts, but also annexing cities. In this regard, fire protection districts and cities may have close relationships where they assist each other in providing fire protection services, based on agreement (“mutual aid”), or based on immediate need (“instant aid”). If, because of a reorganization, a fire protection district cannot continue to provide fire protection services in its own service area near a city (e.g., fire protection district must close a fire station and thereby lengthen response times to its service area near the affected territory), it is possible that the fire protection district cannot continue to be available to the city for mutual aid or instant aid in times of significant emergency or crises where the city’s own fire department cannot adequately respond to a major fire incident.

Therefore, the Commission adopts the following amendments to its policies and standards for review in furtherance of carrying out the Commission’s purpose under the Act.

1. Districts within a city's sphere of influence should develop plans for orderly detachment of territory from the district or merger of the district as district territory is annexed to the city and should plan their long-term expenditures (e.g., facilities, equipment) accordingly, except where the type of district services provided are not provided by the city.

2. Where a special district is within a city's sphere of influence, the city is encouraged to develop annexation policies that will anticipate the total inclusion of the district's territory rather than a portion of its territory so as not to impose an unbearable tax burden upon citizens within the balance of the district's territory. The city's proposed services in the affected territory to be annexed to the city should be of equal or higher quality than the detaching special district's services provided in that territory.

**Encouraging Orderly Urban Development and Preservation of Open Space Patterns**

**Policy 103-01.** The Commission encourages well-planned, orderly, and compact urban development patterns for all developing areas. Also, the County, cities, and those districts providing urban services, are encouraged to develop and implement plans and policies which will provide for well-planned, orderly and compact urban development patterns, with consideration of preserving permanent open space lands within those urban patterns.

**Encouraging Conservation of Prime Agricultural Lands and Open Space areas.**

**Policy 104-01.** Proposals which would conflict with the goals of maintaining the physical and economic integrity of open space lands, agricultural lands, or agricultural preserve areas in open space uses, as indicated on the City or County general plan, shall be discouraged.

**Policy 104-03.** A sphere of influence revision or update for an agency providing urban services where the revision includes prime agricultural land shall be discouraged. Development shall be guided towards areas containing nonprime agricultural lands, unless such action will promote unplanned, disorderly, inefficient development of the community or area.

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# APPENDIX C

## SPECIAL-STATUS SPECIES LISTS

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# Selected Elements by Scientific Name

California Department of Fish and Game

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFG SSC or FP
<b>brittlescale</b> <i>Atriplex depressa</i>	PDCHE042L0	None	None	G2Q	S2.2	1B.2
<b>burrowing owl</b> <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S2	SSC
<b>California satintail</b> <i>Imperata brevifolia</i>	PMPOA3D020	None	None	G2	S2.1	2.1
<b>California tiger salamander</b> <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SSC
<b>Earlimart orache</b> <i>Atriplex erecticaulis</i>	PDCHE042V0	None	None	G2	S2.2	1B.2
<b>Great Valley Mixed Riparian Forest</b> <i>Great Valley Mixed Riparian Forest</i>	CTT61420CA	None	None	G2	S2.2	
<b>Greene's tuctoria</b> <i>Tuctoria greenei</i>	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
<b>hoary bat</b> <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4?	
<b>Hoover's spurge</b> <i>Chamaesyce hooveri</i>	PDEUP0D150	Threatened	None	G2	S2	1B.2
<b>lesser saltscale</b> <i>Atriplex minuscula</i>	PDCHE042M0	None	None	G1	S1.1	1B.1
<b>molestan blister beetle</b> <i>Lytta molesta</i>	IICOL4C030	None	None	G2	S2	
<b>Moody's gnaphosid spider</b> <i>Talanites moodyae</i>	ILARA98020	None	None	G1G2	S1S2	
<b>Northern Claypan Vernal Pool</b> <i>Northern Claypan Vernal Pool</i>	CTT44120CA	None	None	G1	S1.1	
<b>Northern Hardpan Vernal Pool</b> <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
<b>northern leopard frog</b> <i>Lithobates pipiens</i>	AAABH01170	None	None	G5	S2	SSC
<b>pallid bat</b> <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
<b>recurved larkspur</b> <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G3	S3	1B.2
<b>San Joaquin adobe sunburst</b> <i>Pseudobahia peirsonii</i>	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
<b>San Joaquin kit fox</b> <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	
<b>San Joaquin Valley Orcutt grass</b> <i>Orcuttia inaequalis</i>	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
<b>spiny-sepaled button-celery</b> <i>Eryngium spinosepalum</i>	PDAPI0Z0Y0	None	None	G2	S2.2	1B.2



**Selected Elements by Scientific Name**  
**California Department of Fish and Game**  
**California Natural Diversity Database**



<b>Species</b>	<b>Element Code</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Rare Plant Rank/CDFG SSC or FP</b>
<b>valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S2	
<b>Valley Sacaton Grassland</b> <i>Valley Sacaton Grassland</i>	CTT42120CA	None	None	G1	S1.1	
<b>vernal pool fairy shrimp</b> <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S2S3	
<b>vernal pool tadpole shrimp</b> <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G3	S2S3	
<b>western mastiff bat</b> <i>Eumops perotis californicus</i>	AMACD02011	None	None	G5T4	S3?	SSC
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western spadefoot</b> <i>Spea hammondi</i>	AAABF02020	None	None	G3	S3	SSC
<b>western yellow-billed cuckoo</b> <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Candidate	Endangered	G5T3Q	S1	

**Record Count: 29**

Group	Name	Population	Status	Lead Office	Recovery Plan Name	Recovery Plan Stage
Amphibians	California tiger Salamander	U.S.A. (CA - Sonoma County)	Endangered	Sacramento Fish And Wildlife		
Amphibians	California red-legged frog (Rana)	Entire	Threatened	Sacramento Fish And Wildlife	Recovery Plan for the California	Final
Amphibians	Mountain yellow-legged frog	U.S.A., frogs occurring north of	Candidate	Sacramento Fish And Wildlife		
Amphibians	Yosemite toad (Anaxyrus)		Candidate	Sacramento Fish And Wildlife		
Crustaceans	Conservancy fairy shrimp		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Crustaceans	Longhorn fairy shrimp		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Crustaceans	Vernal pool tadpole shrimp		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Fishes	Paiute cutthroat trout		Threatened	Nevada Fish And Wildlife Office	Revised Recovery Plan for the	Final Revision 1
Flowering Plants	Mariposa pussypaws		Threatened	Sacramento Fish And Wildlife		
Flowering Plants	Fleshy owl's-clover (Castilleja)		Threatened	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Flowering Plants	Hairy Orcutt grass (Orcuttia)		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Flowering Plants	Hartweg's golden sunburst		Endangered	Sacramento Fish And Wildlife		
Flowering Plants	San Joaquin adobe sunburst		Threatened	Sacramento Fish And Wildlife		
Flowering Plants	Keck's Checker-mallow		Endangered	Sacramento Fish And Wildlife		
Flowering Plants	Palmate-bracted bird's beak		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Upland	Final
Flowering Plants	San Joaquin Orcutt grass		Threatened	Sacramento Fish And Wildlife	Recovery Plan for Vernal Pool	Final
Flowering Plants	San Joaquin wooly-threads		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Upland	Final
Mammals	San Joaquin kit fox (Vulpes)		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Upland	Final
Mammals	Fresno kangaroo rat		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Upland	Final
Mammals	Tipton kangaroo rat (Dipodomys)		Endangered	Sacramento Fish And Wildlife	Recovery Plan for Upland	Final
Mammals	Sierra Nevada bighorn sheep	Sierra Nevada	Endangered	Ventura Fish And Wildlife Office	Final Recovery Plan for the	Final
Mammals	Fisher (Martes pennanti)	West coast DPS	Candidate	Yreka Fish And Wildlife Office		
Reptiles	Giant garter snake (Thamnophis)		Threatened	Sacramento Fish And Wildlife	Draft Recovery Plan for the	Draft

## Plant List

9 matches found. *Click on scientific name for details*

### Search Criteria

Rare Plant Rank is one of [1A, 1B, 2], Found in 9 Quads around 36119E4

Common Name	Scientific Name	Lifeform	Rare Plant Rank	State Listing Status	Federal Listing Status
brittlescale	<a href="#"><u>Atriplex depressa</u></a>	annual herb	1B.2		
California satintail	<a href="#"><u>Imperata brevifolia</u></a>	perennial rhizomatous herb	2.1		
Earlimart orache	<a href="#"><u>Atriplex erecticaulis</u></a>	annual herb	1B.2		
Hoover's spurge	<a href="#"><u>Chamaesyce hooveri</u></a>	annual herb	1B.2		FT
lesser saltscale	<a href="#"><u>Atriplex minuscula</u></a>	annual herb	1B.1		
recurved larkspur	<a href="#"><u>Delphinium recurvatum</u></a>	perennial herb	1B.2		
San Joaquin adobe sunburst	<a href="#"><u>Pseudobahia peirsonii</u></a>	annual herb	1B.1	CE	FT
San Joaquin Valley Orcutt grass	<a href="#"><u>Orcuttia inaequalis</u></a>	annual herb	1B.1	CE	FT
spiny-sepaed button-celery	<a href="#"><u>Eryngium spinosepalum</u></a>	annual / perennial herb	1B.2		

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# **APPENDIX D**

## **GHG REDUCTION POLICIES**

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## GHG Reduction Policies Contained in the Proposed GPU

<b>Greenhouse Gas Reduction Planning (Overall)</b>	
COSP 4.11A	Reduce GHG emissions from all activities within the City to support the State’s efforts under AB 32 and to mitigate the impacts of climate change.
COSP 4.11.1	By 2020, the City will reduce greenhouse gas emissions from within its boundaries to a level 15% less than the level that would otherwise occur if all activities continued under a “business as usual” scenario.
COSP 4.11.2	<p>The City will establish a Climate Action Plan<sup>2</sup> which will include measures to reduce GHG emissions from municipal, business and community activities by at least 15% by 2020 compared to “business as usual” (including any reductions required by ARB under AB 32).</p> <p><sup>2</sup><i>Climate Action Plans provide an overarching policy direction for local governments committed to reducing GHG emissions within their jurisdictions. An effective Climate Action Plan will have several core elements, including an inventory of emissions, a target for reductions, timeframes, milestones, and tracking and accountability mechanisms, and strategies for achieving the reductions.</i></p>
COSP 4.11.3	The City will ensure that local Climate Action, Land Use, Housing, and Transportation Plans support and enhance any regional plans developed consistent with state guidance to achieve reductions in GHG emissions.
COSP 4.11.4	The City will participate in the Sustainable Communities Strategy/Regional Blueprint Planning effort and ensure that local plans are consistent with the Regional Plan.
<b>Land Use and Urban Design</b>	
LU 2.4.3	Develop pedestrian amenities in the Downtown area to include open space or plazas, street furniture and lighting and signage.
LU 2.4.5	Establish an overlay zone in the Downtown area that will allow more flexible or mixed use of existing buildings
LU 2.4.6	Consider adoption of a form based code for the overlay district that will allow greater flexibility in design standards and facilitate continued investment in the Downtown area.
LU 2.5A	Establish urban growth management policies which seek to minimize the premature conversion of productive and potentially productive agricultural land to urban uses.
LU 2.5B	Minimize urban sprawl and leapfrog development.
LU 2.5C	Facilitate orderly transition from rural/agricultural uses to urban land uses.
LU 2.5D	Designate growth areas that can be served by existing and planned infrastructure.
LU 2.5E	Encourage a concentrated urban land uses pattern which provides for the economically efficient provision of urban services and maintains Downtown as the core of the City.
LU 2.5.1	Within areas outside the city limits, the City should encourage Fresno County to:

	(a) Maintain an exclusive agricultural zone district.
	(b) Maintain a minimum permitted lot size for agricultural land which assures that the land can be used for agricultural purposes.
LU 2.5.2	Development standards shall incorporate measures to protect and preserve agricultural land.
LU 2.5.7	Require contiguous development within the Sphere of Influence unless it can be demonstrated that the development of contiguous property is infeasible.
LU 2.5.8	Implement an annexation policy that is based on annexing land for residential development only when at least 80 percent of the residentially designated land inside city limits is developed.
LU 2.5.9	Work with Fresno County and Fresno LAFCO to maintain agricultural designations in areas outside the planning area and the Reedley Sphere of Influence.
LU 2.5.11	The Plan should foster the establishment of a concentrated urban development pattern, with land outside the planned urban area being designated exclusively for Agriculture.
LU 2.5.12	New urban development should occur in an orderly manner with initial development occurring on the available undeveloped properties which are closer to the built-up area.
LU 2.5.13	The City should promote and provide urban services to development within the City as a means of controlling and directing growth.
LU 2.5.16	The City shall encourage projects incorporating pedestrian-oriented design.
LU 2.5.17	The City shall identify areas and zones that can accommodate mixed use planning that will provide a combination of residential, commercial services and employment opportunities.
LU 2.6A	New development (residential, commercial and public) shall be designed in a way that creates fully integrated neighborhoods with a variety of land uses arranged so that access by walking or bicycling is possible and encouraged.
LU 2.6B	New development in the planning area shall be designed on a pedestrian scale, as opposed to the automobile scale.
LU 2.6C	Street standards shall be revised to allow narrower streets - thereby reducing the amount of land consumed for urban development.
LU 2.6D	The City shall prepare and implement a policy that supports and encourages infill-development for vacant/undeveloped or by-passed parcels within the existing urban area.
LU 2.6E	The City shall review and revise parking standards contained in the zoning ordinance and reduce requirements where appropriate. The city shall also encourage shared parking facilities when practical.
LU 2.6F	Street standards shall be revised to reflect Complete Streets design.
LU 2.6G	In order to provide efficient transportation, new development shall be arranged with a grid street pattern, to the extent practical. The use of cul-de-sac streets shall be kept to a minimum.

LU 2.6H	Sidewalk standards shall be revised to encourage and facilitate pedestrian activity by increasing sidewalk width, allow meandering sidewalk patterns and incorporating the placement of street trees between the sidewalk and the street.
LU 2.6I	New residential development shall be designed around “activity nodes” which provide commercial uses, employment centers, higher density development, and a complete range of supporting social and cultural facilities to the surrounding neighborhood.
LU 2.7.6	Guide new development into compact neighborhoods around commercial centers, public open space and schools.
LU 2.7.10	Residential development shall be designed in a manner so that new development is well connected to the surrounding area and to encourage pedestrian and bicycle transportation.
LU 2.7.24	Mixing of residential uses, densities and lot sizes shall be encouraged, while maintaining traditional neighborhood values and emphasizing concepts for livable, walkable neighborhoods.
LU 2.7.26	<p>Future commercial development in the planning area shall be well designed to respect neighborhood scale and traditional architectural design. Toward that end, commercial development will be reviewed utilizing the following design standards:</p> <ul style="list-style-type: none"> <li>(a) Parking space requirements shall be minimized for commercial developments. Parking lots should be segmented to minimize the impact of parking on the streetscape. In particular, parking should be located to the rear or to the side of commercial and office buildings.</li> <li>(b) Incorporate interface design standards (e.g. setbacks, fencing) into each residential and commercial zone district to ensure compatibility.</li> <li>(c) Commercial development shall be designed to facilitate pedestrian and bicycle access and function, featuring outdoor seating, pedestrian plazas and wide, shade-covered walkways.</li> <li>(d) Landscaping, particularly shade trees and drought tolerant plants, shall be maximized in all commercial developments.</li> </ul>
LU 2.7.34	Encourage mixed uses in new and existing structures.
CIR 3.9.4	Establish parking lot landscaping standards that require the provision of at least 50% shade coverage.
COSP 4.4.9	The City shall consider air quality when planning land use and transportation systems to accommodate expected growth in the community.
COSP 4.9.1	The City shall consider air quality and mobility when reviewing any proposed change to the land use pattern of the community.
COSP 4.9.2	The City shall encourage projects proposing pedestrian-oriented designs to improve the image of pedestrian-oriented neighborhoods and the downtown (pedestrian amenities, street trees, transit facilities, etc.).

COSP 4.9.3	The City shall designate high and medium-density housing at sites within walking distance of neighborhood commercial services and transportation corridors during general plan updates and developer-initiated general plan amendments.
COSP 4.9.4	The City shall encourage mixed-use developments, either horizontal or vertical, that provide a combination of residential, commercial services, employment, and cultural amenities.
COSP 4.9.9	The City shall provide for an orderly outward expansion of new urban development so that it is contiguous with existing development, allows for the incremental expansion of infrastructure and public services, and minimizes impacts on the environment.
COSP 4.9.10	The City shall encourage infill of vacant parcels.
COSP 4.9.11	Encourage commercial uses that are complimentary to employment centers.
COSP 4.9.18	The City will identify sites suitable for mixed-use development and establish appropriate site specific standards to accommodate mixed uses.
COSP 4.9.19	The City will identify and include complementary land uses not already present in local zoning districts, such as supermarkets, parks and recreational fields, schools in neighborhoods, and residential uses in business districts, to reduce vehicle miles traveled and promote bicycling and walking to these uses.
COSP 4.9.22	The City will ensure pedestrian access to activities and services, including: <ul style="list-style-type: none"> <li>(a) Ensuring that new development provides pedestrian connections to as many locations as possible to adjacent development, arterial streets, thoroughfares;</li> <li>(b) Ensuring a balanced mix of housing, workplaces, shopping, recreational opportunities, and institutional uses, including mixed-use structures;</li> <li>(c) Locating schools in neighborhoods, within safe and easy walking distances of residences served;</li> <li>(d) Support commercial development where automobile access does not impede pedestrian access, by consolidating driveways, providing cross-access between parcels, or developing alley access; and</li> <li>(e) For existing areas with poor or inefficient connectivity, prioritize development of sidewalks and pedestrian trails.</li> </ul>
COSP 4.9.23	The City will mitigate climate change by decreasing heat gain from pavement and other hard surfaces, including: <ul style="list-style-type: none"> <li>(a) Reduce street rights-of-ways;</li> <li>(b) Reinstate parkway strips to allow shading of streets by trees;</li> <li>(c) Include shade trees on south- and west-facing sides of structures;</li> <li>(d) Include low-water landscaping in place of hardscaping around transportation infrastructure and in parking areas;</li> <li>(e) Install cool roofs, green roofs, and use cool paving for pathways, parking, and other roadway surfaces; and</li> <li>(f) Establish standards that provide for pervious pavement options.</li> </ul>

<b>Transportation</b>	
CIR 3.2E	Provide a street and highway system which can accommodate alternative modes of travel.
CIR 3.2.5	<p>The City shall revise roadway standards for future streets to include the following:</p> <ul style="list-style-type: none"> <li>(a) Narrow street widths, particularly on local roadways.</li> <li>(b) Revised geometrics of street intersections, including smaller turning radii, to the maximum extent practical. This functions to slow turning vehicles, thereby, improving safety for pedestrians.</li> <li>(c) Tree lined streets, including parkways between the curb and sidewalk.</li> <li>(d) Along major streets, landscaped medians shall be constructed.</li> <li>(e) Revised Street Standards shall ensure efficient and safe access for emergency vehicles.</li> <li>(f) Roundabouts shall be located at selected street intersections to improve traffic flow, reduce air emissions and to provide community landmarks.</li> <li>(g) Circulation plans for pedestrian, bicycle and vehicle traffic shall provide for effective connections to major community facilities, such as the Kings River, Rail Trail, downtown, Reedley College, Reedley High School, elementary schools, parks and employment areas.</li> <li>(h) Street designs for collector and arterial roadways shall include provisions for future fixed route transit systems.</li> <li>(i) Traffic signals where warrants for traffic demands are met.</li> </ul>
CIR 3.2.6	Street standards shall be developed to include street trees planted in planter strips between the curb and sidewalk in order to shade paved street surfaces.
CIR 3.2.7	Subdivisions shall be designed to maximize connectivity between subdivisions and surrounding development. Use of a grid pattern with reasonable street lengths to maximize the number of connections to surrounding collector street system is encouraged.
CIR 3.2.22	<p>The City should insure that planned streets and highways operate to their maximum efficiency by coordinating their multi-modal use as follows:</p> <ul style="list-style-type: none"> <li>(a) Develop bikeways in accordance with the City Bikeways Plan.</li> <li>(b) Consider the need for transit and bikeway facilities when establishing the ultimate rights-of-way of streets and highways.</li> <li>(c) The City should prepare typical roadway cross sections which define standards for transit and bikeway facility improvements.</li> <li>(d) Provide additional rights-of-way and improvements off of the travelway of arterial and collector streets where deemed necessary for public transportation.</li> </ul>

	(e) Provide areas for pedestrian travel which will enhance the safety and efficiency of the street system.
CIR 3.4A	Encourage the use of bicycles as a viable means of transportation.
CIR 3.4B	Develop a continuous and easily accessible bikeways system which facilitates the use of the bicycle as a viable alternative transportation mode.
CIR 3.4C	Develop programs, standards, ordinances, and procedures to achieve and maintain safe conditions for bicycle use.
CIR 3.4D	Encourage bicycling for reasons of ecology, health, economy, and enjoyment as well as for transportation use.
CIR 3.4.1	Priority should be given to bikeways that will serve the most cyclists and destinations of greatest demand.
CIR 3.4.2	Bikeways should be designated near major traffic generators such as commercial and employment centers, schools, recreational areas, and major public facilities.
CIR 3.4.3	Bicycle parking and storage facilities should be provided at major bicycle traffic generators.
CIR 3.4.4	Bikeways should be provided in both existing and future parks where they will not cause serious conflicts with other uses of the parks.
CIR 3.4.5	Bikeways should be continuous and should be linked to other bikeways and recreation facilities.
CIR 3.4.6	Whenever possible, bikeways should be developed in conjunction with street construction and improvement projects occurring along streets and roads where bikeways have been designated on the Bikeways Plan map.
CIR 3.4.7	The City and County should develop a coordinated program for the construction of bikeways in the Planning Area.
CIR 3.4.8	The design and construction of bikeways shall conform to the standards established by the California Department of Transportation and the City of Reedley Standard Plans and Specifications.
CIR 3.4.9	Work with the City of Dinuba to provide a bicycle/pedestrian trail system that will connect to a similar system in the City of Reedley near the Sports Park.
CIR 3.4.10	Safe conditions for bicycle use shall be developed and maintained. The following shall apply: <ul style="list-style-type: none"> <li>(a) A visually clear, simple, and consistent bikeway system with clearly defined areas and boundaries should be established.</li> <li>(b) For the safety of those who use the bikeways, the City should consider stopping a bikeway before a major street intersection or dangerous railroad crossing and starting it again after the area has been passed. Within these potentially dangerous areas, bicyclists walk their bicycles or ride with extra caution at their own risk.</li> </ul>

	(c)	Through mass media, school, and private efforts, the City of Reedley should encourage a program of education in the rules of the road aimed at both the cyclist and the motorist.
	(d)	Bikeways should be constructed and maintained to reduce or eliminate hazards such as unsafe drainage grates, dirt, glass, gravel, and other debris.
	(e)	The bikeway system should be monitored and evaluated in order to determine the effectiveness of established bikeway facilities in terms of use, safety, and efficiency.
CIR 3.5A		Promote the variety of public transit connections with other nearby cities and locations.
CIR 3.5.1		Continue to evaluate public transit needs.
CIR 3.5.2		Explore increased transit opportunities with nearby cities.
CIR 3.9.3		Establish standards for parking spaces that include compact parking spaces, or parking to encourage alternative fuel vehicles.
COSP 4.4.7		Work with the Fresno COG on programs implementing transportation control measures to reduce vehicle trips and vehicle miles traveled.
COSP 4.4.11		The City shall work with Caltrans and the Fresno COG to minimize the air quality, mobility, and social impacts of large scale transportation projects on existing neighborhoods.
COSP 4.4.12		Ensure that land uses proposed in the general plan are supported by a multi-modal transportation system, including coordination with local transit providers.
COSP 4.5A		Reduce traffic congestion and vehicle trips through more efficient infrastructure and support for trip reduction programs.
COSP 4.5.1		The City shall consider measures to increase the capacity of the existing road network prior to constructing more capacity. Measures that may increase capacity and reduce congestion on existing roads include:
	(a)	Where possible, synchronize traffic signals to assure smooth-flowing traffic through intersections;
	(b)	Modify intersections using turn restrictions, channelization, enhanced pavement, or traffic circles where necessary and feasible; and
	(c)	Redirect truck traffic.
COSP 4.5.2		The City shall work with employers and developers to provide employees and residents with affordable transportation alternatives. Some methods employers may use to encourage trip reduction include rideshare and vanpool matching, flexible work schedules, telecommuting, and preferential parking for ride-sharing vehicles.
COSP 4.5.3		Require new homes and businesses to be wired with fiber-optic cables or to require wiring conduits with easy access and adequate capacity to allow for efficient retrofitting.
COSP 4.5.4		Require major new development to provide on-site facilities that encourage employees to use alternative transportation modes as air quality and transportation mitigation measures. Some examples include:

	(a) Showers and lockers provided in office buildings;
	(b) Safe and secure bicycle parking areas; and
	(c) On-site or nearby cafeterias and eating areas.
COSP 4.8.5	Support the use of electric vehicles, including golf carts and NEVs, where appropriate.
COSP 4.9.12	The City shall encourage project sites designed to increase the convenience, safety and comfort of people walking or cycling, and for future transit use.
COSP 4.9.13	The City shall review all subdivision street and lot designs, commercial site plans, and multifamily site plans to identify design changes that can improve access by transit, bicycle, and walking.
COSP 4.9.14	Require as a part of the site plan review or subdivision process a description of design measures proposed for the site. Some specific design features include: <ul style="list-style-type: none"> <li>(a) Subdivision street and lot designs that promote pedestrian, bicycle, and transit use;</li> <li>(b) Pedestrian access improvements and amenities (sidewalks, benches, water fountains, landscaping, etc.);</li> <li>(c) Parking lot designs that enhance rather than detract from pedestrian access; and</li> <li>(d) The location and type of bicycle improvements (bicycle parking/lockers, relation to bike paths or routes serving the site).</li> </ul>
COSP 4.9.15	The City will reduce required road width standards wherever feasible to calm traffic and encourage alternative modes of transportation.
COSP 4.9.16	The City will reduce parking space requirements when feasible.
COSP 4.9.17	The City will add bicycle facilities to city streets and public spaces.
COSP 4.10.1	The City shall plan for a multi-modal transportation system that meets the mobility needs of the community and improves air quality.
COSP 4.10.2	The City shall vigorously pursue and use local, state, and federal funds earmarked for bicycle and transit improvements.
COSP 4.10.3	The City shall ensure to the extent feasible that pedestrian, bicycle, and automobile connections are maintained in existing neighborhoods affected by transportation and other development projects.
COSP 4.10.4	Ensure that updates to the Circulation Element and submittals of regional transportation improvement projects to the Fresno COG reflect designs and facilities that support a multi-modal system.
COSP 4.10.5	Include maintenance or improvement requirements for pedestrian, bicycle, and automobile connections as part of the development standards of the Zoning Ordinance or Subdivision Ordinance.
COSP 4.10.6	The City shall require transit improvements at sites deemed appropriate and necessary by the Transportation Department and the transit provider and consistent with long-

	range transit plans and shall revise design standards to include bus turn-out designs and passenger loading area designs where appropriate.
COSP 4.10.7	The City shall ensure that a comprehensive system of bikeways and pedestrian paths is planned and constructed in accordance with an adopted City plan.
COSP 4.10.8	The City shall ensure that upgrades to existing roads (widening, curb and gutter, etc.) include bicycle and pedestrian improvements in their plans and implementation where appropriate.
COSP 4.10.9	The City shall consider the long-term requirements of future transit alternatives such as express bus lanes, high speed rail, and regional transportation corridors and reserve appropriate right-of-way as appropriate.
COSP 4.10.11	To maximize bicycle use, the following actions may be included in street design standards: <ul style="list-style-type: none"> <li>(a) Bikeways should be part of a network that connects major destination points within the community;</li> <li>(b) Provide separate bike paths in areas where motor vehicle speed or volume make on-street bike lanes unsafe or unpleasant to use; and</li> <li>(c) Provide adequate paved shoulder on arterial and collectors to keep cyclists and motorists separated.</li> </ul>
COSP 4.10.12	Require pedestrian pathways connecting existing developments and planned transit or multimodal facilities.
COSP 4.10.13	The City will ensure that new development incorporates both local and regional transit measures into project design that promote the use of alternative modes of transportation.
COSP 4.10.14	The City shall include sidewalks, separated sidewalks whenever possible, on both sides of all new street improvement projects, except where there are identified constraints.
COSP 4.10.15	Provide safe and convenient access for pedestrians and bicyclists to, across, and along major streets;
COSP 4.10.16	Before funding transportation improvements that increase roadway capacity and VMT, evaluate the feasibility and effectiveness of funding projects that support alternative modes of transportation and reduce VMT, including transit, and bicycle and pedestrian access.
COSP 4.10.17	The City will expand signal timing programs where emissions reduction benefits can be demonstrated, including maintenance of the synchronization system, and will coordinate with adjoining jurisdictions to optimize transit operation while maintaining a free flow of traffic.
COSP 4.10.18	The City will promote ride sharing programs, including: <ul style="list-style-type: none"> <li>(a) Designate in the zoning ordinance a certain percentage of parking spaces for ride-sharing vehicles; and</li> <li>(b) The City will support voluntary, employer-based trip reduction programs.</li> </ul>

COSP 4.10.19	<p>The City will facilitate employment opportunities that minimize the need for private vehicle trips, including:</p> <ul style="list-style-type: none"> <li>(a) Amend the zoning ordinance to include live/work sites and satellite work centers in appropriate locations; and</li> <li>(b) Encourage telecommuting options with new and existing employers, through project review and incentives, as appropriate.</li> </ul>
COSP 4.10.20	<p>Develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. Plans may address necessary infrastructure improvements and potential funding sources and Safe Routes to School programs and other formal efforts to increase walking and biking by students.</p>
COSP 4.10.21	<p>The City will consider a comprehensive parking policy to encourage the use of alternative transportation, including:</p> <ul style="list-style-type: none"> <li>(a) Reduce minimum parking requirements for new buildings;</li> <li>(b) Create parking benefit districts which invest revenues in pedestrian infrastructure and other public amenities;</li> <li>(c) Encourage shared parking programs in mixed-use and transit-oriented development areas; and</li> <li>(d) Require new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.</li> </ul>
COSP 4.10.22	<p>Develop the necessary infrastructure to encourage the use of zero emission vehicles and clean alternative fuels, such as development of electric vehicle charging facilities and conveniently located alternative fueling stations.</p>
<b>Energy Efficiency</b>	
COSP 4.8.1	<p>The City shall cooperate with the local building industry, utilities and the SJVAPCD to promote enhanced energy conservation standards for new construction.</p>
COSP 4.8.2	<p>The City shall encourage new residential, commercial, and industrial development to reduce air quality impacts from area sources and from energy consumption.</p>
COSP 4.8.3	<p>As many energy-conserving features as possible shall be included in each new project. Examples include, but are not limited to, increased wall and ceiling insulation, EPA-certified fireplace inserts and/or wood stoves or natural gas fireplaces, electrical and natural gas outlets installed around the exterior of the units to encourage use of electric yard maintenance equipment and gas-fired barbeques, and each home wired for computers/internet and electronic meter reading.</p>
COSP 4.8.6	<p>The City will support the use of green building practices by:</p> <ul style="list-style-type: none"> <li>(a) Providing information, marketing, training, and technical assistance about green building practices;</li> <li>(b) Establishing guidelines for green building practices in residential and commercial development; and</li> </ul>

	(c) Providing financial incentives, including reduction in development fees, administrative fees, and expedited permit processing for projects that use green building practices.
COSP 4.8.7	The City will establish outdoor lighting standards in the zoning ordinance, including: <ul style="list-style-type: none"> <li>(a) Requirements that all outdoor lighting fixtures be energy efficient;</li> <li>(b) Requirements that light levels in all new development, parking lots, and street lighting not exceed state standards; and</li> <li>(c) Prohibition against continuous all-night outdoor lighting in sports stadiums, construction sites, and rural areas unless required for security reasons.</li> </ul>
COSP 4.8.8	The City will pursue incentives, grants, and creative financing for projects that improve energy efficiency, including, for example, the option for property owners to pay for such improvements through long-term assessments on their property tax bills.
<b>Alternative Energy</b>	
COSP 4.8.4	Encourage developers to orient housing units and landscape building sites to maximize solar heating and cooling.
COSP 4.8.10	The City will require that new commercial, industrial, or major rehabilitation (e.g., additions of 25,000 square feet commercial, or 100,000 square feet industrial) development projects consider renewable energy generation either on- or off-site to provide 15% or more of the project’s energy needs.
COSP 4.8.11	The City will promote and encourage cogeneration projects for commercial and industrial facilities that provide a net reduction in GHG emissions associated with energy production.
COSP 4.8.12	The City will require that, where feasible, all new buildings be constructed to allow for easy, cost-effective installation of solar energy systems in the future.
COSP 4.8.13	The City will require that any building constructed in whole or in part with City funds incorporate passive solar design features, such as daylighting and passive solar heating, where feasible.
COSP 4.8.14	The City will pursue partnerships with other governmental entities and with private companies and utilities to establish incentive programs for renewable energy.
<b>Municipal Operations</b>	
COSP 4.4.16	Public facilities and operations should provide a model for the private sector in implementing air quality programs.
COSP 4.4.17	The City will establish a replacement policy and schedule to replace fleet vehicles and equipment with the most fuel efficient vehicles practical, including gasoline hybrid and alternative fuel or electric models.
COSP 4.4.18	The City shall support the use of teleconferencing in lieu of employee travel to conferences and meetings when feasible, and shall encourage departments to set up trip reduction programs for employees, including:

	<ul style="list-style-type: none"> <li>(a) Providing incentives for carpooling, such as pool vehicles, preferred parking, and a website or bulletin board to facilitate ride-sharing;</li> <li>(b) Offering compressed work hours, off-peak work hours, and telecommuting, where appropriate;</li> <li>(c) Providing bicycle stations with secure, covered parking; and</li> <li>(d) Implementing a police-on-bicycles program.</li> </ul>
COSP 4.4.19	Incorporate infrastructure to facilitate the use of clean-fuel vehicles, such as electrical plug-in stations and L/CNG refueling stations for clean fuel vehicles.
COSP 4.4.20	<p>The City will prepare and implement a comprehensive plan to improve energy efficiency of municipal facilities, including:</p> <ul style="list-style-type: none"> <li>(a) Conduct energy audits for municipal facilities;</li> <li>(b) Retrofit facilities for energy efficiency where feasible and when remodeling or replacing components, including increased insulation, installing green or reflective roofs and low-emissive window glass, and ultra-low-flow toilets and water fixtures;</li> <li>(c) Install renewable energy systems where feasible, including solar collection systems on municipal roofs and solar water heating;</li> <li>(d) Install energy-efficient street signs and traffic lighting;</li> <li>(e) Install Energy Star® appliances and energy-efficient vending machines;</li> <li>(f) Maximize efficiency of wastewater treatment and pumping equipment; and</li> <li>(g) Maximize efficiency at water treatment, pumping, and distribution facilities.</li> </ul>
COSP 4.4.21	<p>The City will require that any newly constructed, purchased, or leased municipal space meet minimum standards as appropriate, such as:</p> <ul style="list-style-type: none"> <li>(a) Incorporation of passive solar design features in new buildings, including daylighting and passive solar heating;</li> <li>(b) Retrofitting of existing buildings to meet standards under Title 24 of the California Building Energy Code, or to achieve a higher performance standard as established by the City;</li> <li>(c) Retrofitting of existing buildings to decrease heat gain from non-roof impervious surfaces with cool paving, landscaping, and other techniques; and</li> <li>(d) Install outdoor electrical outlets on buildings to support the use of electric lawn and garden equipment, and other tools that would otherwise be run with small gas engines or portable generators.</li> </ul>
COSP 4.4.22	The City will adopt purchasing practices and standards to support reductions in GHG emissions, including preferences for energy-efficient office equipment, and the use of recycled materials and manufacturers that have implemented green management practices.

COSP 4.4.23	The City will establish bidding standards and contracting practices that encourage GHG emissions reductions, including preferences or points for the use of low or zero emission vehicles and equipment, recycled materials, and provider implementation of other green management practices.
<b>Waste Reduction</b>	
COSP 4.4.24	The City will adopt a Construction and Demolition Waste Recovery Ordinance, requiring building projects to recycle or reuse a minimum percentage of unused or leftover building materials.
<b>Conservation and Open Space</b>	
LU 2.7.13	Encourage the planting of trees on residential lots by providing a brochure outlining the benefits of shade trees and establish a tree list that maximizes shade and aesthetics and minimizes conflict with sidewalk and curb improvements.
CIR 3.10.10	Establish a comprehensive program for water conservation consistent with State law.
COSP 4.2.10	Continue to encourage water conservation.
COSP 4.12.1	The City will reduce per capita water consumption by 10% by 2020.
COSP 4.12.2	The City will establish a water conservation plan that may include such policies and actions as: <ul style="list-style-type: none"> <li>(a) Restrictions on time of use for landscape watering, and other demand management strategies; and</li> <li>(b) Performance standards for irrigation equipment and water fixtures.</li> </ul>
COSP 4.12.3	The City will establish programs and policies to increase the use of recycled water, including: <ul style="list-style-type: none"> <li>(a) Produce and promote the use of recycled water for agricultural, industrial, and irrigation purposes, including grey water systems for residential irrigation; and</li> <li>(b) Produce and promote the use of treated, recycled water for potable uses where GHG emissions from producing such water are lower than from other potable sources.</li> </ul>
COSP 4.12.4	The City will promote the planting of shade trees and will establish shade tree guidelines and specifications, including: <ul style="list-style-type: none"> <li>(a) Recommendations for tree planting based on the land use (residential, commercial, parking lots, etc.);</li> <li>(b) Recommendations for tree types based on species size, branching patterns, whether deciduous or evergreen, whether roots are invasive, etc.; and</li> <li>(c) Recommendations for placement, including distance from structures, density of planting, and orientation relative to structures and the sun.</li> </ul>
COSP 4.14.1	The Kings River and creek system in Reedley provides a significant open space element and constitutes the most important wildlife habitat in the Planning Area. The City is

	committed to a policy of preserving and protecting these open space resources and assuring their continued viability as open space and drainage corridors.
COSP 4.14.2	Designate the Kings River corridor and associated creeks, woodlands, and other appropriate areas as Open Space.
COSP 4.14.3	An open space buffer of approximately 200 feet shall be maintained between urban development and the Kings River corridor. The Planning Commission may approve exceptions to the open space buffer subject to a Conditional Use Permit if the finding can be made that the river and riparian areas will not be negatively impacted by the exception.
COSP 4.14.6	Reforest designated open space lands between the Kings River and adjacent development as an oak savannah which requires limited initial maintenance.
COSP 4.14.11	Wetlands containing sensitive plant and/or animal species shall be protected according to law. Specific protection policies shall include: <ul style="list-style-type: none"> <li>(a) Protection of wetland watershed areas;</li> <li>(b) Establishment of minimum setback areas around wetlands in accordance with recommendations of the California Department of Fish and Game, U.S. Fish and Wildlife Service, or a qualified wildlife biologist.</li> </ul>
COSP 4.14.12	Design parks and open space corridors to provide linkages between potential habitat areas.
COSP 4.14.13	Incorporate existing trees into development projects, and where preservation is not feasible, require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.
COSP 4.14.14	Continue to require new development to plant street trees along City streets and work with local non-profit agencies and voluntary organizations to plant trees in appropriate areas throughout the City.
COSP 4.14.15	Designate the 100-year flood plain as Open Space to protect habitat and wildlife values in perpetuity.
COSP 4.14.16	Require preservation of contiguous areas in excess of the 100-year flood plain as merited by special circumstances. Special circumstances may include sensitive wildlife or vegetation, wetland habitat, oak woodland areas, slope or topographical considerations, and recreation opportunities.
COSP 4.14.17	Work with adjacent jurisdictions, regulatory agencies, and community organizations to explore opportunities for regional mitigation banking.
COSP 4.14.18	In addition to open space preservation, explore development alternatives and standards to minimize impacts on open space areas. Such techniques may include grading standards and measures to improve the short-term and long-term quality of stormwater run-off.
COSP 4.14.19	Utilize a variety of mechanisms to promote the preservation of designated open space resources. Such mechanisms may include dedication, fee-title purchase, donations,

	transfer or purchase of development rights, and credits against park dedication requirements.
COSP 4.14.20	The City will participate in public programs emphasizing awareness of open space and resource conservation issues. When feasible, such programs should be coordinated with local school districts and community groups.
<b>Education</b>	
COSP 4.4.13	The City shall work to improve the public’s understanding of the land use, transportation, and air quality link.
COSP 4.4.14	The City should assist in educating developers and the public on the benefits of local programs that can reduce vehicle trips and miles traveled.
COSP 4.8.9	The City will implement an outreach and incentive program to promote energy efficiency and conservation in the community, including: <ul style="list-style-type: none"> <li>(a) Implement a low-income weatherization assistance program;</li> <li>(b) Implement conservation campaigns specifically targeted to residents, and separately to businesses; and</li> <li>(c) Promote the purchase of Energy Star® appliances, including, where feasible, incentive grants and vouchers.</li> </ul>
COSP 4.12.5	The City will establish a coordinated, creative public outreach campaign, including publicizing the importance of reducing GHG emissions and steps community members can take to reduce their individual impacts, including: <ul style="list-style-type: none"> <li>a) Collaborating with utilities, business associations, civic groups, and nonprofits to place tips and articles in billing materials or newsletters;</li> <li>b) Designing and maintaining an interactive Climate Protection link on the City’s website;</li> <li>(c) Water conservation and water-efficient design and products; and</li> <li>d) The benefits of buying local, and information about locally grown, prepared, and manufactured goods and local services.</li> </ul>

*Source:* California Air Pollution Control Officer’s Association 2009, EMC Planning Group 2012

*Note:* Text

The key opportunities in the conservation element related to GHG reductions include:

- Conserve natural lands for carbon sequestration;
- Identify lands suitable for wind power generation;
- Conserve water to promote energy efficiency;
- Promote recycling and waste recovery; and
- Promote urban forestry and reforestation as feasible.

The key opportunities in the open space element related to GHG reductions include:

- Identify existing and potential future urban growth boundaries to limit sprawling development patterns and foster a more compact urban form;
- Conserve natural lands for carbon sequestration; and
- Promote trail systems to facilitate bicycle and pedestrian trips in lieu of vehicle travel.

The key opportunities and constraints in an air quality element related to GHG reductions include:

- Integrate land use plans and transportation plans;
- Provide multimodal transportation options;
- Co-benefits of criteria pollutant reduction strategies that also reduce GHG emissions and vice versa; and
- Disbenefits of potential GHG emissions reductions strategies on criteria and other pollutants.

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# **APPENDIX E**

## ENVIRONMENTAL NOISE ASSESSMENT

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**ENVIRONMENTAL NOISE ASSESSMENT  
REEDLEY GENERAL PLAN UPDATE 2030  
CITY OF REEDLEY, CALIFORNIA**

**BBA Report No. 09-009**

**PREPARED FOR**

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## TABLE OF CONTENTS

CHAPTER ONE.....	1
INTRODUCTION .....	1
1.1 Background.....	1
1.2 Purpose and Scope .....	1
1.3 Relationship to Other Elements of the General Plan .....	2
1.4 Definitions of Key Terms .....	2
CHAPTER TWO .....	4
EXISTING AND FUTURE NOISE ENVIRONMENT .....	4
2.1 Overview of Sources.....	4
2.2 Methods Used to Develop Noise Exposure Information .....	4
2.3 Existing Conditions.....	5
2.3.1 Existing Traffic Noise Exposure.....	5
2.3.2 Stationary Noise Sources .....	8
2.3.3 Existing Railroad Operations.....	8
2.3.4 Reedley Municipal Airport .....	9
2.3.5 Intermittent Farming Operations.....	9
2.4 Future Conditions.....	9
2.4.1 Future Traffic Noise Exposure.....	9
2.4.2 Future Stationary Noise Sources.....	12
2.4.3 Future Railroad Operations.....	12
2.4.4 Future Airport Operations.....	12
2.4.5 Future Farming Operations .....	12
CHAPTER THREE .....	13
RECOMMENDED GOALS AND POLICIES .....	13
3.1 Goals .....	13
3.2 Policies.....	13

### LIST OF TABLES

I	TRAFFIC NOISE EXPOSURE - EXISTING CONDITIONS .....	6-7
II	TRAFFIC NOISE EXPOSURE - FUTURE CONDITIONS .....	10-11
III	ALLOWABLE NOISE EXPOSURE - STATIONARY NOISE SOURCES .....	14

### LIST OF FIGURES

1	CURRENT AIRPORT CNEL CONTOUR MAP.....	16
2	2020 FORECAST AIRPORT CNEL CONTOUR MAP .....	17

### APPENDICIES

A	TRAFFIC NOISE MODELING ASSUMPTIONS
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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

The General Plan is the City of Reedley's official policy statement for the use of land and for guiding future decisions regarding growth and development. The existing general plan (2012 General Plan) was adopted in 1993. The 2030 General Plan would expand the City's Sphere of Influence (SOI) and increase the population holding capacity of the general plan area.

The Environmental Impact Report (EIR) for the 2030 General Plan considers a preferred alternative (Project) and a no project alternative (continuation of the 2012 General Plan). This environmental noise assessment provides updated noise exposure information for major noise sources within the general plan update study area and suggests updated policies and implementation measures for noise mitigation. Additionally, this document is intended to provide the documentation required for evaluation of the project as required under the provisions of the California Environmental Quality Act (CEQA).

### 1.2 Purpose and Scope

Land use compatibility planning with respect to noise is addressed by the noise element of the general plan. The content of the noise element and the methods used in its preparation have been determined by the requirements of Section 65302 (f) of the California Government Code and by the *Guidelines for the Preparation and Content of Noise Elements of the General Plan* adopted and published by the California Office of Noise Control (ONC) in 1976. The ONC Guidelines require that major noise sources be quantified by preparing generalized noise exposure information for current and projected conditions.

According to the Government Code requirements, noise exposure information should be included in the noise element for the following major noise sources:

1. Highways and freeways
2. Primary arterials and major local streets
3. Railroad operations
4. Aircraft and airport operations
5. Local industrial facilities
6. Other stationary sources

Noise-sensitive uses identified by the Government Code and the City of Reedley include the following:

1. Residential developments
2. Schools
3. Hospitals, nursing homes
4. Churches
5. Libraries

### **1.3 Relationship to Other Elements of the General Plan**

The noise element is related to the land use, housing, circulation and open space elements of the general plan. Recognition of the interrelationship of the noise element and these four other mandated elements is necessary to prepare an integrated general plan and to implement actions to achieve an acceptable noise environment within the community as defined by the noise element. The relationship between these elements is briefly discussed below.

1. Land Use: An objective of the noise element is to provide noise exposure information for use in the land use element. When integrated with the noise element, the land use element will show acceptable land uses in relation to existing and projected noise levels.
2. Housing: The housing element considers the provision of adequate sites for new housing and standards for housing stock. Since residential land uses are considered noise-sensitive, the noise exposure information of the noise element must be considered when planning the locations of new housing. The State Noise Insulation Standards may influence the locations and construction costs of multi-family dwellings, which should be considered by the housing element.
3. Circulation: The circulation system, which is a major source of noise, must be correlated with the land use element. This is especially true for roadways which carry significant numbers of trucks. Noise exposure will thus be a decisive factor in the location and design of new transportation facilities, and in the mitigation of noise produced by existing facilities upon existing and planned land uses.
4. Open Space: Excessive noise adversely affects the enjoyment of recreational pursuits in designated open space areas, particularly in areas where quiet is a valued part of the recreational experience. Thus, noise exposure should be considered in planning for these types of open space uses. Conversely, open space can be used to buffer noise-sensitive uses from noise sources by providing setbacks and visual screening.

### **1.4 Definition of Key Terms**

1. A-Weighted Sound Level: All sound levels referred to in this document are in A-weighted decibels. A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and potential adverse health effects.
2. Community Noise Equivalent Level (CNEL): The time-weighted average sound level during a 24-hour day, obtained after addition of approximately 5 dB to sound levels during the evening hours (7:00 p.m.-10:00 p.m.) and 10 dB to sound levels during the nighttime hours (10:00 p.m.-7:00 a.m.). The State of California requires that aircraft noise exposure be defined in terms of the annual average CNEL.

3. Day/Night Average Sound Level (DNL): The time-weighted average sound level during a 24-hour day, obtained after addition of 10 dB to sound levels during the nighttime hours (10:00 p.m.-7:00 a.m.). The DNL and CNEL are similar descriptors of the community noise environment and are generally considered to be equivalent within  $\pm 1.0$  dB.
4. Equivalent Sound Level ( $L_{eq}$ ): The sound level containing the same total energy as a time varying signal over a given period. The  $L_{eq}$  is typically calculated for either one-hour or 24-hour periods, but may be calculated for any stated period of time.
5. New Development: Projects requiring land use or building permits, but excluding remodeling or additions to existing structures.
6. Noise-Sensitive Land Use: Residential land uses, transient lodging, schools, libraries, churches, hospitals and nursing homes.
7. Outdoor Activity Areas: Outdoor activity areas for single-family homes are generally considered to be individual backyards. Outdoor activity areas for multi-family residences or transient lodging facilities are generally considered to be patios, decks and common outdoor recreation areas.
8. Stationary Noise Source: Any fixed or mobile source *not* preempted from local control by federal or state regulations. Examples of such sources include agricultural, industrial and commercial facilities and vehicle movements on private property.
9. Transportation Noise Source: Traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by federal or state regulations. However, the effects of noise from transportation sources may be controlled by regulating the locations and design of adjacent land uses.

## CHAPTER TWO

### EXISTING AND FUTURE NOISE ENVIRONMENT

#### 2.1 Overview of Sources

Based on the requirements of the Government Code, discussions with City staff, review of existing documents and field studies conducted during preparation of this environmental noise assessment, it was determined that there are four major sources of community noise within the 2030 General Plan study area. Those sources include traffic on major local roadways, rail operations on the San Joaquin Valley Railroad (SJVRR), commercial/industrial facilities and aircraft operations at the Reedley Municipal Airport. Due to the location of the City of Reedley in a major agricultural area, noise from farming activities is also a concern, especially in areas where noise-sensitive development may occur adjacent to active farming operations.

#### 2.2 Methods Used to Develop Noise Exposure Information

According to the Government Code and ONC Guidelines, noise exposure information should be developed in terms of the Day-Night Average Level (DNL) or Community Noise Equivalent Level (CNEL) for transportation-related noise sources. Both of those descriptors represent the time-weighted energy noise level for a 24-hour day after inclusion of a 10 dB penalty for noise levels occurring at night between the hours of 10:00 p.m. and 7:00 a.m. The CNEL descriptor also includes a penalty of 4.8 dB for noise levels occurring during the evening hours of 7:00 p.m. and 10:00 p.m. The CNEL descriptor was developed for the quantification of aircraft noise, and its use is required when preparing noise exposure maps for airports within the State of California. The CNEL and DNL descriptors are generally considered to be equivalent to each other for most community noise environments within  $\pm 1.0$  dB.

Analytical noise modeling techniques were used to develop generalized DNL contours for major transportation noise sources (traffic and rail operations) within the study area for existing and projected future conditions. Noise exposure information from the 2012 General Plan was used for existing stationary noise sources (commercial and industrial operations) since the factors influencing noise produced by those sources have not significantly changed since that document was adopted by the City of Reedley in 1993. Updated CNEL contours from the Reedley Municipal Airport 2020 Master Plan (Report dated May 2004) were utilized to characterize noise exposure for the airport.

The noise exposure information developed during the preparation of this analysis does not include all conceivable sources of industrial, commercial, agricultural or transportation noise within the study area, but rather is a representative sampling of typical sources. The noise exposure information developed for the sources identified for study should be used as an indicator of potential noise impacts when other, similar sources are considered.

## **2.3 Existing Conditions**

### **2.3.1 Existing Traffic Noise Exposure**

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop DNL contours for major local roadways. The FHWA Model is an analytical method accepted by state and local agencies, including Caltrans, for highway traffic noise prediction. The FHWA Model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavily trucks (3 or more axles), with consideration given to vehicles volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly  $L_{eq}$  values for free-flowing traffic conditions, and is generally considered to be accurate within  $\pm 1.5$  dB. To calculate DNL values, it is necessary to estimate the day/night distribution of traffic so that an hourly equivalent traffic volume may be calculated. The FHWA Model assumes a clear view of traffic with no shielding at the receiver location.

Average Daily Traffic (ADT) volumes and speeds used for noise modeling were provided by Omni-Means, the project traffic engineers. The day/night distribution of traffic and truck percentages were estimated by BBA based upon studies along similar roadways. Based upon information provided by Omni Means, it was assumed that all analyzed roadways other than some sections of North and Dinuba Avenues are truck routes with higher percentages of trucks than other major local streets. Appendix A summarizes the noise modeling assumptions used to calculate traffic noise exposure for existing conditions along major local roadways.

Table I summarizes calculated noise exposure at typical building setbacks and distances to DNL contours for existing traffic conditions. Traffic noise exposure information is generalized for flat terrain and the absence of acoustical shielding or reflections that may be caused by site-specific conditions.

**TABLE I**

**GENERALIZED TRAFFIC NOISE EXPOSURE  
REEDLEY 2030 GENERAL PLAN UPDATE  
EXISTING CONDITIONS**

Roadway	Segment	DNL @ Typical Setback, dB <sup>1</sup>	Distance, Feet <sup>2</sup>
			60 dB DNL
Reed Avenue	n/o South Avenue	65.6	176
	s/o South Avenue	64.4	148
	n/o Parlier Avenue	62.5	111
	s/o Parlier Avenue	63.9	136
	n/o I Street	62.4	108
	n/o Dinuba Avenue	57.8	54
	s/o Dinuba Avenue	59.7	72
	n/o Floral	63.5	129
	s/o Floral	62.0	102
South Avenue	e/o Reed Avenue	57.1	48
	w/o Frankwood Avenue	56.9	47
	e/o Frankwood Avenue	58.8	62
	w/o Buttonwillow Avenue	59.8	73
	e/o Buttonwillow Avenue	59.8	73
	w/o Englehart Avenue	55.5	67
	e/o Englehart Avenue	59.2	67
Frankwood Avenue	n/o South Avenue	60.6	82
	s/o South Avenue	59.9	74
	n/o Parlier Avenue	59.2	65
	s/o Parlier Avenue	59.3	66
	n/o Manning Avenue	63.3	125
	s/o Manning Avenue	61.1	89
	n/o Olson Avenue	62.9	117
	s/o Olson Avenue	62.2	106
	n/o Floral	64.3	146
s/o Floral	64.7	155	
Buttonwillow Avenue	n/o South Avenue	62.4	109
	s/o South Avenue	63.6	131
	n/o Parlier Avenue	63.7	133
	s/o Parlier Avenue	63.6	130
	n/o Manning Avenue	65.1	164
	s/o Manning Avenue	64.6	153
	n/o Springfield Avenue	64.3	145
	s/o Springfield Avenue	64.2	144
	n/o Dinuba Avenue	63.2	123
	s/o Dinuba Avenue	63.3	125
	n/o Floral	65.5	174
s/o Floral	65.3	169	
Englehart Avenue	n/o South Avenue	54.9	34
	s/o South Avenue	55.5	37
	n/o Manning Avenue	58.3	58
	s/o Manning Avenue	58.8	62
	n/o Dinuba Avenue	59.0	64
	s/o Dinuba Avenue	59.8	73
Parlier Avenue	e/o Reed Avenue	59.1	65
	w/o Frankwood Avenue	58.3	58
	e/o Frankwood Avenue	60.3	78
	w/o Buttonwillow Avenue	58.3	58
	e/o Buttonwillow Ave	60.2	77

**TABLE I (CONCLUDED)**

**GENERALIZED TRAFFIC NOISE EXPOSURE  
REEDLEY 2030 GENERAL PLAN UPDATE  
EXISTING CONDITIONS**

Roadway	Segment	DNL @ Typical Setback, dB <sup>1</sup>	Distance, Feet <sup>2</sup>
			60 dB DNL
I Street	s/o Manning Avenue	63.7	132
	w/o Reed Avenue	64.6	152
	e/o Reed Avenue	65.0	161
Manning Avenue	w/o I Street	68.9	295
	e/o I Street	65.0	163
	w/o Frankwood Avenue	65.2	166
	e/o Frankwood Avenue	65.5	174
	w/o Buttonwillow Avenue	64.8	158
	e/o Buttonwillow Avenue	64.7	155
	w/o Zumwalt	65.3	169
	e/o Zumwalt	66.8	212
	w/o Englehart Avenue	66.2	194
	e/o Englehart Avenue	65.8	182
Zumwalt Avenue	s/o Manning Avenue	57.5	51
	n/o Dinuba Avenue	55.3	37
G Street	s/o North Avenue	52.4	23
North Avenue	w/o G Street	57.1	48
	e/o G Street	55.8	39
	w/o East Avenue	57.2	49
	e/o East Avenue	59.5	69
East Avenue	n/o North Avenue	55.1	35
	s/o North Avenue	58.4	39
	n/o Dinuba Avenue	61.3	92
Springfield Avenue	w/o Buttonwillow Avenue	54.9	34
	e/o Buttonwillow Avenue	---	---
Dinuba Avenue	e/o Reed Avenue	53.6	28
	w/o East Avenue	61.4	93
	e/o East Avenue	64.4	147
	w/o Buttonwillow Avenue	65.2	166
	e/o Buttonwillow Avenue	64.7	154
	w/o Zumwalt	64.4	148
	e/o Zumwalt	66.1	190
	w/o Englehart Avenue	65.4	173
	e/o Englehart Avenue	65.0	162
Kings River Avenue	n/o Olson Avenue	56.8	46
	s/o Olson Avenue	57.8	54
Olson Avenue	e/o Kings River Avenue	60.2	77
	w/o Frankwood Avenue	56.2	42
	e/o Frankwood Avenue	51.3	20
Floral Avenue	w/o Reed Avenue	55.5	37
	e/o Reed Avenue	56.9	47
	w/o Frankwood Avenue	56.0	41
	e/o Buttonwillow Avenue	57.8	54

<sup>1</sup>Assumed to be 75 feet from the center of all roadways.

<sup>2</sup>From the center of the roadway.

Source: Brown-Buntin Associates, Inc.

### **2.3.2 Stationary Noise Sources**

Stationary noise sources within the City of Reedley include agricultural packing houses, manufacturing plants, the City's waste water treatment plant, auto repair shops, car washes, shopping centers, etc. Most of these sources are located near major transportation corridors including arterial roadways and the SJVRR. The existing (2012) general plan contains a table summarizing noise level measurements conducted by Fresno County in 1975 at 16 noise-sensitive locations within the City. Some of those measurements suggest that noise from stationary sources may be of concern for the land use compatibility planning process. Typical noise sources associated with commercial or industrial activities include truck movements, loading docks and mechanical equipment such as fans, compressors, cooling towers, trash compactors and power tools. In some cases, noise from commercial and industrial operations may operate continuously, 24 hours per day.

### **2.3.3 Existing Railroad Operations**

The San Joaquin Valley Railroad (SJVRR) line between Fresno and Exeter passes through Reedley in a northwest-southeast direction between H and I Streets. Approximately two freight trains per day pass through Reedley. Train operations may occur at any time during the day or night. Train speeds generally vary between 10 and 15 mph.

There are approximately 12 public or private roadway grade crossings within the study area. Train engineers are required to sound the warning horn when approaching within approximately 500-1000 feet of a grade crossing. Train noise levels are therefore higher at locations near grade crossings. Due the number of grade crossings within the study area, warning horns are used frequently as trains pass through Reedley. This is especially true in the downtown area.

Noise measurements have been conducted by Brown-Buntin Associates, Inc. (BBA) for a number of development projects along the SJVRR in the Fresno County area. Substantial variability in the noise levels produced by individual train pass-bys has been observed due to train length, speed, horn usage and other factors. Based upon a total of 17 measurements, the average sound exposure level (SEL) for a train pass-by at a reference distance of 100 feet from the center of the track near a grade crossing (where the horn is used) is 100.4 dBA. The SEL for an individual train pass-by is a numerically higher number than the maximum level for the same noise event because the SEL consolidates the energy of the entire noise event into a reference duration of one second. The SEL is not "heard", but is a derived value used for calculation of cumulative noise exposure as defined by the DNL. Maximum noise levels generated by train pass-bys when the horn is being used are in the range of 90-95 dBA at 100 feet from the tracks.

Railroad noise exposure as defined by the DNL was calculated based upon the assumption that one train pass-by would occur during the nighttime hours (10:00 p.m.-7:00 a.m.) and one train pass-by would occur during the daytime hours (7:00 a.m. -10:00 p.m.) every day. In areas near grade crossings, the calculated distance to the 60 dB DNL contour for current railroad activity is 125 feet from the center of the tracks. This would apply to most of the downtown area. This calculation is generalized, and does not take into consideration site-specific conditions such as acoustic shielding or reflections caused by nearby buildings.

### **2.3.4 Reedley Municipal Airport**

The Reedley Municipal Airport is located about five miles north of the center of town on the west side of Frankwood Avenue. The airport has a single runway that is 3,300 feet long. According to the 2020 Airport Master Plan, there were 26,923 aircraft operations at the airport in 2000. An operation is a landing *or* a takeoff. Most aircraft that operate at the airport are small single-engine propeller aircraft having a maximum takeoff weight of less than 12,500 pounds, although there are occasional operations by twin-engine aircraft, turboprops and small jets. As required by the California Code of Regulations, Title 21, aircraft noise exposure is defined in terms of the CNEL. The CNEL is the same as the DNL except that an additional penalty of 4.8 dB is added to aircraft-related noise levels that occur during the evening hours (7:00 p.m.-10:00 p.m.). Figure 1 shows that the 60 dB CNEL contour for current airport operations is located entirely within the airport property, and that there are no noise-sensitive uses located within the contour.

### **2.3.5 Intermittent Farming Operations**

Most of the City of Reedley is surrounded by active farmland. Noise sources typically associated with farming operations include the operation of water pumps, tractors, trucks and other heavy equipment and occasional aircraft operations associated with the aerial application of agricultural chemicals. With the exception of water pumps, the noise levels associated with such activities occur on an intermittent basis and generally during the daytime hours. Water pumps may operate continuously for extended periods of time on a 24-hour basis.

## **2.4 Future Conditions**

### **2.4.1 Future Traffic Noise Exposure**

Future traffic noise exposure was calculated based upon the above-described FHWA Model and traffic data obtained from Omni-Means. Traffic noise modeling assumptions for future conditions (2035 base and 2035 base plus project) are summarized in Appendix B.

Table II summarizes calculated noise exposure at typical building setbacks and distances to the 60 dB DNL contour for future traffic conditions, both with and without the general plan update project. Traffic noise exposure information is generalized for flat terrain and the absence of acoustical shielding or reflections that may be caused by site-specific conditions.

Table II also shows the resulting change in DNL that would occur as a result of the general plan update (with full build-out) at a typical residential building setback. Project-related changes range from -2.9 to +10.3 dB. Project-related changes are usually considered significant if: 1) the noise level without the project is less than 60 dB DNL and the project-related increase is greater than 5.0 dB, *or* 2) the noise level without the project is in the range of 60-65 dB DNL and the project-related increase is greater than 3.0 dB, *or* 3) the noise level without the project is greater than 65 dB DNL and the project-related increase is greater than 1.5 dB. Future traffic noise impacts may be mitigated by implementation of the policies of the noise element

**TABLE II**  
**GENERALIZED TRAFFIC NOISE EXPOSURE**  
**REEDLEY 2030 GENERAL PLAN UPDATE**  
**FUTURE CONDITIONS**

Roadway	Segment	2035 No Project		2035 With Project		Change in DNL, dB
		DNL @ Typical Setback, dB <sup>1</sup>	60 dB DNL <sup>2</sup>	DNL @ Typical Setback, dB <sup>1</sup>	60 dB DNL <sup>2</sup>	
Reed Avenue	n/o South Avenue	67.0	220	68.3	269	1.3
	s/o South Avenue	65.8	184	67.1	221	1.3
	n/o Parlier Avenue	63.7	133	65.4	173	1.7
	s/o Parlier Avenue	64.8	157	66.1	151	1.3
	n/o I Street	63.9	137	64.4	147	0.5
	n/o Dinuba Avenue	59.6	70	59.9	74	0.3
	s/o Dinuba Avenue	61.4	93	61.6	96	0.2
	n/o Floral	65.2	166	66.2	195	1.0
	s/o Floral	63.9	135	65.0	162	1.1
South Avenue	e/o Reed Avenue	58.6	60	61.3	91	2.7
	w/o Frankwood Avenue	58.6	60	61.3	91	2.7
	e/o Frankwood Avenue	60.4	79	62.9	116	2.5
	w/o Buttonwillow Avenue	61.4	93	64.1	140	2.7
	e/o Buttonwillow Avenue	61.5	95	63.6	130	2.1
	w/o Englehart Avenue	61.2	90	62.7	114	1.5
	e/o Englehart Avenue	61.2	90	62.7	114	1.5
Frankwood Avenue	n/o South Avenue	62.1	104	63.8	133	1.7
	s/o South Avenue	61.5	94	63.3	124	1.8
	n/o Parlier Avenue	61.0	87	62.1	103	1.1
	s/o Parlier Avenue	62.2	106	63.1	120	0.9
	n/o Manning Avenue	64.0	138	65.0	162	1.0
	s/o Manning Avenue	62.5	109	63.0	118	0.5
	n/o Olson Avenue	64.6	152	65.8	184	1.2
	s/o Olson Avenue	64.0	138	65.3	169	1.3
	n/o Floral	65.9	186	67.2	227	1.3
s/o Floral	66.3	196	67.5	236	1.2	
Buttonwillow Avenue	n/o South Avenue	64.0	138	64.8	156	0.8
	s/o South Avenue	65.1	165	66.3	196	1.2
	n/o Parlier Avenue	65.3	168	66.3	197	1.0
	s/o Parlier Avenue	65.1	164	66.1	192	1.0
	n/o Manning Avenue	66.7	209	67.3	231	0.6
	s/o Manning Avenue	66.2	195	66.7	209	0.5
	n/o Springfield Avenue	65.9	186	63.0	119	-2.9
	s/o Springfield Avenue	65.8	183	63.1	120	-2.7
	n/o Dinuba Avenue	65.1	165	65.8	182	0.7
	s/o Dinuba Avenue	64.8	158	65.4	172	0.6
	n/o Floral	67.0	220	67.9	252	0.9
s/o Floral	66.8	214	67.7	243	0.9	
Englehart Avenue	n/o South Avenue	56.6	44	58.1	56	1.5
	s/o South Avenue	57.2	49	58.5	60	1.3
	n/o Manning Avenue	59.8	73	60.5	81	0.7
	s/o Manning Avenue	60.1	76	62.0	102	1.9
	n/o Dinuba Avenue	60.4	80	61.1	89	0.7
	s/o Dinuba Avenue	61.2	90	61.7	97	0.5
Parlier Avenue	e/o Reed Avenue	59.4	68	61.1	89	1.7
	w/o Frankwood Avenue	60.0	75	60.8	84	0.8
	e/o Frankwood Avenue	62.0	102	62.4	109	0.4
	w/o Buttonwillow Avenue	59.9	74	60.8	85	0.9
	e/o Buttonwillow Ave	59.0	64	59.8	72	0.8

**TABLE II (CONCLUDED)**

**GENERALIZED TRAFFIC NOISE EXPOSURE  
REEDLEY 2030 GENERAL PLAN UPDATE  
FUTURE CONDITIONS**

Roadway	Segment	2035 No Project		2035 With Project		Change in DNL, dB
		DNL @ Typical Setback, dB <sup>1</sup>	60 dB DNL <sup>2</sup>	DNL @ Typical Setback, dB <sup>1</sup>	60 dB DNL <sup>2</sup>	
I Street	s/o Manning Avenue	65.2	168	65.7	180	0.5
	w/o Reed Avenue	66.3	197	66.6	205	0.3
	e/o Reed Avenue	66.6	207	66.9	215	0.3
Manning Avenue	w/o I Street	70.4	372	70.7	387	0.3
	e/o I Street	66.5	205	66.8	213	0.3
	w/o Frankwood Avenue	66.7	211	66.8	215	0.1
	e/o Frankwood Avenue	66.8	214	67.0	218	0.2
	w/o Buttonwillow Avenue	66.4	201	67.0	219	0.6
	e/o Buttonwillow Avenue	66.4	199	67.0	220	0.6
	w/o Zumwalt	66.8	214	67.5	238	0.7
	e/o Zumwalt	68.3	266	69.0	300	0.7
	w/o Englehart Avenue	67.9	251	68.6	281	0.7
	e/o Englehart Avenue	67.5	236	68.2	265	0.7
Zumwalt Avenue	s/o Manning Avenue	59.0	64	60.3	78	1.3
	n/o Dinuba Avenue	56.9	46	59.5	69	2.6
G Street	s/o North Avenue	53.5	27	53.6	28	0.1
North Avenue	w/o G Street	57.9	54	58.0	55	0.1
	e/o G Street	56.5	44	56.6	45	0.1
	w/o East Avenue	58.1	56	58.3	57	0.2
	e/o East Avenue	60.2	77	60.4	79	0.2
East Avenue	n/o North Avenue	56.4	43	57.1	48	0.7
	s/o North Avenue	59.2	66	59.4	69	0.2
	n/o Dinuba Avenue	62.5	110	62.6	111	0.1
Springfield Avenue	w/o Buttonwillow Avenue	56.7	45	58.5	60	1.8
	e/o Buttonwillow Avenue	49.5	15	59.8	73	10.3
Dinuba Avenue	e/o Reed Avenue	55.3	36	55.9	40	0.6
	w/o East Avenue	64.5	149	64.6	152	0.1
	e/o East Avenue	65.8	182	65.9	185	0.1
	w/o Buttonwillow Avenue	66.9	215	67.4	235	0.5
	e/o Buttonwillow Avenue	66.2	195	66.5	205	0.3
	w/o Zumwalt	65.4	172	65.9	186	0.5
	e/o Zumwalt	67.0	221	67.2	226	0.2
	w/o Englehart Avenue	66.8	212	67.0	219	0.2
Kings River Avenue	e/o Englehart Avenue	66.4	201	66.7	209	0.3
	n/o Olson Avenue	58.2	57	59.1	66	0.9
Olson Avenue	s/o Olson Avenue	59.3	67	61.4	93	2.1
	e/o Kings River Avenue	61.6	95	62.1	103	0.5
	w/o Frankwood Avenue	57.8	54	58.8	62	1.0
Floral Avenue	e/o Frankwood Avenue	54.2	31	59.2	67	5.0
	w/o Reed Avenue	57.2	49	58.6	61	1.4
	e/o Reed Avenue	58.8	63	61.9	100	3.1
	w/o Frankwood Avenue	57.9	54	61.2	90	3.3
	e/o Buttonwillow Avenue	59.4	69	61.7	97	2.3

<sup>1</sup> Assumed to be 75 feet from the center of all roadways.

<sup>2</sup> Distance in feet from the center of the roadway to the 60 dB DNL contour.

Source: Brown-Buntin Associates, Inc.

## **2.4.2 Future Stationary Noise Sources**

It is not possible to predict the future development of commercial, industrial and other stationary noise sources within the City of Reedley. The 2030 General Plan update designates significant acreage for the development of commercial and industrial uses, and new employment opportunities will be needed if residential development occurs as predicted. New industrial/commercial uses would be expected to generate increased truck traffic within the City and stationary equipment associated with such uses could produce significant noise levels. Future noise-related land use conflicts can be avoided by implementation of the policies of the noise element.

## **2.4.3 Future Railroad Operations**

It is unknown if, or by how much, rail operations could increase within the City of Reedley in the future. However, rail activity is likely to increase, and switching operations within the city could increase if existing or future industries increase the use of rail shipments. If rail activity were to double in the future, the generalized 60 dB DNL contour would be located at approximately 200 feet from the center of the tracks. This does not take into consideration site-specific conditions such as acoustic shielding or reflections caused by nearby buildings.

## **2.3.4 Future Airport Operations**

The 2020 Airport Master Plan recommends that the runway length remain at 3,300 feet and that runway and taxiway be widened to improve the airport facility. The number of annual aircraft operations is forecast to increase to 36,538 by the year 2020, but it is not anticipated that the types of aircraft utilizing the facility would change during the planning period. The 60 dB CNEL contour for forecast future (2020) aircraft operations is shown in Figure 2. The 60 dB CNEL contour is located entirely on airport property and there are no noise-sensitive uses located within the contour. The 2020 Airport Master Plan recommends that new development of residential or other noise-sensitive uses not be allowed within the future 60 dB CNEL contour and that such development be discouraged within the future 55 dB CNEL contour.

## **2.4.5 Future Farming Operations**

Noise sources associated with farming operations are not expected to change in the future. However, as development of noise-sensitive uses occurs adjacent to active farmland, noise-related conflicts could occur. Future noise-related land use conflicts may be minimized by implementation of the policies of the noise element.

## CHAPTER THREE

### RECOMMENDED GOALS AND POLICIES

The following goals and policies are offered for consideration by the City of Reedley for inclusion in the updated General Plan. It is noted that transportation and non-transportation (stationary) noise sources are treated differently, which is consistent with the approach taken by other jurisdictions in Fresno County, including the City of Fresno. A consistent approach to noise compatibility planning is considered desirable from both the reviewing agency and project developer perspectives. It is recommended that the city *not* pick and choose from the recommended policies, as they are in most cases interrelated.

#### 3.1 Goals

- To protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.
- To protect the economic base of the City by preventing noise-sensitive land uses from encroaching upon existing or planned noise-producing uses.
- To preserve the tranquility of residential and other noise-sensitive areas by preventing noise-producing uses from encroaching upon existing or planned noise-sensitive uses.
- To educate the citizens of the City concerning the effects of exposure to excessive noise and the methods available for minimizing such exposure.

#### 3.2 Policies

##### Policy N-1 Transportation Noise

Maintain a citywide noise environment that achieves noise goals by minimizing to the degree practicable the impact of transportation-related noise. Transportation noise sources include roadways, railroads and aircraft operations.

*Implementing Action N-1.1 – Noise-Sensitive Land Uses:* New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future noise levels from transportation noise sources exceeding 60 dB DNL within outdoor activity areas unless appropriate noise mitigation measures have been incorporated into the final project design. An exterior exposure of up to 65 dB DNL within outdoor activity areas may be allowed if a good-faith effort has been made to mitigate exterior noise exposure using a practical application of available noise mitigation measures and interior noise exposure due to exterior sources will not exceed 45 dB DNL.

*Implementing Action N1.2 – New Transportation Noise Sources:* Noise created by new transportation noise sources, including roadway improvement projects, shall be

mitigated so as not to exceed 60 dB DNL within outdoor activity areas and 45 dB DNL within interior living spaces of existing or planned noise-sensitive land uses.

**Policy N-2 Stationary Noise Sources**

Maintain a citywide noise environment that achieves noise goals by minimizing to the degree practicable the impact of stationary noise sources. Stationary noise sources include industrial and commercial facilities, agricultural operations and vehicle movements on private property.

*Implementing Action N-2.1 – Noise-Sensitive Land Uses:* The development of new noise-sensitive land uses shall not be permitted in areas where noise levels from existing stationary noises sources may exceed the noise level standards summarized in Table III within outdoor activity areas.

*Implementing Action N-2.2 – New Stationary Noise Sources:* Noise created by proposed stationary noise sources, or existing stationary noise sources which undergo modifications that may increase noise levels, shall be mitigated so as not to exceed the noise level standards of Table III within outdoor activity areas of existing or planned noise-sensitive land uses.

<b>TABLE III</b>		
<b>ALLOWABLE NOISE EXPOSURE – STATIONARY NOISE SOURCES<sup>1</sup></b>		
	<b>Daytime (7:00 a.m. to 10:00 p.m.)</b>	<b>Nighttime (10:00 p.m.-7:00 a.m.)</b>
Hourly L <sub>eq</sub> , dBA	55	50
Maximum level, dBA	70	65
<sup>1</sup> As determined within outdoor activity areas of existing or planned noise-sensitive uses. If outdoor activity area locations are unknown, the allowable noise exposure shall be determined at the property line of the noise-sensitive use.		

**Policy N-3 Development Review and Monitoring**

Maintain a citywide noise environment that achieves noise goals through development review and post-development monitoring.

*Implementing Action N-3.1 – Development Review:* The City shall review new public and private development proposals to determine conformance with the policies and implementing actions of the Noise Element.

*Implementing Action N-3.2 – Acoustical Analysis Required (Transportation Noise Sources):* At the discretion of the Community Development Department or where the development of a project may result in noise-sensitive land uses being exposed to existing or projected future transportation noise levels exceeding 60 dB DNL (or

CNEL), an acoustical analysis shall be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. Areas of the city potentially exposed to noise from transportation sources in excess of 60 dB DNL (or CNEL) may be determined by reference to Table II for traffic noise and Figure 2 for the Reedley Municipal Airport. For railroad noise, it is assumed that areas closer than 200 feet from the track may be exposed to 60 dB DNL or above. When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the DNL (CNEL for aircraft noise) and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest.

*Implementing Action N-3.3 – Acoustical Analysis Required (Stationary Noise Sources):* Where, at the discretion of the Community Development Department, the development of a project may result in noise-sensitive land uses being exposed to noise from existing or future stationary sources exceeding the daytime or nighttime standards shown in Table III, an acoustical analysis shall be required. The acoustical analysis should be required early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. When required, an acoustical analysis shall include identification and quantification of noise sources that may affect the proposed use, or that may result from the proposed use, for existing and foreseeable future conditions. Noise levels shall be quantified in terms of the noise level descriptors utilized in Table III and shall include consideration of site-specific conditions that could affect noise exposure at the location or locations of interest.

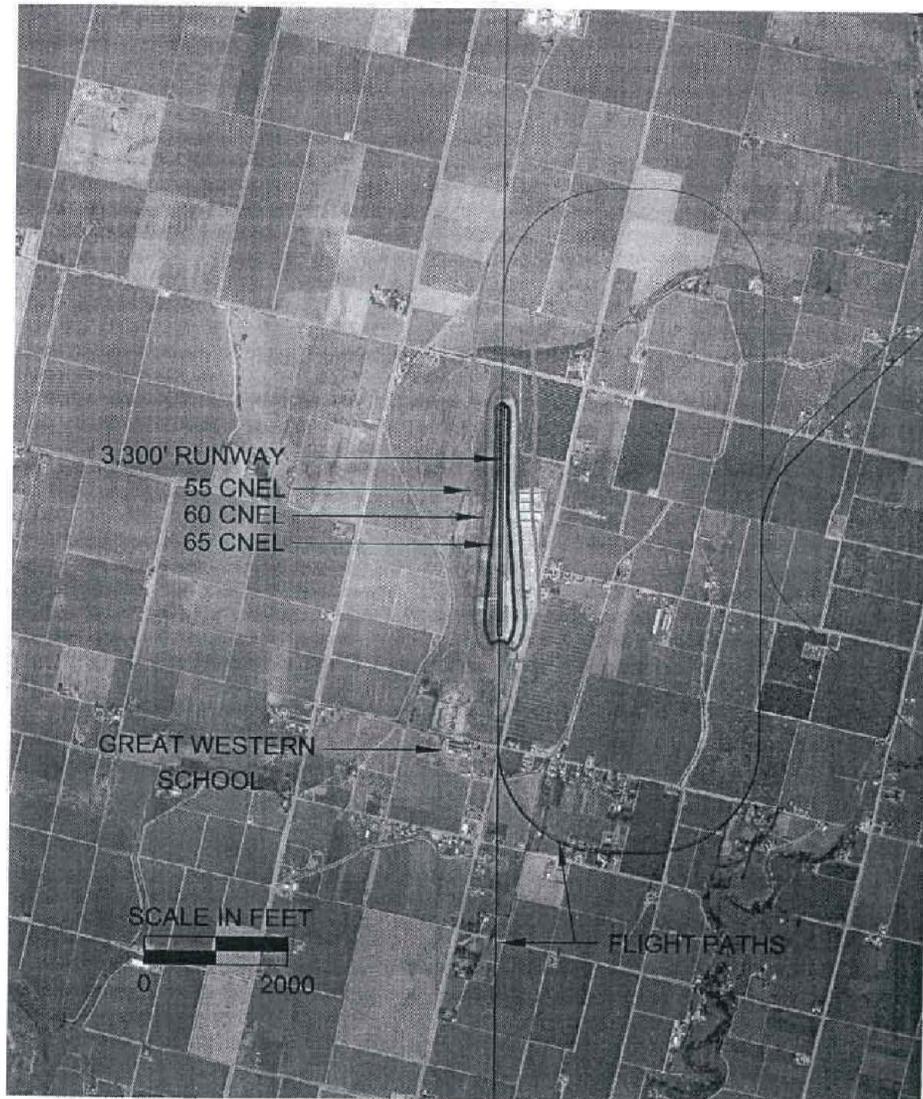
*Implementing Action N-3.4 – Compliance Monitoring:* The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.

*Implementing Action N-3.5 – State Noise Insulation Standards:* The City shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for new multi-family housing, hotels and motels.

*Implementing Action N-3.6 – Reedley Ordinance Code:* The City shall amend the Reedley Ordinance Code if required to achieve consistency with the Noise Element.

*Implementing Action N-3.7 – California Vehicle Code:* The City shall encourage appropriate authorities to enforce provisions of the California Vehicle Code related to vehicle noise emissions and muffler systems.

**FIGURE 1: CURRENT AIRPORT CNEL CONTOUR MAP**

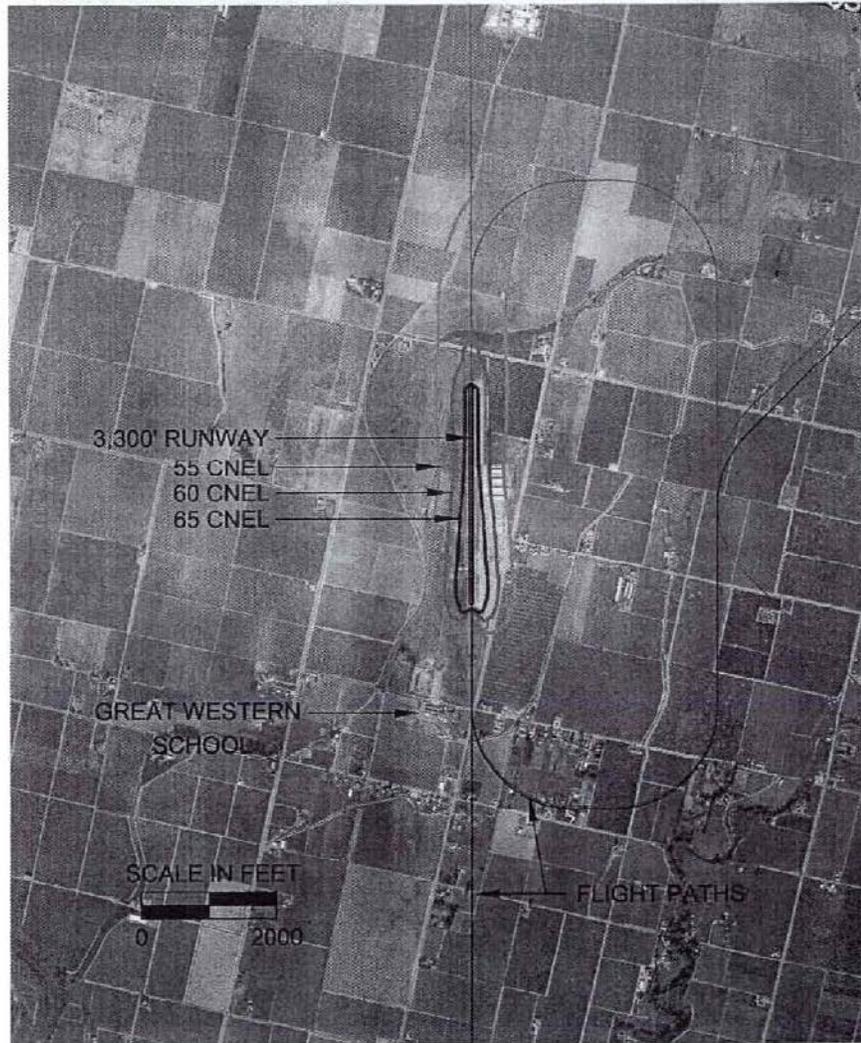


**Exhibit 8  
Current Noise Contours  
Reedley Municipal Airport EA/EIR**

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WADELL ENGINEERING CORPORATION

**FIGURE 2: 2020 FORECAST AIRPORT CNEL CONTOUR MAP**



**Exhibit 9  
Forecast 2020 Noise Contours  
Reedley Municipal Airport EA/EIR**

WADELL ENGINEERING CORPORATION

**APPENDIX A**  
**TRAFFIC NOISE MODELING ASSUMPTIONS**

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	Existing
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day Eve Night			Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
1	Reed Avenue	n/o South Avenue	5290	85		15	3	5	55	75	
2	Reed Avenue	s/o South Avenue	6010	85		15	3	5	45	75	
3	South Avenue	e/o Reed Avenue	1380	85		15	3	5	40	75	
4	Frankwood Avenue	n/o South Avenue	1690	85		15	3	5	55	75	
5	Frankwood Avenue	s/o South Avenue	2140	85		15	3	5	45	75	
6	South Avenue	w/o Frankwood Avenue	1320	85		15	3	5	40	75	
7	South Avenue	e/o Frankwood Avenue	1630	85		15	3	5	45	75	
8	Buttonwillow Avenue	n/o South Avenue	2560	85		15	3	5	55	75	
9	Buttonwillow Avenue	s/o South Avenue	3380	85		15	3	5	55	75	
10	South Avenue	w/o Buttonwillow Avenue	1420	85		15	3	5	55	75	
11	South Avenue	e/o Buttonwillow Avenue	1420	85		15	3	5	55	75	
12	Englehart Avenue	n/o South Avenue	450	85		15	3	5	55	75	
13	Englehart Avenue	s/o South Avenue	520	85		15	3	5	55	75	
14	South Avenue	w/o Englehart Avenue	1230	85		15	3	5	55	75	
15	South Avenue	e/o Englehart Avenue	1240	85		15	3	5	55	75	
16	Reed Avenue	n/o Parlier Avenue	6040	85		15	3	5	35	75	
17	Reed Avenue	s/o Parlier Avenue	8210	85		15	3	5	35	75	
18	Parlier Avenue	e/o Reed Avenue	3490	85		15	3	5	30	75	
19	Frankwood Avenue	n/o Parlier Avenue	2800	85		15	3	5	35	75	
20	Frankwood Avenue	s/o Parlier Avenue	2900	85		15	3	5	35	75	
21	Parlier Avenue	w/o Frankwood Avenue	2910	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	Existing
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
22	Parlier Avenue	e/o Frankwood Avenue	3610	85		15	3	5	35	75	
23	Buttonwillow Avenue	n/o Parlier Avenue	3470	85		15	3	5	55	75	
24	Buttonwillow Avenue	s/o Parlier Avenue	4970	85		15	3	5	45	75	
25	Parlier Avenue	w/o Buttonwillow Avenue	2270	85		15	3	5	35	75	
26	Parlier Avenue	e/o Buttonwillow Ave	1530	85		15	3	5	55	75	
27	I Street	s/o Manning Avenue	7880	85		15	3	5	35	75	
28	Manning Avenue	w/o I Street	16960	85		15	3	5	45	75	
29	Manning Avenue	e/o I Street	10770	85		15	3	5	35	75	
30	Frankwood Avenue	n/o Manning Avenue	7260	85		15	3	5	35	75	
31	Frankwood Avenue	s/o Manning Avenue	4330	85		15	3	5	35	75	
32	Manning Avenue	w/o Frankwood Avenue	11080	85		15	3	5	35	75	
33	Manning Avenue	e/o Frankwood Avenue	11940	85		15	3	5	35	75	
34	Buttonwillow Avenue	n/o Manning Avenue	7030	85		15	3	5	45	75	
35	Buttonwillow Avenue	s/o Manning Avenue	7840	85		15	3	5	40	75	
36	Manning Avenue	w/o Buttonwillow Avenue	10300	85		15	3	5	35	75	
37	Manning Avenue	e/o Buttonwillow Avenue	7990	85		15	3	5	40	75	
38	Zumwalt Avenue	s/o Manning Avenue	820	85		15	3	5	55	75	
39	Manning Avenue	w/o Zumwalt	7370	85		15	3	5	45	75	
40	Manning Avenue	e/o Zumwalt	6970	85		15	3	5	55	75	
41	Englehart Avenue	n/o Manning Avenue	990	85		15	3	5	55	75	
42	Englehart Avenue	s/o Manning Avenue	1110	85		15	3	5	55	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	Existing
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day Eve Night			Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
43	Manning Avenue	w/o Englehart Avenue	6120	85		15	3	5	55	75	
44	Manning Avenue	e/o Englehart Avenue	5560	85		15	3	5	55	75	
45	Reed Avenue	n/o I Street	7440	85		15	3	5	30	75	
46	I Street	w/o Reed Avenue	9730	85		15	3	5	35	75	
47	I Street	e/o Reed Avenue	13590	85		15	3	5	30	75	
48	G Street	s/o North Avenue	2370	85		15	1.5	1	25	75	
49	North Avenue	w/o G Street	6950	85		15	1.5	1	25	75	
50	North Avenue	e/o G Street	5180	85		15	1.5	1	25	75	
51	East Avenue	n/o North Avenue	2110	85		15	1.5	1	35	75	
52	East Avenue	s/o North Avenue	4490	85		15	1.5	1	35	75	
53	North Avenue	w/o East Avenue	7090	85		15	1.5	1	25	75	
54	North Avenue	e/o East Avenue	8190	85		15	1.5	1	30	75	
55	Buttonwillow Avenue	n/o Springfield Avenue	7240	85		15	3	5	40	75	
56	Buttonwillow Avenue	s/o Springfield Avenue	7120	85		15	3	5	40	75	
57	Springfield Avenue	w/o Buttonwillow Avenue	1740	85		15	3	5	25	75	
58	Springfield Avenue	e/o Buttonwillow Avenue	---	85		15	3	5	25	75	
59	Reed Avenue	n/o Dinuba Avenue	5560	85		15	1.5	1	30	75	
60	Reed Avenue	s/o Dinuba Avenue	6060	85		15	1.5	1	35	75	
61	Dinbua Avenue	e/o Reed Avenue	2100	85		15	1.5	1	30	75	
62	East Avenue	n/o Dinuba Avenue	4580	85		15	3	5	35	75	
63	Dinbua Avenue	w/o East Avenue	5930	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	Existing
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day Eve Night			Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
64	Dinbua Avenue	e/o East Avenue	7400	85		15	3	5	40	75	
65	Buttonwillow Avenue	n/o Dinuba Avenue	5650	85		15	3	5	40	75	
66	Buttonwillow Avenue	s/o Dinuba Avenue	5790	85		15	3	5	40	75	
67	Dinbua Avenue	w/o Buttonwillow Avenue	8890	85		15	3	5	40	75	
68	Dinbua Avenue	e/o Buttonwillow Avenue	6370	85		15	3	5	45	75	
69	Zumwalt Avenue	n/o Dinuba Avenue	740	85		15	3	5	45	75	
70	Dinbua Avenue	w/o Zumwalt	6030	85		15	3	5	45	75	
71	Dinbua Avenue	e/o Zumwalt	5950	85		15	3	5	55	75	
72	Englehart Avenue	n/o Dinuba Avenue	1160	85		15	3	5	55	75	
73	Englehart Avenue	s/o Dinuba Avenue	1410	85		15	3	5	55	75	
74	Dinbua Avenue	w/o Englehart Avenue	5140	85		15	3	5	55	75	
75	Dinbua Avenue	e/o Englehart Avenue	4670	85		15	3	5	55	75	
76	Kings River Avenue	n/o Olson Avenue	1630	85		15	3	5	35	75	
77	Kings River Avenue	s/o Olson Avenue	2050	85		15	3	5	35	75	
78	Olson Avenue	e/o Kings River Avenue	3500	85		15	3	5	35	75	
79	Frankwood Avenue	n/o Olson Avenue	5220	85		15	3	5	40	75	
80	Frankwood Avenue	s/o Olson Avenue	4490	85		15	3	5	40	75	
81	Olson Avenue	w/o Frankwood Avenue	1420	85		15	3	5	35	75	
82	Olson Avenue	e/o Frankwood Avenue	450	85		15	3	5	35	75	
83	Reed Avenue	n/o Floral	3310	85		15	3	5	55	75	
84	Reed Avenue	s/o Floral	2350	85		15	3	5	55	75	



**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 No Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day Eve Night			Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
1	Reed Avenue	n/o South Avenue	7390	85		15	3	5	55	75	
2	Reed Avenue	s/o South Avenue	8330	85		15	3	5	45	75	
3	South Avenue	e/o Reed Avenue	1940	85		15	3	5	40	75	
4	Frankwood Avenue	n/o South Avenue	2410	85		15	3	5	55	75	
5	Frankwood Avenue	s/o South Avenue	3060	85		15	3	5	45	75	
6	South Avenue	w/o Frankwood Avenue	1930	85		15	3	5	40	75	
7	South Avenue	e/o Frankwood Avenue	2360	85		15	3	5	45	75	
8	Buttonwillow Avenue	n/o South Avenue	3660	85		15	3	5	55	75	
9	Buttonwillow Avenue	s/o South Avenue	4780	85		15	3	5	55	75	
10	South Avenue	w/o Buttonwillow Avenue	2020	85		15	3	5	55	75	
11	South Avenue	e/o Buttonwillow Avenue	2100	85		15	3	5	55	75	
12	Englehart Avenue	n/o South Avenue	670	85		15	3	5	55	75	
13	Englehart Avenue	s/o South Avenue	770	85		15	3	5	55	75	
14	South Avenue	w/o Englehart Avenue	1920	85		15	3	5	55	75	
15	South Avenue	e/o Englehart Avenue	1940	85		15	3	5	55	75	
16	Reed Avenue	n/o Parlier Avenue	7950	85		15	3	5	35	75	
17	Reed Avenue	s/o Parlier Avenue	10240	85		15	3	5	35	75	
18	Parlier Avenue	e/o Reed Avenue	3740	85		15	3	5	30	75	
19	Frankwood Avenue	n/o Parlier Avenue	4230	85		15	3	5	35	75	
20	Frankwood Avenue	s/o Parlier Avenue	5660	85		15	3	5	35	75	
21	Parlier Avenue	w/o Frankwood Avenue	4310	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 No Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
22	Parlier Avenue	e/o Frankwood Avenue	5360	85		15	3	5	35	75	
23	Buttonwillow Avenue	n/o Parlier Avenue	4940	85		15	3	5	55	75	
24	Buttonwillow Avenue	s/o Parlier Avenue	7060	85		15	3	5	45	75	
25	Parlier Avenue	w/o Buttonwillow Avenue	3300	85		15	3	5	35	75	
26	Parlier Avenue	e/o Buttonwillow Ave	1160	85		15	3	5	55	75	
27	I Street	s/o Manning Avenue	11280	85		15	3	5	35	75	
28	Manning Avenue	w/o I Street	24040	85		15	3	5	45	75	
29	Manning Avenue	e/o I Street	15190	85		15	3	5	35	75	
30	Frankwood Avenue	n/o Manning Avenue	8400	85		15	3	5	35	75	
31	Frankwood Avenue	s/o Manning Avenue	5950	85		15	3	5	35	75	
32	Manning Avenue	w/o Frankwood Avenue	15870	85		15	3	5	35	75	
33	Manning Avenue	e/o Frankwood Avenue	16260	85		15	3	5	35	75	
34	Buttonwillow Avenue	n/o Manning Avenue	10090	85		15	3	5	45	75	
35	Buttonwillow Avenue	s/o Manning Avenue	11260	85		15	3	5	40	75	
36	Manning Avenue	w/o Buttonwillow Avenue	14800	85		15	3	5	35	75	
37	Manning Avenue	e/o Buttonwillow Avenue	11650	85		15	3	5	40	75	
38	Zumwalt Avenue	s/o Manning Avenue	1160	85		15	3	5	55	75	
39	Manning Avenue	w/o Zumwalt	10440	85		15	3	5	45	75	
40	Manning Avenue	e/o Zumwalt	9840	85		15	3	5	55	75	
41	Englehart Avenue	n/o Manning Avenue	1410	85		15	3	5	55	75	
42	Englehart Avenue	s/o Manning Avenue	1510	85		15	3	5	55	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 No Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
43	Manning Avenue	w/o Englehart Avenue	9010	85		15	3	5	55	75	
44	Manning Avenue	e/o Englehart Avenue	8190	85		15	3	5	55	75	
45	Reed Avenue	n/o I Street	10620	85		15	3	5	30	75	
46	I Street	w/o Reed Avenue	14360	85		15	3	5	35	75	
47	I Street	e/o Reed Avenue	19780	85		15	3	5	30	75	
48	G Street	s/o North Avenue	3020	85		15	1.5	1	25	75	
49	North Avenue	w/o G Street	8350	85		15	1.5	1	25	75	
50	North Avenue	e/o G Street	6130	85		15	1.5	1	25	75	
51	East Avenue	n/o North Avenue	2830	85		15	1.5	1	35	75	
52	East Avenue	s/o North Avenue	5410	85		15	1.5	1	35	75	
53	North Avenue	w/o East Avenue	8780	85		15	1.5	1	25	75	
54	North Avenue	e/o East Avenue	9620	85		15	1.5	1	30	75	
55	Buttonwillow Avenue	n/o Springfield Avenue	10480	85		15	3	5	40	75	
56	Buttonwillow Avenue	s/o Springfield Avenue	10220	85		15	3	5	40	75	
57	Springfield Avenue	w/o Buttonwillow Avenue	2620	85		15	3	5	25	75	
58	Springfield Avenue	e/o Buttonwillow Avenue	500	85		15	3	5	25	75	
59	Reed Avenue	n/o Dinuba Avenue	8330	85		15	1.5	1	30	75	
60	Reed Avenue	s/o Dinuba Avenue	9020	85		15	1.5	1	35	75	
61	Dinbua Avenue	e/o Reed Avenue	3110	85		15	1.5	1	30	75	
62	East Avenue	n/o Dinuba Avenue	5970	85		15	3	5	35	75	
63	Dinbua Avenue	w/o East Avenue	12060	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 No Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
64	Dinbua Avenue	e/o East Avenue	10150	85		15	3	5	40	75	
65	Buttonwillow Avenue	n/o Dinuba Avenue	8760	85		15	3	5	40	75	
66	Buttonwillow Avenue	s/o Dinuba Avenue	8190	85		15	3	5	40	75	
67	Dinbua Avenue	w/o Buttonwillow Avenue	13020	85		15	3	5	40	75	
68	Dinbua Avenue	e/o Buttonwillow Avenue	9090	85		15	3	5	45	75	
69	Zumwalt Avenue	n/o Dinuba Avenue	1060	85		15	3	5	45	75	
70	Dinbua Avenue	w/o Zumwalt	7560	85		15	3	5	45	75	
71	Dinbua Avenue	e/o Zumwalt	7440	85		15	3	5	55	75	
72	Englehart Avenue	n/o Dinuba Avenue	1620	85		15	3	5	55	75	
73	Englehart Avenue	s/o Dinuba Avenue	1920	85		15	3	5	55	75	
74	Dinbua Avenue	w/o Englehart Avenue	7000	85		15	3	5	55	75	
75	Dinbua Avenue	e/o Englehart Avenue	6460	85		15	3	5	55	75	
76	Kings River Avenue	n/o Olson Avenue	2240	85		15	3	5	35	75	
77	Kings River Avenue	s/o Olson Avenue	2860	85		15	3	5	35	75	
78	Olson Avenue	e/o Kings River Avenue	4840	85		15	3	5	35	75	
79	Frankwood Avenue	n/o Olson Avenue	7760	85		15	3	5	40	75	
80	Frankwood Avenue	s/o Olson Avenue	6700	85		15	3	5	40	75	
81	Olson Avenue	w/o Frankwood Avenue	2050	85		15	3	5	35	75	
82	Olson Avenue	e/o Frankwood Avenue	890	85		15	3	5	35	75	
83	Reed Avenue	n/o Floral	4850	85		15	3	5	55	75	
84	Reed Avenue	s/o Floral	3570	85		15	3	5	55	75	



**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 Plus Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day Eve Night			Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
1	Reed Avenue	n/o South Avenue	9970	85		15	3	5	55	75	
2	Reed Avenue	s/o South Avenue	11030	85		15	3	5	45	75	
3	South Avenue	e/o Reed Avenue	3600	85		15	3	5	40	75	
4	Frankwood Avenue	n/o South Avenue	3490	85		15	3	5	55	75	
5	Frankwood Avenue	s/o South Avenue	4630	85		15	3	5	45	75	
6	South Avenue	w/o Frankwood Avenue	3590	85		15	3	5	40	75	
7	South Avenue	e/o Frankwood Avenue	4190	85		15	3	5	45	75	
8	Buttonwillow Avenue	n/o South Avenue	4430	85		15	3	5	55	75	
9	Buttonwillow Avenue	s/o South Avenue	6230	85		15	3	5	55	75	
10	South Avenue	w/o Buttonwillow Avenue	3740	85		15	3	5	55	75	
11	South Avenue	e/o Buttonwillow Avenue	3360	85		15	3	5	55	75	
12	Englehart Avenue	n/o South Avenue	940	85		15	3	5	55	75	
13	Englehart Avenue	s/o South Avenue	1050	85		15	3	5	55	75	
14	South Avenue	w/o Englehart Avenue	2760	85		15	3	5	55	75	
15	South Avenue	e/o Englehart Avenue	2770	85		15	3	5	55	75	
16	Reed Avenue	n/o Parlier Avenue	11780	85		15	3	5	35	75	
17	Reed Avenue	s/o Parlier Avenue	13690	85		15	3	5	35	75	
18	Parlier Avenue	e/o Reed Avenue	5570	85		15	3	5	30	75	
19	Frankwood Avenue	n/o Parlier Avenue	5420	85		15	3	5	35	75	
20	Frankwood Avenue	s/o Parlier Avenue	6830	85		15	3	5	35	75	
21	Parlier Avenue	w/o Frankwood Avenue	5120	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 Plus Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
22	Parlier Avenue	e/o Frankwood Avenue	5890	85		15	3	5	35	75	
23	Buttonwillow Avenue	n/o Parlier Avenue	6280	85		15	3	5	55	75	
24	Buttonwillow Avenue	s/o Parlier Avenue	8900	85		15	3	5	45	75	
25	Parlier Avenue	w/o Buttonwillow Avenue	4070	85		15	3	5	35	75	
26	Parlier Avenue	e/o Buttonwillow Ave	1390	85		15	3	5	55	75	
27	I Street	s/o Manning Avenue	12550	85		15	3	5	35	75	
28	Manning Avenue	w/o I Street	25460	85		15	3	5	45	75	
29	Manning Avenue	e/o I Street	16110	85		15	3	5	35	75	
30	Frankwood Avenue	n/o Manning Avenue	10720	85		15	3	5	35	75	
31	Frankwood Avenue	s/o Manning Avenue	6680	85		15	3	5	35	75	
32	Manning Avenue	w/o Frankwood Avenue	16330	85		15	3	5	35	75	
33	Manning Avenue	e/o Frankwood Avenue	16730	85		15	3	5	35	75	
34	Buttonwillow Avenue	n/o Manning Avenue	11740	85		15	3	5	45	75	
35	Buttonwillow Avenue	s/o Manning Avenue	12550	85		15	3	5	40	75	
36	Manning Avenue	w/o Buttonwillow Avenue	16840	85		15	3	5	35	75	
37	Manning Avenue	e/o Buttonwillow Avenue	13550	85		15	3	5	40	75	
38	Zumwalt Avenue	s/o Manning Avenue	1560	85		15	3	5	55	75	
39	Manning Avenue	w/o Zumwalt	12270	85		15	3	5	45	75	
40	Manning Avenue	e/o Zumwalt	11750	85		15	3	5	55	75	
41	Englehart Avenue	n/o Manning Avenue	1660	85		15	3	5	55	75	
42	Englehart Avenue	s/o Manning Avenue	2320	85		15	3	5	55	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
43	Manning Avenue	w/o Englehart Avenue	10680	85		15	3	5	55	75	
44	Manning Avenue	e/o Englehart Avenue	9750	85		15	3	5	55	75	
45	Reed Avenue	n/o I Street	11810	85		15	3	5	30	75	
46	I Street	w/o Reed Avenue	15280	85		15	3	5	35	75	
47	I Street	e/o Reed Avenue	20900	85		15	3	5	30	75	
48	G Street	s/o North Avenue	3090	85		15	1.5	1	25	75	
49	North Avenue	w/o G Street	8510	85		15	1.5	1	25	75	
50	North Avenue	e/o G Street	6240	85		15	1.5	1	25	75	
51	East Avenue	n/o North Avenue	3360	85		15	1.5	1	35	75	
52	East Avenue	s/o North Avenue	5710	85		15	1.5	1	35	75	
53	North Avenue	w/o East Avenue	9130	85		15	1.5	1	25	75	
54	North Avenue	e/o East Avenue	10000	85		15	1.5	1	30	75	
55	Buttonwillow Avenue	n/o Springfield Avenue	5380	85		15	3	5	40	75	
56	Buttonwillow Avenue	s/o Springfield Avenue	5440	85		15	3	5	40	75	
57	Springfield Avenue	w/o Buttonwillow Avenue	3980	85		15	3	5	25	75	
58	Springfield Avenue	e/o Buttonwillow Avenue	5400	85		15	3	5	25	75	
59	Reed Avenue	n/o Dinuba Avenue	8970	85		15	1.5	1	30	75	
60	Reed Avenue	s/o Dinuba Avenue	9350	85		15	1.5	1	35	75	
61	Dinbua Avenue	e/o Reed Avenue	3560	85		15	1.5	1	30	75	
62	East Avenue	n/o Dinuba Avenue	6110	85		15	3	5	35	75	
63	Dinbua Avenue	w/o East Avenue	12410	85		15	3	5	30	75	

**Brown Buntin Associates, Inc**

**FHWA-RD-77-108**

**Calculation Sheets**

December 16, 2010

Project #:	09-009
Description:	2035 Plus Project
Ldn/Cnel:	Ldn
Site Type:	Soft

<b>Contour Levels (dB)</b>	55	60	65	70	
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Segment	Roadway Name	Segment Description	ADT	Day	Eve	Night	Truck %		Speed	Dist	Offset
				%	%	%	Med	Hvy	mph	ft	dB
64	Dinbua Avenue	e/o East Avenue	10440	85		15	3	5	40	75	
65	Buttonwillow Avenue	n/o Dinuba Avenue	10170	85		15	3	5	40	75	
66	Buttonwillow Avenue	s/o Dinuba Avenue	9320	85		15	3	5	40	75	
67	Dinbua Avenue	w/o Buttonwillow Avenue	14920	85		15	3	5	40	75	
68	Dinbua Avenue	e/o Buttonwillow Avenue	9810	85		15	3	5	45	75	
69	Zumwalt Avenue	n/o Dinuba Avenue	1930	85		15	3	5	45	75	
70	Dinbua Avenue	w/o Zumwalt	8500	85		15	3	5	45	75	
71	Dinbua Avenue	e/o Zumwalt	7670	85		15	3	5	55	75	
72	Englehart Avenue	n/o Dinuba Avenue	1900	85		15	3	5	55	75	
73	Englehart Avenue	s/o Dinuba Avenue	2180	85		15	3	5	55	75	
74	Dinbua Avenue	w/o Englehart Avenue	7360	85		15	3	5	55	75	
75	Dinbua Avenue	e/o Englehart Avenue	6840	85		15	3	5	55	75	
76	Kings River Avenue	n/o Olson Avenue	2770	85		15	3	5	35	75	
77	Kings River Avenue	s/o Olson Avenue	4650	85		15	3	5	35	75	
78	Olson Avenue	e/o Kings River Avenue	5430	85		15	3	5	35	75	
79	Frankwood Avenue	n/o Olson Avenue	10330	85		15	3	5	40	75	
80	Frankwood Avenue	s/o Olson Avenue	9110	85		15	3	5	40	75	
81	Olson Avenue	w/o Frankwood Avenue	2530	85		15	3	5	35	75	
82	Olson Avenue	e/o Frankwood Avenue	2830	85		15	3	5	35	75	
83	Reed Avenue	n/o Floral	6170	85		15	3	5	55	75	
84	Reed Avenue	s/o Floral	4690	85		15	3	5	55	75	





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# **APPENDIX F**

## TRAFFIC IMPACT ANALYSIS REPORT

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December 10, 2012

Mr. Ron Sissem  
EMC Planning Group, Inc.  
301 Lighthouse Avenue, Suite C  
Monterey, CA 93940

**RE: City of Reedley Traffic Impact Analysis Report**

Dear Mr. Sissem:

We are pleased to submit this Traffic Impact Study Analysis which has been prepared in support of the Circulation Element of the City of Reedley General Plan 2030. The report was prepared in accordance with the requirements specified in the current City of Reedley General Plan 2012 and utilizes generally accepted traffic engineering principles and methods.

The City of Reedley Traffic Impact Analysis Report studies the potential traffic impacts related to implementing the proposed City of Reedley General Plan 2030, dated July 25, 2011. The General Plan update proposes to expand the City of Reedley's sphere of influence and in turn includes additional acreage of planned land uses when compared to the currently adopted General Plan. The purpose of the report is to investigate the potential impacts related to the changes proposed in the General Plan update.

In order to identify potential impacts at General Plan buildout, future traffic volumes were developed for two scenarios; one reflecting the current General Plan land uses and another reflecting the updated General Plan 2030 land uses. The Fresno Council of Governments utilized its Travel Demand Forecast Model to develop future traffic volume outputs for both scenarios. For the update scenario, the modeled land uses are those identified in the City of Reedley General Plan 2030, dated July 25, 2011.

The future traffic volumes were used to identify potential deficiencies in the roadway network as a result of the changes in land uses per the City of Reedley General Plan 2030 and recommendations are provided in the report to mitigate these deficiencies.

Thanks you for the opportunity to perform this traffic impact analysis and provide you with the report. Please feel free to contact our office with any questions or comments regarding the report.

Sincerely,

OMNI-MEANS, Ltd.  
Engineers & Planners



Jeremy Schmal  
Staff Engineer

JMS  
C1330LTR001 / 55-2823-01



# City of Reedley Transportation Impact Analysis Report

Prepared For:



EMC Planning Group

Prepared By:



**CITY OF REEDLEY  
TRANSPORTATION IMPACT ANALYSIS REPORT**

**Prepared For  
EMC Planning Group**

**Prepared By**

**OMNI-MEANS, LTD.  
ENGINEERS & PLANNERS  
309 W. Main Street, Suite 100  
Visalia, CA 93291  
(559) 734-5895**

**November 2012**

**55-2823-01  
(R1330TS004.DOC)**

**TABLE OF CONTENTS**

---

INTRODUCTION..... 1

SETTING ..... 1

EXISTING TRANSPORTATION SYSTEM ..... 4

EXISTING TRAFFIC VOLUMES ..... 5

Intersection LOS Methodology ..... 11

Roadway LOS Methodology ..... 13

EXISTING CONDITIONS ..... 14

Roadway Operating Conditions ..... 15

TRANSPORTATION AND CIRCULATION ..... 17

STREETS AND HIGHWAYS ..... 18

Introduction ..... 18

Functional Classification System ..... 18

Regional Setting ..... 19

Existing Improvement Standards ..... 22

PUBLIC TRANSPORTATION ..... 31

Introduction ..... 31

Methods ..... 31

Existing Conditions ..... 31

UNMET TRANSIT NEEDS PROCESS ..... 33

PARK AND RIDE FACILITIES ..... 33

RAIL TRANSPORTATION ..... 33

Existing Conditions ..... 33

Introduction ..... 35

BICYCLE FACILITIES AND PLANNING ..... 35

RECREATIONAL WALKWAYS ..... 35

SAFE ROUTES TO SCHOOL ..... 35

AVIATION SYSTEM ..... 38

Introduction ..... 38

Existing Conditions ..... 38

GOODS MOVEMENT ..... 40

Introduction ..... 40

Existing Conditions ..... 40

TRANSPORTATION SYSTEM MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ..... 42

Introduction ..... 42

Existing Conditions ..... 42

TRANSPORTATION DEMAND MANAGEMENT ..... 42

Strategies ..... 42

COMMUTE MODES OF TRANSPORTATION ..... 43

Introduction ..... 43

Methods ..... 43

Existing Conditions ..... 43

FUTURE CONDITIONS ..... 44

Future Traffic Volumes ..... 44

Future Roadway Network ..... 44

Year 2035 Base Conditions ..... 48

2035 Base Roadway Operating Conditions ..... 52

Year 2035 Base plus Project Conditions ..... 53

2035 Roadway Base plus Project Operating Conditions ..... 57

RECOMMENDED MITIGATION MEASURES ..... 58

Existing Conditions ..... 58

Year 2035 Base Conditions ..... 59

Year 2035 Base plus Project Conditions ..... 60

---

## LIST OF FIGURES

---

Figure 1 – Project Vicinity Map.....	3
Figure 2 – Study Intersections.....	7
Figure 3 – Existing Intersection Traffic Volumes.....	8
Figure 4 – Existing Lane Geometrics and Control.....	9
Figure 5 – Existing Daily Traffic Volumes.....	10
Figure 6 – Circulation Diagram.....	21
Figure 7 – Existing Transit Routes.....	32
Figure 8 – Bicycle Transportation Map.....	37
Figure 9 – Existing Airport Map.....	39
Figure 10 – Existing Truck Routes (local truck routes).....	41
Figure 11 – Measure “C” Project List.....	47
Figure 12 – Year 2035 Base Intersection Traffic Volumes.....	50
Figure 13 – Year 2035 Base Lane Geometrics and Control.....	51
Figure 14 – Year 2035 Base plus Project Intersection Traffic Volumes.....	55
Figure 15 – Year 2035 Base plus Project Lane Geometrics and Control.....	56
Figure 16 – Year 2035 Base plus Project Mitigated Lane Geometrics and Control.....	61

---

## LIST OF TABLES

---

Table 1 Level Of Service Criteria for Intersections.....	12
Table 2 Level of Service (LOS) Threshold Volumes for Urban/Suburban Roadway Types.....	13
Table 3 Existing Conditions: Intersection Levels of Service.....	14
Table 4 Existing Conditions: Roadway Segment Level of Service.....	16
Table 5 City of Reedley Road Requirements.....	19
Table 6 Dial-a-Ride Fares.....	31
Table 7 Transportation to Work.....	43
Table 8 Financially Constrained Federal Transportation Improvements Program Projects for the City of Reedley; 2011 RTP.....	45
Table 9 Year 2035 Base Conditions: Intersection Levels of Service.....	48
Table 10 Year 2035 Base Conditions: Roadway Segment Level of Service.....	52
Table 11 Year 2035 Base plus Project Conditions: Intersection Levels of Service.....	53
Table 12 Year 2035 Base plus Project Conditions: Roadway Segment Level of Service.....	57

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## APPENDICES (available under separate cover)

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- Appendix A – Peak Hour Intersection Traffic Counts
- Appendix B – Daily Segment Traffic Counts
- Appendix C – Level of Service Worksheets

## **INTRODUCTION**

EMC Planning Group, who is working for the City of Reedley (City), has retained OMNI-MEANS to complete a citywide Transportation Impact Analysis Report (TIAR). The TIAR is being done in support of updates to the City's General Plan Circulation Element, which is part of the City of Reedley General Plan 2030 Update.

This report summarizes the City of Reedley's existing transportation facilities and circulation system in the context of a regional setting. The report also presents existing and projected future service levels on critical City facilities. Daily and peak hour traffic volumes are presented for both existing and future scenarios and facilities with surplus or deficit capacities are identified. This report summarizes the City's existing pedestrian and bicycle facilities, and local transit facilities and linkages to regional transit routes. Lastly, this report examines rail and air transportation access within and/or in the immediate vicinity of City Limits. Some of the key subjects the report covers are:

- Setting
- Existing Conditions
- Streets and Highways
- Pedestrian and Bicycle Routes
- Public Transportation
- Railroads
- Airports
- Future Conditions and Demand

## **SETTING**

The City of Reedley, incorporated in 1913, is located in the central portion of the San Joaquin Valley approximately 20 miles southeast of the City of Fresno. Reedley is one of the 15 incorporated cities that comprise Fresno County and has the third largest population in the County, with a current estimate of 25,520 citizens (2011 Department of Finance). Fresno County's agricultural lands are some of the richest farmlands in the world and perennially ranks first in the State in agriculture production. Reedley, known as "The World's Fruit Basket" has an economy closely tied with agriculture, with other services being created to balance the city's economic base.

Fresno County is in the heart of The San Joaquin Valley, which is bounded on the west by the Coastal Range; the Sierra Nevada to the east; the Tehachapi and Santa Ynez mountains to the south; and Sacramento to the north. It is bordered by Mono County and Madera County to the north; Tulare County and Kings County to the south; Inyo County to the east; and Monterey County and San Benito County to the west. Elevations range from 130 feet in western Fresno County to over 12,000 feet at the extreme eastern portion of the county. There are 15 incorporated cities within Fresno County, which contain over eighty percent of the total county 2008 population estimate of 931,098. The cities within Fresno County include Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger and Selma. Fresno County contains approximately 65 miles of interstate freeway, 529 miles of state roadways, 3,563 miles of county roads and 2,465 miles of city streets.

The City of Reedley maintains over 77 miles of roadway and supports a public use (general aviation) airport. There is also approximately two miles of rail lines operated by San Joaquin Valley Railroad/RailAmerica. Currently there are no freeways or State Routes in the City of Reedley; however, access to State Route 99, which is approximately 10 miles to the west, is available via Manning Avenue and other regional county facilities. Also, State Route 180 is approximately 7 miles north of the City of Reedley and can be accessed via Reed Avenue. Along with Manning Avenue to the west, Reed Avenue to the north, Frankwood Avenue and Dinuba Avenue provide the primary access to the City of Reedley from the south and east respectively.

Public transit needs within the City of Reedley are served with demand-response (dial-a-ride) service operated by the Community Services Department. There is also limited fixed route service offered by Fresno County Rural Transit Agency (FCRTA). FCRTA consists of the thirteen Fresno County cities and Fresno County officials that oversee the operations of the local transit providers. The FCRTA operates the Orange Cove Transit, which has stops in the City of Reedley and offers service to the City of Fresno. Dinuba Area Regional Transit (DART) also operates a bus that runs from the City of Dinuba into the City of Reedley.

**TABLE OF CONTENTS**

---

INTRODUCTION..... 1

SETTING ..... 1

EXISTING TRANSPORTATION SYSTEM ..... 4

EXISTING TRAFFIC VOLUMES ..... 5

Intersection LOS Methodology ..... 11

Roadway LOS Methodology ..... 13

EXISTING CONDITIONS ..... 14

Roadway Operating Conditions ..... 15

TRANSPORTATION AND CIRCULATION ..... 17

STREETS AND HIGHWAYS ..... 18

Introduction ..... 18

Functional Classification System ..... 18

Regional Setting ..... 19

Existing Improvement Standards ..... 22

PUBLIC TRANSPORTATION ..... 31

Introduction ..... 31

Methods ..... 31

Existing Conditions ..... 31

UNMET TRANSIT NEEDS PROCESS ..... 33

PARK AND RIDE FACILITIES ..... 33

RAIL TRANSPORTATION ..... 33

Existing Conditions ..... 33

Introduction ..... 35

BICYCLE FACILITIES AND PLANNING ..... 35

RECREATIONAL WALKWAYS ..... 35

SAFE ROUTES TO SCHOOL ..... 35

AVIATION SYSTEM ..... 38

Introduction ..... 38

Existing Conditions ..... 38

GOODS MOVEMENT ..... 40

Introduction ..... 40

Existing Conditions ..... 40

TRANSPORTATION SYSTEM MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT ..... 42

Introduction ..... 42

Existing Conditions ..... 42

TRANSPORTATION DEMAND MANAGEMENT ..... 42

Strategies ..... 42

COMMUTE MODES OF TRANSPORTATION ..... 43

Introduction ..... 43

Methods ..... 43

Existing Conditions ..... 43

FUTURE CONDITIONS ..... 44

Future Traffic Volumes ..... 44

Future Roadway Network ..... 44

Year 2035 Base Conditions ..... 48

2035 Base Roadway Operating Conditions ..... 52

Year 2035 Base plus Project Conditions ..... 53

2035 Roadway Base plus Project Operating Conditions ..... 57

RECOMMENDED MITIGATION MEASURES ..... 58

Existing Conditions ..... 58

Year 2035 Base Conditions ..... 59

Year 2035 Base plus Project Conditions ..... 60

## LIST OF FIGURES

---

Figure 1 – Project Vicinity Map.....	3
Figure 2 – Study Intersections.....	7
Figure 3 – Existing Intersection Traffic Volumes.....	8
Figure 4 – Existing Lane Geometrics and Control.....	9
Figure 5 – Existing Daily Traffic Volumes.....	10
Figure 6 – Circulation Diagram.....	21
Figure 7 – Existing Transit Routes.....	32
Figure 8 – Bicycle Transportation Map.....	37
Figure 9 – Existing Airport Map.....	39
Figure 10 – Existing Truck Routes (local truck routes).....	41
Figure 11 – Measure “C” Project List.....	47
Figure 12 – Year 2035 Base Intersection Traffic Volumes.....	50
Figure 13 – Year 2035 Base Lane Geometrics and Control.....	51
Figure 14 – Year 2035 Base plus Project Intersection Traffic Volumes.....	55
Figure 15 – Year 2035 Base plus Project Lane Geometrics and Control.....	56
Figure 16 – Year 2035 Base plus Project Mitigated Lane Geometrics and Control.....	61

## LIST OF TABLES

---

Table 1 Level Of Service Criteria for Intersections.....	12
Table 2 Level of Service (LOS) Threshold Volumes for Urban/Suburban Roadway Types.....	13
Table 3 Existing Conditions: Intersection Levels of Service.....	14
Table 4 Existing Conditions: Roadway Segment Level of Service.....	16
Table 5 City of Reedley Road Requirements.....	19
Table 6 Dial-a-Ride Fares.....	31
Table 7 Transportation to Work.....	43
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Table 9 Year 2035 Base Conditions: Intersection Levels of Service.....	48
Table 10 Year 2035 Base Conditions: Roadway Segment Level of Service.....	52
Table 11 Year 2035 Base plus Project Conditions: Intersection Levels of Service.....	53
Table 12 Year 2035 Base plus Project Conditions: Roadway Segment Level of Service.....	57

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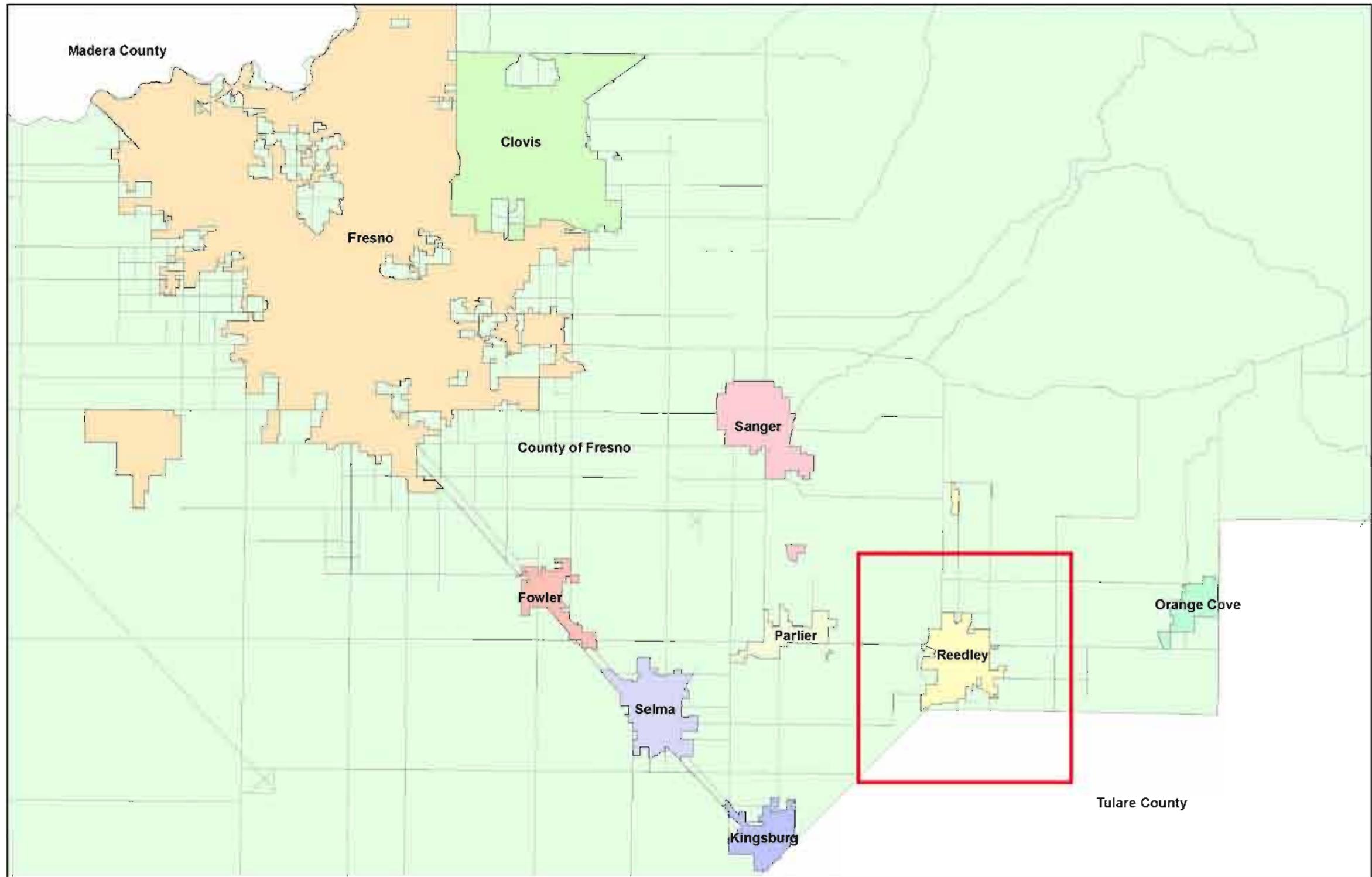
## **SETTING**

The City of Reedley, incorporated in 1913, is located in the central portion of the San Joaquin Valley approximately 20 miles southeast of the City of Fresno. Reedley is one of the 15 incorporated cities that comprise Fresno County and has the third largest population in the County, with a current estimate of 25,520 citizens (2011 Department of Finance). Fresno County's agricultural lands are some of the richest farmlands in the world and perennially ranks first in the State in agriculture production. Reedley, known as "The World's Fruit Basket" has an economy closely tied with agriculture, with other services being created to balance the city's economic base.

Fresno County is in the heart of The San Joaquin Valley, which is bounded on the west by the Coastal Range; the Sierra Nevada to the east; the Tehachapi and Santa Ynez mountains to the south; and Sacramento to the north. It is bordered by Mono County and Madera County to the north; Tulare County and Kings County to the south; Inyo County to the east; and Monterey County and San Benito County to the west. Elevations range from 130 feet in western Fresno County to over 12,000 feet at the extreme eastern portion of the county. There are 15 incorporated cities within Fresno County, which contain over eighty percent of the total county 2008 population estimate of 931,098. The cities within Fresno County include Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger and Selma. Fresno County contains approximately 65 miles of interstate freeway, 529 miles of state roadways, 3,563 miles of county roads and 2,465 miles of city streets.

The City of Reedley maintains over 77 miles of roadway and supports a public use (general aviation) airport. There is also approximately two miles of rail lines operated by San Joaquin Valley Railroad/RailAmerica. Currently there are no freeways or State Routes in the City of Reedley; however, access to State Route 99, which is approximately 10 miles to the west, is available via Manning Avenue and other regional county facilities. Also, State Route 180 is approximately 7 miles north of the City of Reedley and can be accessed via Reed Avenue. Along with Manning Avenue to the west, Reed Avenue to the north, Frankwood Avenue and Dinuba Avenue provide the primary access to the City of Reedley from the south and east respectively.

Public transit needs within the City of Reedley are served with demand-response (dial-a-ride) service operated by the Community Services Department. There is also limited fixed route service offered by Fresno County Rural Transit Agency (FCRTA). FCRTA consists of the thirteen Fresno County cities and Fresno County officials that oversee the operations of the local transit providers. The FCRTA operates the Orange Cove Transit, which has stops in the City of Reedley and offers service to the City of Fresno. Dinuba Area Regional Transit (DART) also operates a bus that runs from the City of Dinuba into the City of Reedley.



## EXISTING TRANSPORTATION SYSTEM

Because of the size and layout of the City of Reedley, the city street system and the regional county roadway system were considered for potential traffic impacts. The following is a brief description of the important roadway corridors within and adjacent to the City of Reedley as they currently exist and as defined in the 2012 General Plan.

***Buttonwillow Avenue*** is a two-lane roadway that runs in a north-south direction in the eastern part of Reedley. Buttonwillow Avenue is classified as an arterial in the City of Reedley. Buttonwillow Avenue runs from El Monte Way in Tulare County to Central Avenue and serves surrounding residential, commercial and agricultural areas.

***Dinuba Avenue*** is an east-west roadway that runs from Raisin City to State Route 63. Dinuba Avenue is mainly a two-lane road except for a section of four lanes between I Street and Columbia Avenue. Dinuba Avenue is classified as an arterial from Frankwood Avenue to Zumwalt Avenue and a collector from Reed Avenue to Frankwood Avenue in the City of Reedley. Dinuba Avenue provides access to residential, commercial and agricultural land uses within the Reedley area.

***Englehart Avenue*** is a two-lane roadway that runs in a north-south direction on the east side of Reedley. Englehart Avenue runs from El Monte Way in Tulare County to Central Avenue. Englehart Avenue is currently not designated in the 2012 General Plan since it is outside the Sphere of Influence (SOI), but will be included in the 2030 General Plan Update. Englehart Avenue primarily provides access to the surrounding agricultural areas.

***Floral Avenue*** is a two-lane roadway that runs in an east-west direction through Fresno County. Floral Avenue is currently not designated in the 2012 General Plan since it is outside the Sphere of Influence (SOI), but will be included in the 2030 General Plan Update. Floral Avenue primarily provides access in the southern part of Reedley to the surrounding agricultural and residential areas.

***Frankwood Avenue*** begins in Tulare County to the south as Road 56 and continues in a northern direction to Piedra Road. There is a break in Frankwood Avenue in Reedley from I Street to 10<sup>th</sup> Street. Frankwood Avenue is a two-lane road and serves surrounding residential, commercial and agricultural areas. Frankwood Avenue is classified as an arterial between “I” Street and Floral Avenue and a collector from Manning Avenue to “D” Street in the City of Reedley.

***Manning Avenue*** runs in an east-west direction throughout Fresno County from Interstate 5 in the west to State Route 63 in the east. Manning Avenue is a four-lane roadway from State Route 99 to Reed Avenue where it goes to a two lanes until going back to four lanes from Columbia Avenue to Buttonwillow Avenue. It then proceeds east as a two-lane roadway out of the City. Manning Avenue is classified as a major arterial between Rio Vista Avenue and “I” Street and a collector from “I” Street to Zumwalt Avenue in the City of Reedley. Manning Avenue provides access to residential, commercial and agricultural land uses. It also provides direct access to State Route 99 west of town with Lac Jac Avenue.

***North Avenue*** is a two-lane roadway that runs in an east-west direction from west of Reed Avenue to Buttonwillow Avenue, with a break between East Avenue and Steven

Avenue. North Avenue serves surrounding residential, commercial and school areas. North Avenue is classified as a collector in the City of Reedley.

**Parlier Avenue** is a two-lane roadway that runs in an east-west direction from west of Reed Avenue to Crawford Avenue and from Lac Jac Avenue into the City of Parlier west of Reedley. Parlier Avenue serves agricultural and residential land uses. Parlier Avenue is classified as a collector in the City of Reedley.

**Reed Avenue** is primarily a two-lane roadway that runs in a north-south direction from Avenue 408 in Tulare County to State Route 180 in Fresno County. Reed Avenue widens to four lanes between Manning Avenue and "I" Street. The Reed Avenue corridor serves surrounding residential, commercial, school and agricultural areas. Reed Avenue is classified as an arterial in the City of Reedley.

**South Avenue** is a two-lane roadway that runs in an east-west direction in the northerly part of the City of Reedley. South Avenue provides access to residential and agricultural areas and provides access to residents in the north section of the City. South Avenue is currently classified as an arterial in the City of Reedley.

## EXISTING TRAFFIC VOLUMES

In order to determine which intersections and road segments should be evaluated, OMNI-MEANS contacted with City of Reedley staff. The following 35 intersections were identified as critical intersections for this study:

- South Avenue/Reed Avenue
- South Avenue/Frankwood Avenue
- South Avenue/Buttonwillow Avenue
- South Avenue/Englehart Avenue
- Parlier Avenue/Reed Avenue
- Parlier Avenue/Frankwood Avenue
- Parlier Avenue/Columbia Avenue
- Parlier Avenue/Buttonwillow Avenue
- Manning Avenue/Lac Jac Avenue
- Manning Avenue/I Street
- Manning Avenue/Reed Avenue
- Manning Avenue/Frankwood Avenue
- Manning Avenue/Columbia Avenue
- Manning Avenue/Buttonwillow Avenue
- Manning Avenue/Zumwalt Avenue
- Manning Avenue/Englehart Avenue
- I Street/Reed Avenue
- North Avenue/Reed Avenue
- North Avenue/G Street
- North Avenue/Frankwood Avenue
- North Avenue/East Avenue
- Springfield Avenue/East Avenue
- Springfield Avenue/Buttonwillow Avenue
- Dinuba Avenue/Reed Avenue
- Dinuba Avenue/Frankwood Avenue

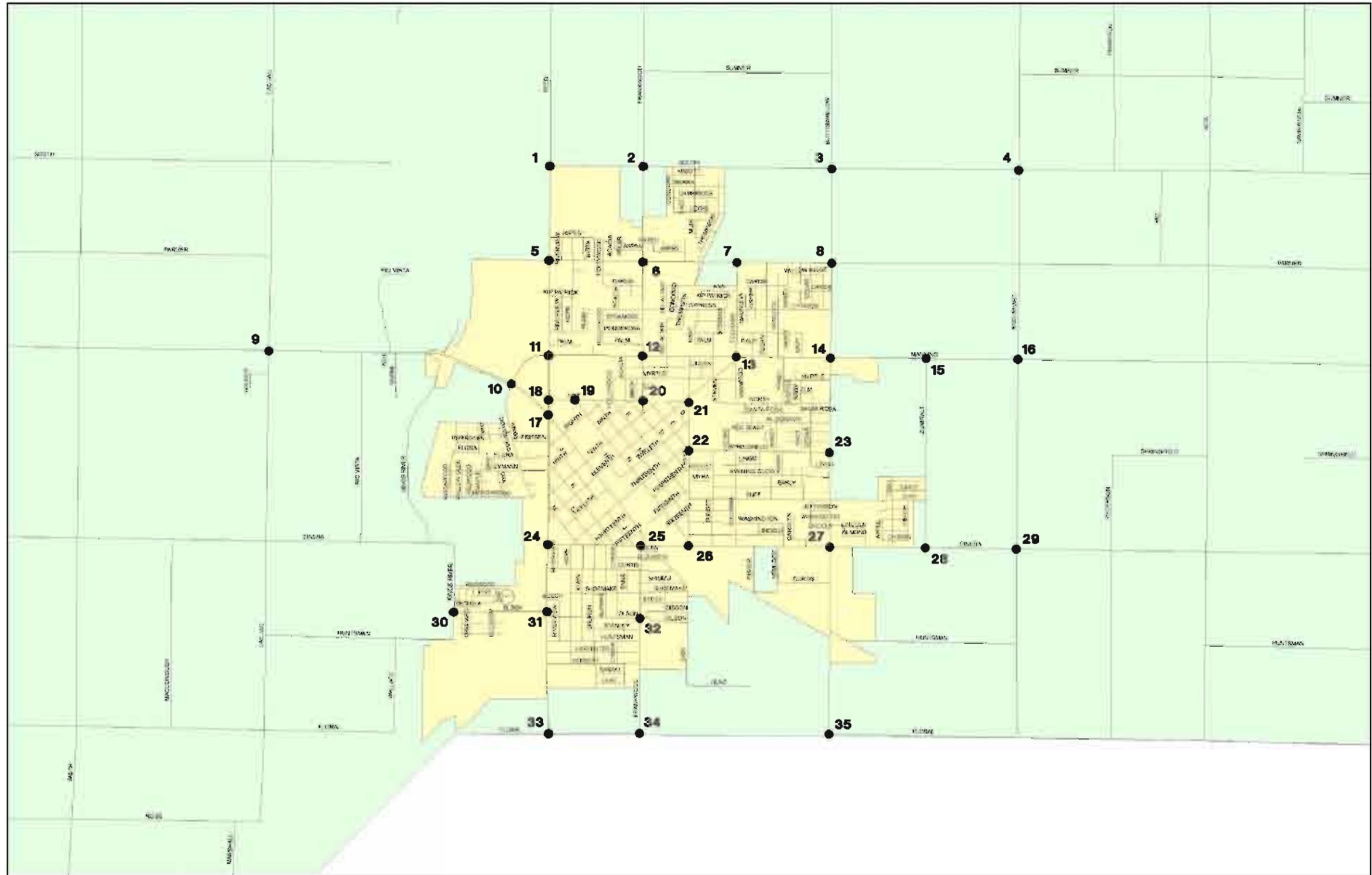
- Dinuba Avenue/East Avenue
- Dinuba Avenue/Buttonwillow Avenue
- Dinuba Avenue/Zumwalt Avenue
- Dinuba Avenue/Englehart Avenue
- Olson Avenue/Kings River Road
- Olson Avenue/Reed Street
- Olson Avenue/Frankwood Avenue
- Floral Avenue/Reed Avenue
- Floral Avenue/Frankwood Avenue
- Floral Avenue/Buttonwillow Avenue

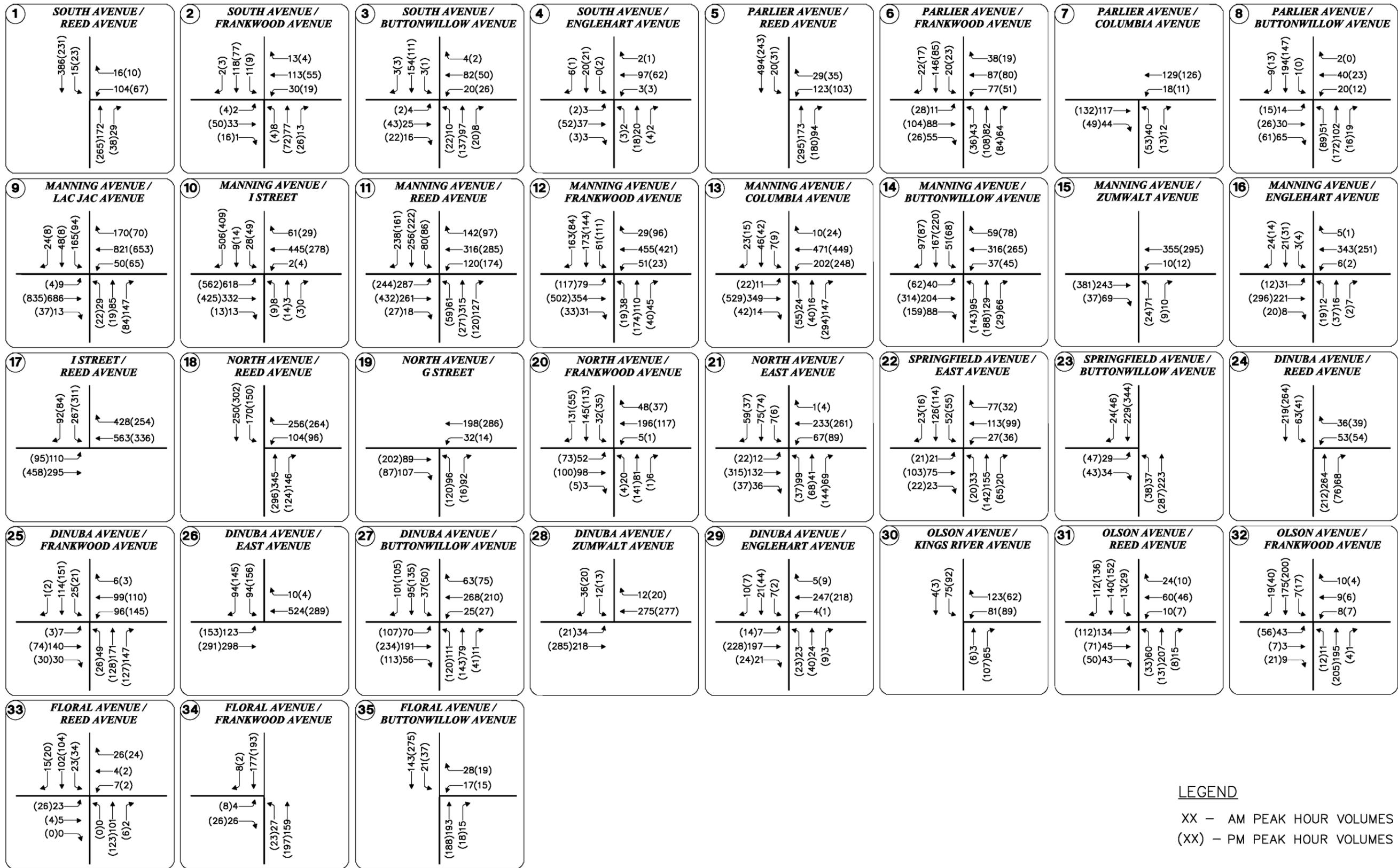
Existing traffic volume counts were collected in March 2009. The AM peak hour is defined as one-hour of peak traffic flow counted between 7:00 AM and 9:00 AM and the PM peak hour is defined as one-hour of peak traffic flow counted between 4:00 PM and 6:00 PM. Figure 3 shows the existing AM and PM peak hour intersection traffic volumes and Figure 4 identifies existing lane geometrics and control at the study intersections.

Average daily traffic (ADT) count information was also collected based upon consultation with the City of Reedley. The following 19 roadway segments were identified as critical roadway segments for this study:

- Reed Avenue between Floral Avenue and Dinuba Avenue
- Reed Avenue between Dinuba Avenue and Manning Avenue
- Reed Avenue between Manning Avenue and South Avenue
- Frankwood Avenue between Floral Avenue and Dinuba Avenue
- Frankwood Avenue between North Avenue and Parlier Avenue
- East Avenue between Dinuba Avenue and North Avenue
- Columbia Avenue between Manning Avenue and Parlier Avenue
- Buttonwillow Avenue between Dinuba Avenue and Manning Avenue
- Buttonwillow Avenue between Manning Avenue and South Avenue
- Dinuba Avenue between Reed Avenue and East Avenue
- Dinuba Avenue between East Avenue and Buttonwillow Avenue
- Springfield Avenue between East Avenue and Buttonwillow Avenue
- North Avenue between Reed Avenue and East Avenue
- Manning Avenue between Lac Jac Avenue and Reed Avenue
- Manning Avenue between Reed Avenue and Frankwood Avenue
- Manning Avenue between Frankwood Avenue and Buttonwillow Avenue
- Parlier Avenue between Reed Avenue and Frankwood Avenue
- Parlier Avenue between Frankwood Avenue and Buttonwillow Avenue
- South Avenue between Reed Avenue and Buttonwillow Avenue

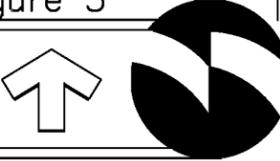
ADT count information on City streets and roads was obtained by conducting daily counts on these facilities in March 2009. The existing daily traffic volumes are shown in Figure 5.

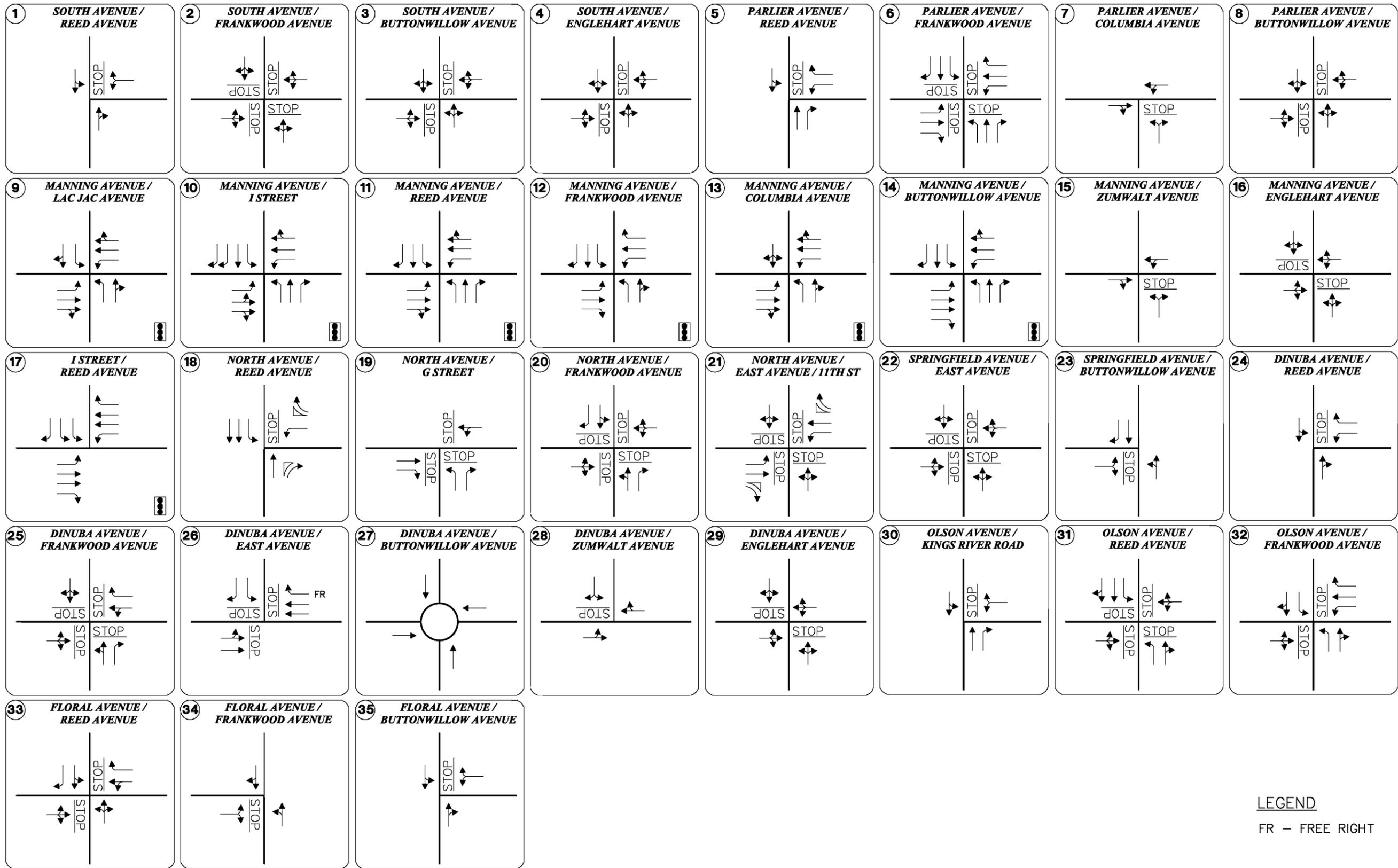




**LEGEND**  
 XX – AM PEAK HOUR VOLUMES  
 (XX) – PM PEAK HOUR VOLUMES

# Existing Intersection Traffic Volumes

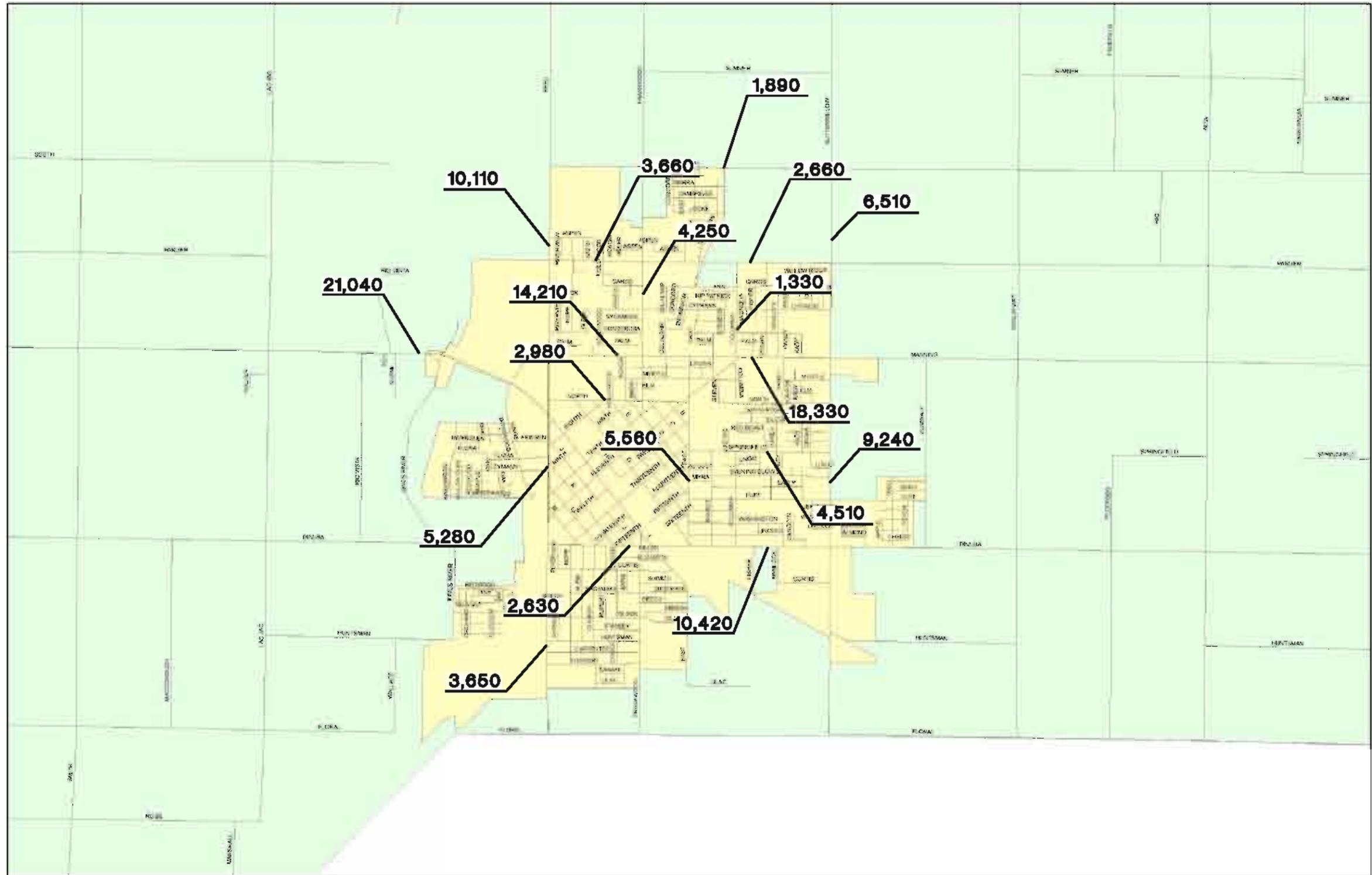




LEGEND  
FR – FREE RIGHT

# Existing Lane Geometrics and Control





## INTERSECTION LOS METHODOLOGY

Traffic operations have been quantified through the determination of “Level of Service” (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade “A” through “F” is assigned to an intersection or roadway segment representing progressively worsening traffic conditions. LOS was calculated for all intersection control types using the methods documented in the City of Reedley’s *General Plan 2012 – Circulation Element* (August 10, 1993). The LOS methodology is based upon the latest Highway Capacity Manual (Special Report 209 of the Transportation Research Board [TRB]).

For signalized intersections and all-way stop-controlled (AWSC) intersections, the intersection delays and LOS are average values for all intersection movements. For one-way stop-controlled (OWSC) and two-way stop-controlled (TWSC) intersections, the intersection delays and LOS are representative of those for the worst-case movement. LOS definitions for different types of intersection controls are outlined in Table 1. The average daily traffic based roadway level of service thresholds are shown in Table 2.

The City of Reedley’s *General Plan 2012 – Circulation Element, Section 302-02.1*, states the following:

*Plan and provide a street and highway system to move people and goods in an orderly, safe, and efficient manner. Not to exceed Level of Service “C”.*

Consistent with City’s policies stated above, for purposes of this traffic study, LOS “C” has been taken as the minimum acceptable LOS standard at critical study intersections and roadway segments falling within City right-of-way. Appropriate circulation, capacity and/or control improvements have been identified for instances when study area facilities are projected to operate below acceptable standards.

The following peak hour factors (PHF) and signal lost time factors will be incorporated in the analysis (for all study intersections under all analysis scenarios) in order to reasonably reflect actual intersection operating conditions:

PHF (Existing) – Actual PHF as calculated based on existing intersection counts

PHF (Future) - **0.92**

Lost time (all scenarios) – **4 seconds** per critical signal phase.

The *Synchro 7* integrated computer software program has been utilized to implement the Highway Capacity Manual analysis methodologies. All LOS worksheets are included in the Technical Appendix.

Where intersections were in close proximity to each other or there were other non-standard intersection geometrics, *SimTraffic 7*, which is the microsimulation component of *Synchro 7* was used to check for reasonableness. It has been determined that in some non-standard situations SimTraffic returns the most realistic and conservative results delays. The main difference between SimTraffic and the HCM based Synchro queuing calculations are that SimTraffic includes the effects of upstream and downstream intersections. SimTraffic analyzes intersections as a “system”, with intersections directly affecting traffic flow through the entire project study area. Through SimTraffic, the effects of turn-pocket overflows and vehicle queue spillback are taken into consideration.

**TABLE 1  
LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS**

LEVEL OF SERVICE	TYPE OF FLOW	DELAY	MANEUVERABILITY	STOPPED DELAY/VEHICLE (SEC)		
				SIGNALIZED	UNSIGNALIZED	ALL-WAY STOP
A	Free Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10.0	≤ 10.0	≤ 10.0
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	>10 and ≤ 20.0	>10 and ≤ 15.0	>10 and ≤ 15.0
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted	>20 and ≤ 35.0	>15 and ≤ 25.0	>15 and ≤ 25.0
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.	>35 and ≤ 55.0	>25 and ≤ 35.0	>25 and ≤ 35.0
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.	>55 and ≤ 80.0	>35 and ≤ 50.0	>35 and ≤ 50.0
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	> 80.0	> 50.0	> 50.0

References: *Highway Capacity Manual 2000*

To determine whether “significance” should be associated with unsignalized intersection operations, a supplemental traffic signal “warrant” analysis has also been completed. The term “signal warrants” refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the need for installation of a traffic signal at an otherwise unsignalized intersection. This study has employed the signal warrant criteria presented in the *California Manual on Uniform Traffic Control Devices (CMUTCD)*, dated September 26, 2006, for all unsignalized study intersections. The signal warrant criteria are based upon several factors including volume of vehicular and pedestrian traffic, frequency of accidents, location of school areas, etc. The *CMUTCD* indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. Specifically, this study utilizes the Peak-Hour-Volume based Warrant 3 as one representative type of traffic signal warrant analysis.

## ROADWAY LOS METHODOLOGY

The methodology to determine roadway LOS is also documented in the City of Reedley’s *General Plan 2012 – Circulation Element*. The LOS methodology is based upon the latest Highway Capacity Manual (Special Report 209 of the TRB). Table 2 identifies the LOS threshold volumes for urban/suburban roadway types used in this study. Freeway capacities were included to provide for general reference of such facilities, although Reedley currently does not have any freeways within the study area.

**TABLE 2  
LEVEL OF SERVICE (LOS) THRESHOLD VOLUMES  
FOR URBAN/SUBURBAN ROADWAY TYPES**

Roadway Type	Total Daily Vehicles in Both Directions (ADT)				
	Level of Service A	Level of Service B	Level of Service C	Level of Service D	Level of Service E
4-Lane Freeway	45,000	52,500	60,000	67,500	75,000
6-Lane Arterial	36,000	42,000	48,000	54,000	60,000
4-Lane Arterial	24,000	28,000	32,000	36,000	40,000
4-Lane Collector	18,000	21,000	24,000	27,000	30,000
2-Lane Collector	9,000	10,500	12,000	13,500	15,000

Note: 1. Based on 2000 Highway Capacity Manual (Special Report 209 of the Transportation Research Board).

2. ADT = Average Daily Traffic

3. All volumes are approximate and assume ideal roadway characteristics. Actual threshold volumes for each Level of Service listed above may vary depending on a number of factors including curvature and grade, intersection or interchange spacing, percentage of trucks and other heavy vehicles, lane widths, signal timing, on-street parking, amount of cross traffic and pedestrians, driveway spacing, etc.

## EXISTING CONDITIONS

Existing peak-hour intersection traffic operations were quantified using the observed existing traffic volumes (Figure 3) with the existing intersection lane geometrics and control (Figure 4). The LOS and average delay are shown in Table 3.

**TABLE 3  
EXISTING CONDITIONS:  
INTERSECTION LEVELS OF SERVICE**

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
1	South Avenue/Reed Avenue	OWSC	22.8	C	NO	14.5	B	NO
2	South Avenue/Frankwood Avenue	AWSC	9.4	A	NO	8.2	A	NO
3	South Avenue/Buttonwillow Avenue	TWSC	13.9	B	NO	13.2	B	NO
4	South Avenue/Englehart Avenue	TWSC	10.4	B	NO	9.8	A	NO
5	Parlier Avenue/Reed Avenue	OWSC	24.2	C	NO	18.3	C	NO
6	Parlier Avenue/Frankwood Avenue	AWSC	13.4	B	NO	8.9	A	NO
7	Parlier Avenue/Columbia Avenue	OWSC	11.3	B	NO	10.8	B	NO
8	Parlier Avenue/Buttonwillow Avenue	TWSC	16.0	C	NO	17.3	C	NO
9	Manning Avenue/Lac Jac Avenue	Signal	19.7	B	--	16.1	B	--
10	Manning Avenue/I Street	Signal	25.9	C	--	21.6	C	--
<b>11</b>	<b>Manning Avenue/Reed Avenue</b>	<b>Signal</b>	<b>48.9</b>	<b>D</b>	<b>--</b>	<b>39.7</b>	<b>D</b>	<b>--</b>
<b>12</b>	<b>Manning Avenue/Frankwood Avenue</b>	<b>Signal</b>	<b>35.6</b>	<b>D</b>	<b>--</b>	<b>27.6</b>	<b>C</b>	<b>--</b>
13	Manning Avenue/Columbia Avenue	Signal	19.0	B	--	21.2	C	--
14	Manning Avenue/Buttonwillow Avenue	Signal	21.4	C	--	31.7	C	--
15	Manning Avenue/Zumwalt Avenue	OWSC	20.5	C	NO	15.9	C	NO
16	Manning Avenue/Englehart Avenue	TWSC	18.2	C	NO	16.5	C	NO
17	I Street/Reed Avenue	Signal	17.4	B	--	13.9	B	--
18	North Avenue/Reed Avenue *	OWSC	19.2	C	NO	14.6	B	NO
19	North Avenue/G Street	AWSC	12.0	B	NO	11.1	B	NO
20	North Avenue/Frankwood Avenue	AWSC	20.7	C	NO	10.0	B	NO
21	11 <sup>th</sup> Street/East Avenue	AWSC	12.0	B	NO	14.4	B	NO
22	Springfield Avenue/East Avenue	AWSC	13.3	B	NO	10.7	B	NO
23	Springfield Avenue/Buttonwillow Avenue	OWSC	12.5	B	NO	18.1	C	NO

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
24	Dinuba Avenue/Reed Avenue	OWSC	15.2	C	NO	13.0	B	NO
25	Dinuba Avenue/Frankwood Avenue	AWSC	14.1	B	NO	10.5	B	NO
26	Dinuba Avenue/East Avenue	AWSC	15.6	C	NO	11.9	B	NO
27	Dinuba Avenue/Buttonwillow Avenue *	ROUND	6.9	A	--	8.2	A	--
28	Dinuba Avenue/Zumwalt Avenue	OWSC	12.0	B	NO	12.1	B	NO
29	Dinuba Avenue/Englehart Avenue	TWSC	15.5	C	NO	15.0	C	NO
30	Olson Avenue/Kings River Road	OWSC	10.2	B	NO	10.6	B	NO
31	Olson Avenue/Reed Street	AWSC	14.2	B	NO	10.5	B	NO
32	Olson Avenue/Frankwood Avenue	TWSC	13.2	B	NO	15.2	C	NO
33	Floral Avenue/Reed Avenue	TWSC	11.6	B	NO	11.9	B	NO
34	Floral Avenue/Frankwood Avenue	OWSC	9.9	A	NO	10.3	B	NO
35	Floral Avenue/Buttonwillow Avenue	OWSC	10.9	B	NO	11.5	B	NO

Legend: OWSC = One-Way Stop Control      TWSC = Two-Way Stop Control.      AWSC = All-Way Stop Control.  
ROUND = Roundabout  
Average Delay = Average Intersection Delay for Signalized Intersections.  
Average Delay = Worst-Case Intersection Movement Delay for OWSC & TWSC Intersections.  
LOS = Average Intersection Level-of-Service for Signalized Intersections.  
LOS = Worst-Case Movement's Level-of-Service for OWSC & TWSC Intersections.  
N/A = Not Applicable (Intersection does not Exist for this Scenario)  
OVRFL = Overflow Conditions (>100 Seconds)  
Warrant = MUTCD Peak Hour Warrant 3.  
\* = SimTraffic delay reported

As shown in Table 3, two of the study intersections are currently operating at an unacceptable LOS during the AM and/or PM peak hour periods. These include the intersections at Manning Avenue/Reed Avenue and Manning Avenue/Frankwood Avenue.

All mitigation measures are discussed in a subsequent section of this report.

## ROADWAY OPERATING CONDITIONS

Table 4 identifies the roadway LOS for the locations of where traffic counts were taken under the existing conditions scenario utilizing the roadway ADT-based LOS thresholds presented in Table 2. Figure 5 shows the existing daily traffic volumes at the study area roadway locations.

**TABLE 4  
EXISTING CONDITIONS:  
ROADWAY SEGMENT LEVEL OF SERVICE**

<b>Roadway Segment</b>	<b>From</b>	<b>To</b>	<b>Facility Type</b>	<b>No. of Lanes</b>	<b>ADT (LOS)</b>
Reed Avenue	Floral Avenue	Dinuba Avenue	Arterial	4	3,650 (A)
Reed Avenue	Dinuba Avenue	Manning Avenue	Arterial	2	5,280 (A)
Reed Avenue	Manning Avenue	South Avenue	Arterial	2	10,110 (B)
Frankwood Avenue	Floral Avenue	Dinuba Avenue	Arterial	2	4,940 (A)
Frankwood Avenue	North Avenue	Parlier Avenue	Arterial	2	4,250 (A)
East Avenue	Dinuba Avenue	North Avenue	Collector	2	5,560 (A)
Columbia Avenue	Manning Avenue	Parlier Avenue	Collector	2	1,330 (A)
Buttonwillow Avenue	Dinuba Avenue	Manning Avenue	Arterial	2	9,240 (B)
Buttonwillow Avenue	Manning Avenue	South Avenue	Arterial	2	6,510 (A)
Dinuba Avenue	Reed Avenue	Frankwood Avenue	Collector	2	2,630 (A)
Dinuba Avenue	Frankwood Avenue	Buttonwillow Avenue	Arterial	4 / 2	10,420 (A/C)
Springfield Avenue	East Avenue	Buttonwillow Avenue	Collector	2	4,510 (A)
North Avenue	Reed Avenue	East Avenue	Collector	2	2,980 (A)
Manning Avenue	Lac Jac Avenue	I Street	Major Arterial	4	21,040 (A)
<b>Manning Avenue</b>	<b>I Street</b>	<b>Frankwood Avenue</b>	Arterial	<b>4 / 2</b>	<b>14,210 (A/E)</b>
<b>Manning Avenue</b>	<b>Frankwood Avenue</b>	<b>Buttonwillow Avenue</b>	Arterial	<b>2 / 4</b>	<b>18,330 (F/B)</b>
Parlier Avenue	Reed Avenue	Frankwood Avenue	Collector	2	3,660 (A)
Parlier Avenue	Frankwood Avenue	Buttonwillow Avenue	Collector	2	2,660 (A)
South Avenue	Reed Avenue	Buttonwillow Avenue	Arterial	2	1,890 (A)

As shown in Table 4, all study roadway segments, except for two, are currently operating at acceptable LOS “C” conditions or better. Two roadway segments along Manning Avenue between Reed Avenue and Buttonwillow Avenue are currently operating at an unacceptable LOS.

All mitigation measures are discussed in a subsequent section of this report.

## **TRANSPORTATION AND CIRCULATION**

The purpose of this section is to provide a firm understanding of existing transportation and circulation conditions in Reedley considering each primary mode of transportation. It is important to define the existing transportation and circulation system in order to identify any existing deficiencies. Such deficiencies will be addressed during development of the planned transportation and circulation system as well as during development of the implementation program.

Implementation of the City of Reedley 2030 General Plan Update Circulation Element will improve the existing regional transportation and circulation systems. A primary focus in the development of this Circulation Element is to provide for essential transportation connections within the city and travel to surrounding communities. Such improvements are intended to fulfill required existing and future circulation needs. Implementation of planned improvements to the roadway network, discussion of access to the Reedley airport, provision of mass transportation services and facilities, identification of additional bikeways and pedestrian improvements and improved transportation systems that accommodate existing and future goods movement, will have beneficial effects on a localized and region-wide travel.

Reedley's transportation system is composed of numerous city streets and county roads. It also includes a public transit system, fixed route transit services, para-transit services, general aviation and freight rail service. Where service is available, public transportation is utilized primarily by a transit-dependent population; i.e., the elderly, students, low-income residents and the physically handicapped. These segments of the population generally have limited access to automobiles.

The agricultural economy, service sector and public services of the city depend upon the safe and efficient movement of goods. Reedley is responsible for maintaining a network of streets, bicycle paths, bike lanes and farm-to-market roadways. Large trucks and van-pools are the primary means of transporting such goods and labor within the region.

The Agricultural Industries Transportation Services (AITS) program is designed to provide qualified agricultural workers in Kings, Kern, Tulare and Fresno counties with safe, affordable vans they can use and drive themselves and others to work. The AITS program exists where the demand for farm labor transportation is high and is not limited to Fresno County.

The sprawling pattern commonly associated with California transportation networks provides fewer modal options to commuters. Multimodal efforts in the city are focused on enhancing existing conditions and creating environmentally favorable patterns of travel. One approach involves enhancement of park-and-ride facilities, vanpools and transit. The following subsections further describe each of the primary modes of transportation identified above.

The Fresno Council of Governments (FCOG) serves as the state-designated Regional Transportation Planning Agency (RTPA) and the federally designated Metropolitan Planning Agency (MPA). A primary responsibility of FCOG is to update the Regional Transportation Plan (RTP) every three years that contains a constrained list of transportation projects (that are federally funded), air quality determination and set policies for spending federal and state funds. The RTP, with a 25-year planning horizon, is the primary tool used to secure federal and state funding for transportation projects in the County.

Also providing funding for transportation projects in the City of Reedley and all of Fresno County is Measure C. The Fresno County Voters passed an extension to the Measure C program in November

2006, continuing and half-cent sales tax for transportation purposes. Much of the planning and implementation of the Measure C Program is done by FCOG staff, while the agency responsible for overseeing the implementation of Measure C is the Fresno County Transportation Authority (FCTA). Twenty-five (25%) percent of the proceeds of the retail transactions and use-tax is allocated to each city and to Fresno County for local priority improvement projects. The distribution of the funds is based on a formula incorporating street miles (25%) and proportionate population (75%).

## **STREETS AND HIGHWAYS**

### **INTRODUCTION**

A hierarchy of streets provides access to and from residential, commercial, and industrial uses throughout the City of Reedley and beyond. A route's design, including number of lanes needed, is determined by its functional classification and its projected traffic levels to achieve safe and convenient movement at the development intensity anticipated in the Land Use Element.

This section identifies the regional street and highway setting as it pertains to streets, highways, freeways, etc. Further, this section provides a description of the City's functional classification system and roadway geometrics per the City's improvement Standards.

### **FUNCTIONAL CLASSIFICATION SYSTEM**

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the type of service they are intended to provide. Fundamental to this process is the recognition that individual streets and highways do not serve travel independently in any major way. Rather, most travel involves movement through a network of streets and roads. It is necessary to determine how travel can be directed along the street and highway system in a logical and efficient manner to make it as efficient as possible. Functional classifications prioritize the channeling process by defining the area that a particular street or highway should service through a circulation network. Table 5 defines the functional classes based on the road requirements.

**TABLE 5  
CITY OF REEDLEY ROAD REQUIREMENTS**

	DESIGN CLASSIFICATION					
	Major Arterial & Arterial Street	Arterial Street Within Specific Plan Area	Arterial & Collector Street	Collector Street	Local Residential Street	Local Industrial Street
Facility Type	Four Lane Divided	Four Lane Divided	Four Lane Undivided	Two Lane Undivided	Two Lane Undivided	Two Lane Undivided
Land Use Classifications	Any	Non-Industrial	Any	Residential	Residential	Industrial
Right of Way	110' or 106'	108'	84'	84'	60'	64'
Pavement Width (curb to curb)	36' or 32'	32'	64'	32'	40' SP= 35'	44'
Type Curbs	Vertical Face	Vertical Face	Vertical Face	Vertical Face	Vertical Face	Vertical Face
Sidewalk Width	Res/Ind= 4' Com= 9.5'	5'	Res/Ind= 4' Com= 9.5' SP= 5'	4' SP= 5'	4' SP= 5'	4'
Sidewalk distance from back of curb	Attached	5'	Attached	Attached	Attached SP= 5'	Attached

*Legend: Res = Residential, Ind = Industrial, Com = Commercial, SP = Specific Plan Area  
Note: Source: City of Reedley General Plan 2012 (August 10, 1993) and City of Reedley 2007 Street Standard Plans.*

**REGIONAL SETTING**

Figure 6 shows the designated street and highway network contained in the City of Reedley’s *General Plan 2012 – Circulation Element*, adopted by the city in 1993. It provides the definition of roads of significance throughout the City based on the functional classification system. Following is a description of the functional classifications as defined in the City of Reedley’s *General Plan 2012 – Circulation Element* and the associated streets.

**Major Arterials**

Facilities that provide for through traffic movement on continuous routes with direct access to abutting property. Intersections with cross streets are generally at grade and generally spaced a minimum of one-half mile apart. There is only one major arterial identified in City of Reedley’s *General Plan 2012 – Circulation Element*, it is:

- Manning Avenue, from Rio Vista Avenue to I Street

**Arterials**

Facilities that provide for through traffic movement on continuous routes, joining major traffic generators, major arterials, and other arterials. Access to abutting property may be controlled in accordance with Section 302-03.6 of the Circulation Element. The arterials identified in City of Reedley’s *General Plan 2012 – Circulation Element* are:

- Manning Avenue, from I Street to Zumwalt Avenue;
- Frankwood Avenue, from I street to Floral Avenue and from South Avenue to Manning Avenue;
- Buttonwillow Avenue, from South Avenue to Floral Avenue;
- South Avenue, from Reed to eastern City Limit;
- Reed Avenue, from South Avenue to Floral Avenue;
- Eleventh Street, from Reed Avenue to Manning Avenue;
- I Street, from Reed Avenue to Dinuba Avenue;
- Huntsman Avenue, from Reed Avenue to western City Limit;

- Olson Avenue, from Reed Avenue to western City Limit; and
- Dinuba Avenue, from Frankwood Avenue to Zumwalt Avenue.

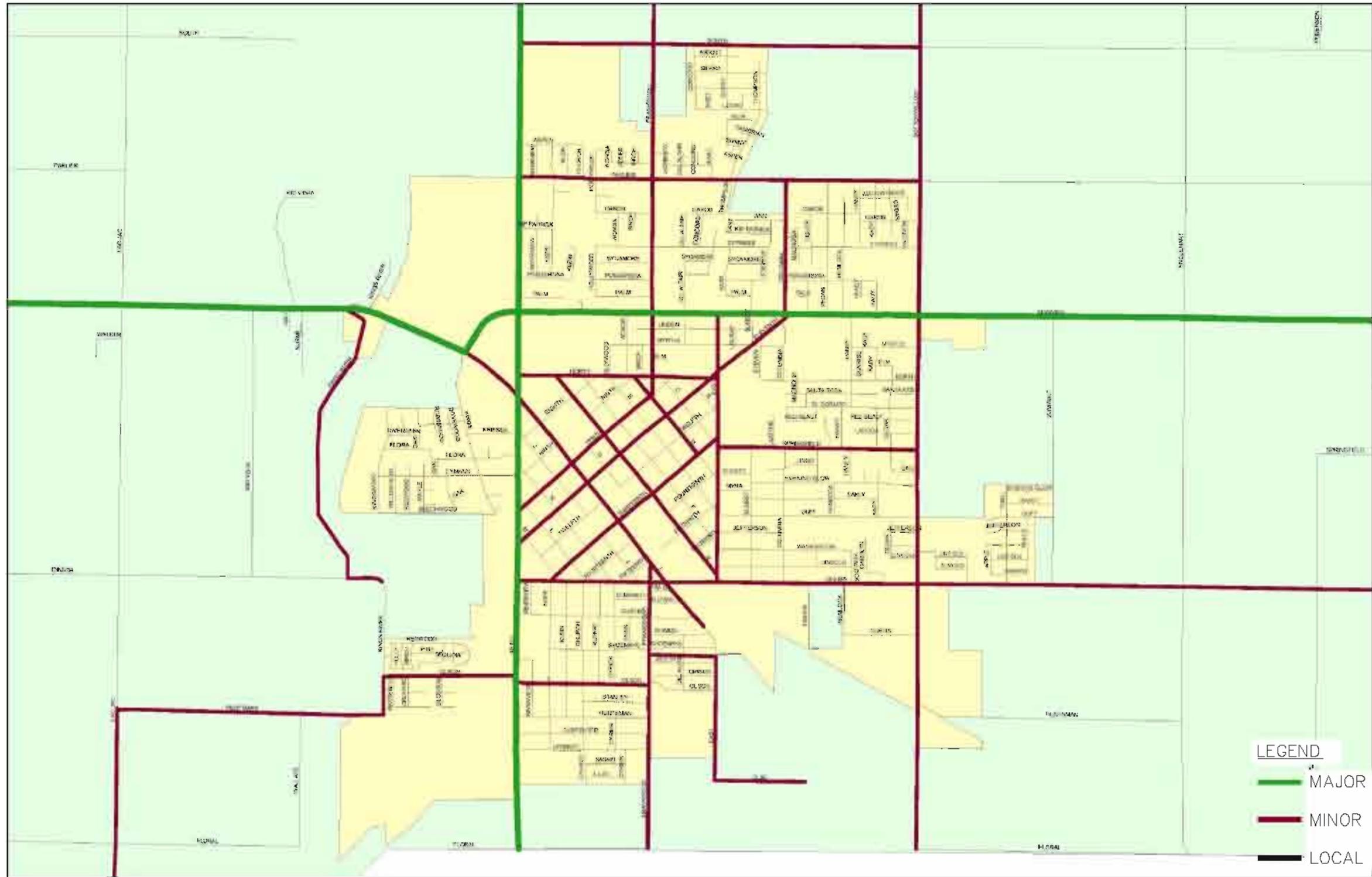
### ***Collectors***

Facilities that provide internal traffic movement within an area and connect local roads to the arterial system. Access to abutting property is generally permitted, but only in accordance with Section 302-03.6 of the Circulation Element. The collectors identified in City of Reedley's *General Plan 2012 – Circulation Element* are:

- Parlier Avenue, from Reed Avenue to eastern City Limit;
- Columbia Avenue, from South Avenue to Manning Avenue;
- Frankwood Avenue, from Manning Avenue to D Street;
- D Street, from Frankwood Avenue to Thirteenth Street;
- Thirteenth Street, from East Avenue to Dinuba Avenue;
- Tenth Street, from Frankwood Avenue to Reed Avenue;
- East Avenue, from Eleventh Street to Dinuba Avenue;
- North Avenue, from Reed Avenue to Eleventh Street;
- G Street, from North Avenue to Dinuba Avenue;
- Springfield Avenue, from East Avenue to Zumwalt Avenue;
- Olsen Avenue, from Reed Avenue to Frankwood Avenue;
- Dinuba Avenue, from Reed Avenue to Frankwood Avenue;
- I Street, from Dinuba Avenue to East Avenue alignment (new road);
- East Avenue, from I Street alignment to Herbert Avenue alignment;
- Herbert Avenue, from Frankwood Avenue alignment to Buttonwillow Avenue (new road);
- Kingswood Parkway, from the Manning Avenue/I Street intersection to Dinuba Avenue; and
- South Avenue, from Reed Avenue to eastern City Limit.

### ***Local Streets***

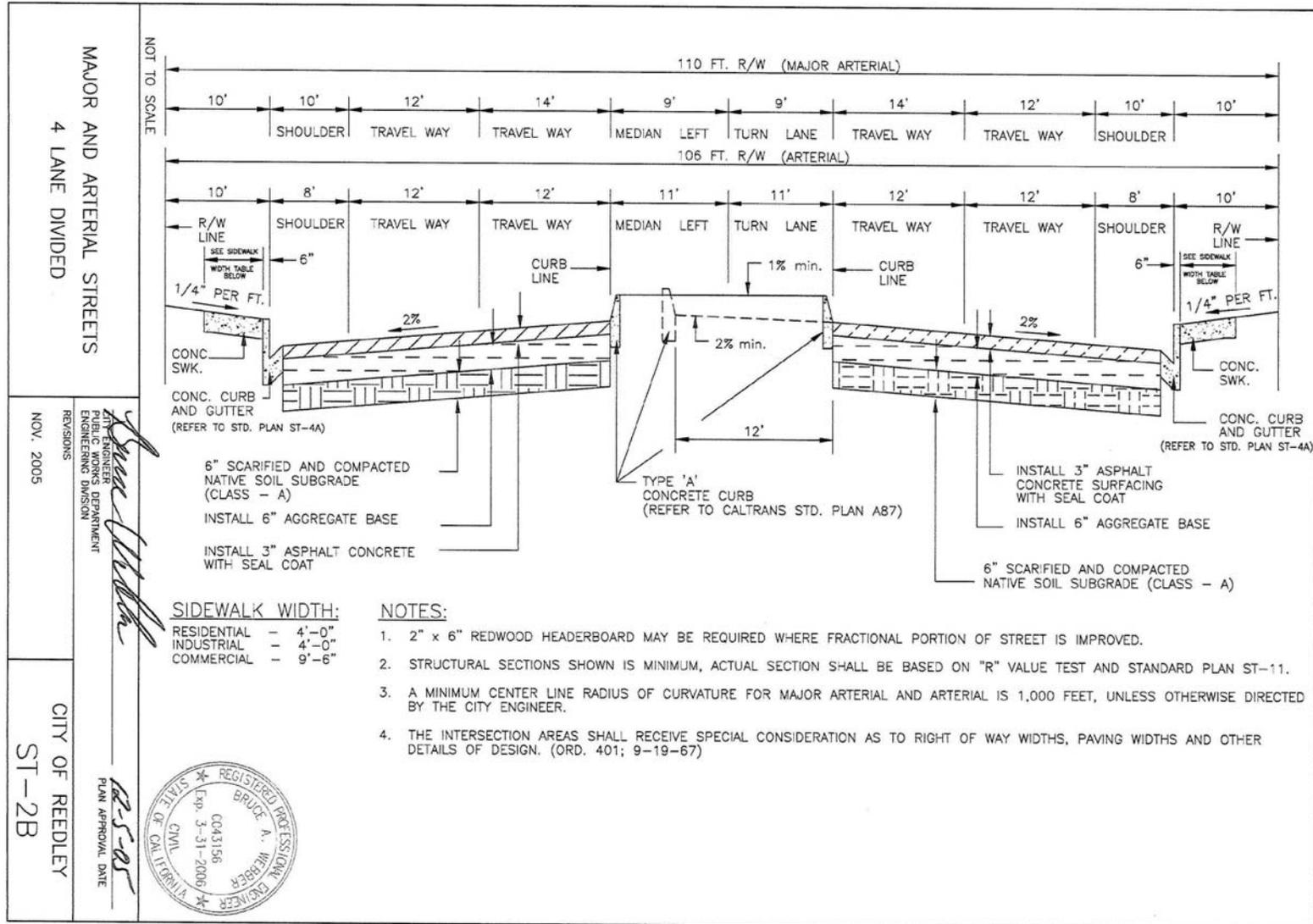
Facilities that provide internal traffic movement within an area and primarily serve to provide direct access to abutting property. According to the City of Reedley's *General Plan 2012 – Circulation Element*, all other roads within the Reedley Planning Area are local streets. Their alignments are to be determined on the basis of the land use to be served and the location of major arterial, arterial, and collector streets and highways.



## **EXISTING IMPROVEMENT STANDARDS**

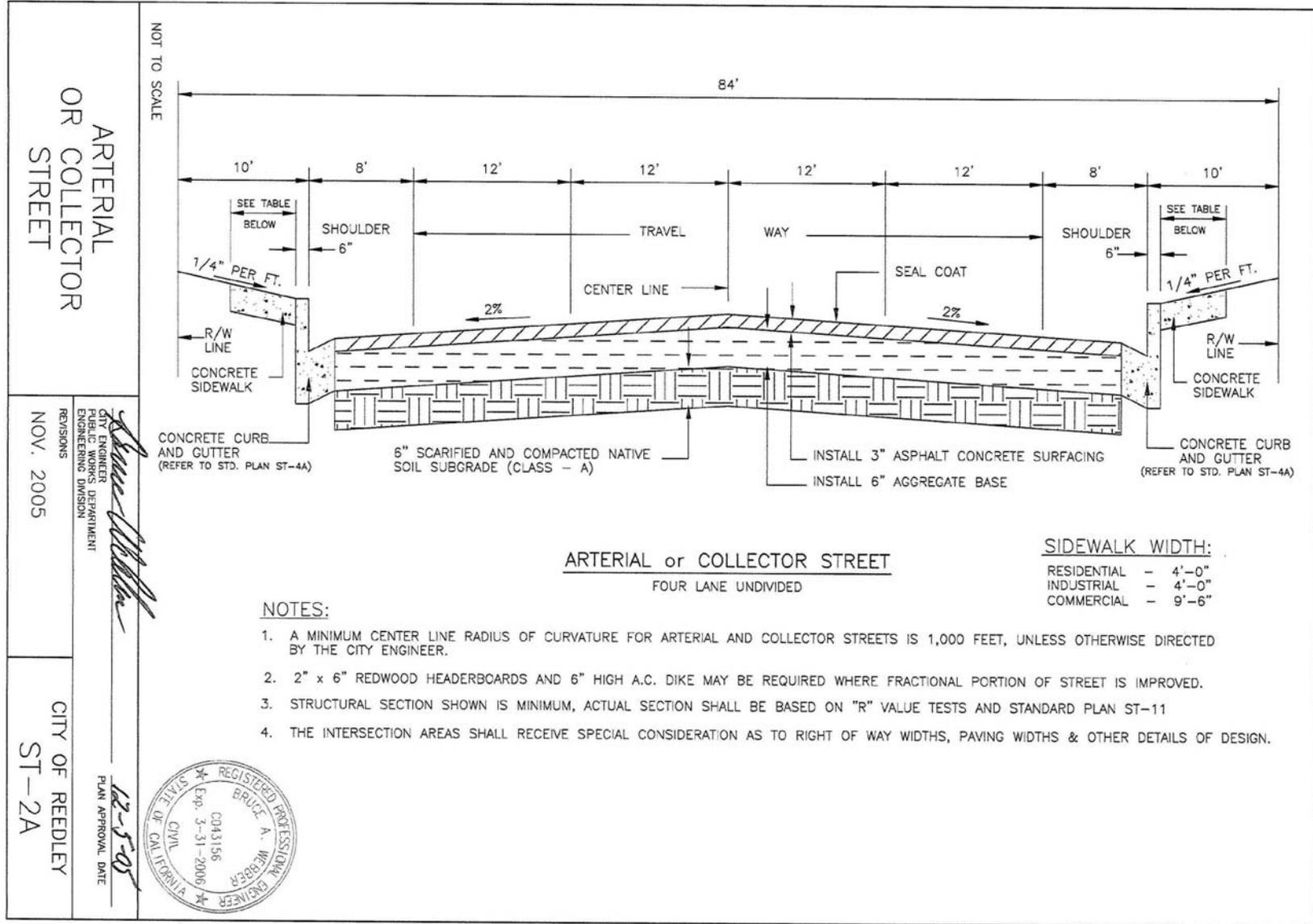
Improvement standards for streets within the City of Reedley are identified based upon their functional classification. Section 802, Appendix B: Street and Highway Development Standards of the City of Reedley's *General Plan 2012* identified roadway geometrics for each functional class. In January 2007 the City of Reedley adopted an updated version of their Standard Plans, which included Street Standard Plans. These Standard Plans superseded the *General Plan 2012*. The following illustrations show typical cross sections for each class of roadway, as identified in the 2007 Standard Plans.

**REEDLEY TYPICAL CROSS SECTIONS - MAJOR ARTERIAL AND ARTERIAL STREET**



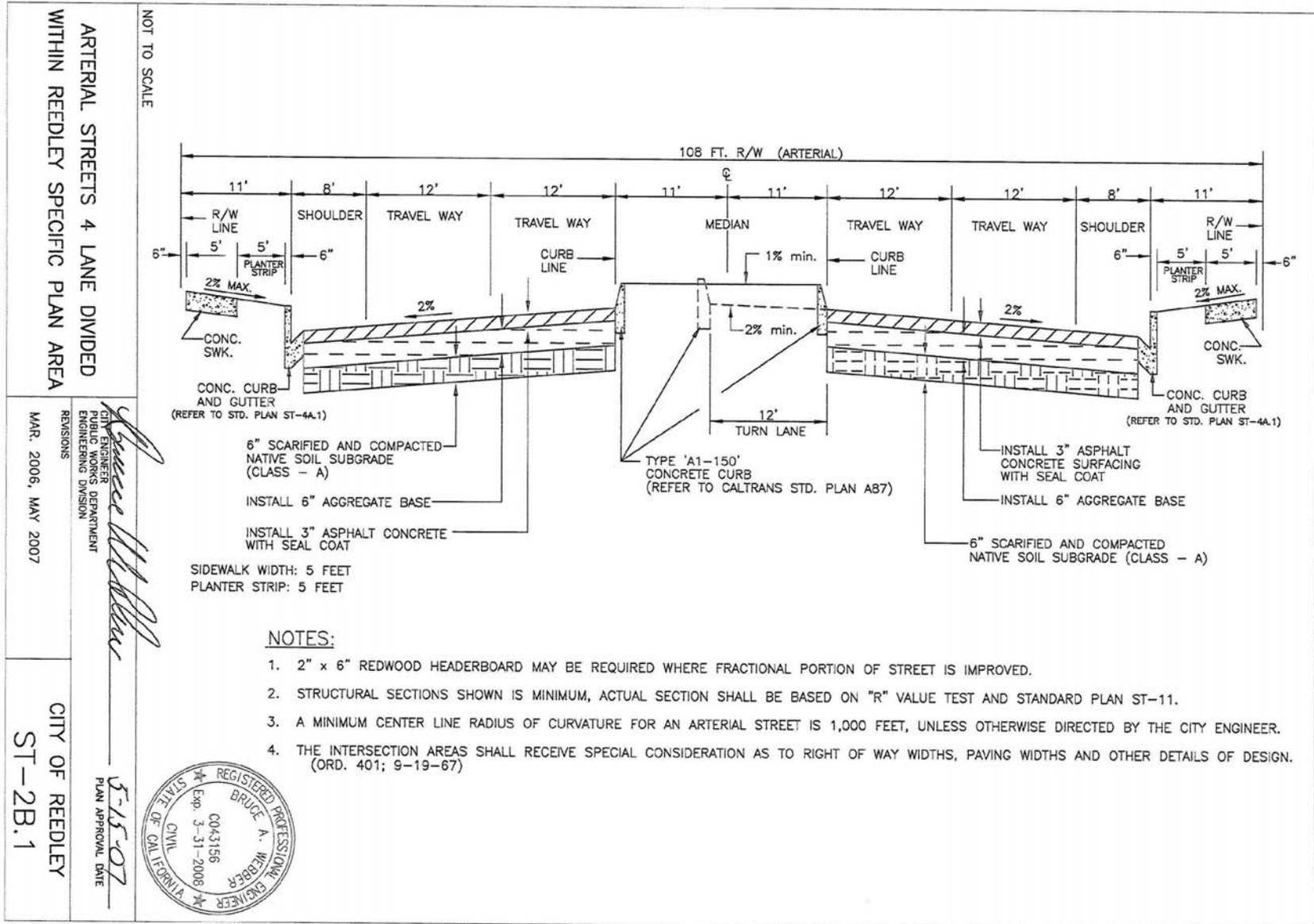
Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – ARTERIAL AND COLLECTOR STREET



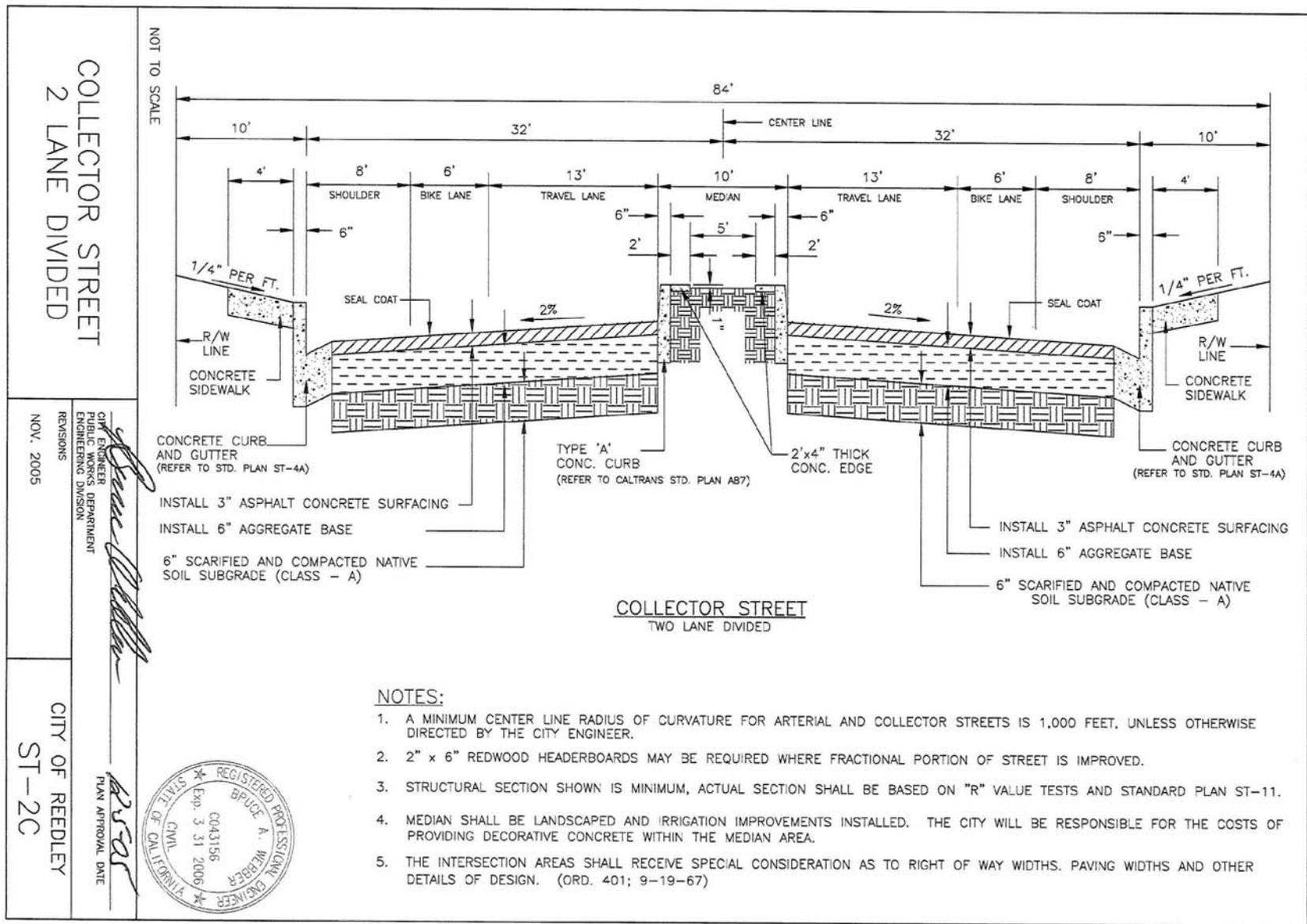
Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – ARTERIAL AND COLLECTOR STREET WITHIN SPECIFIC PLAN



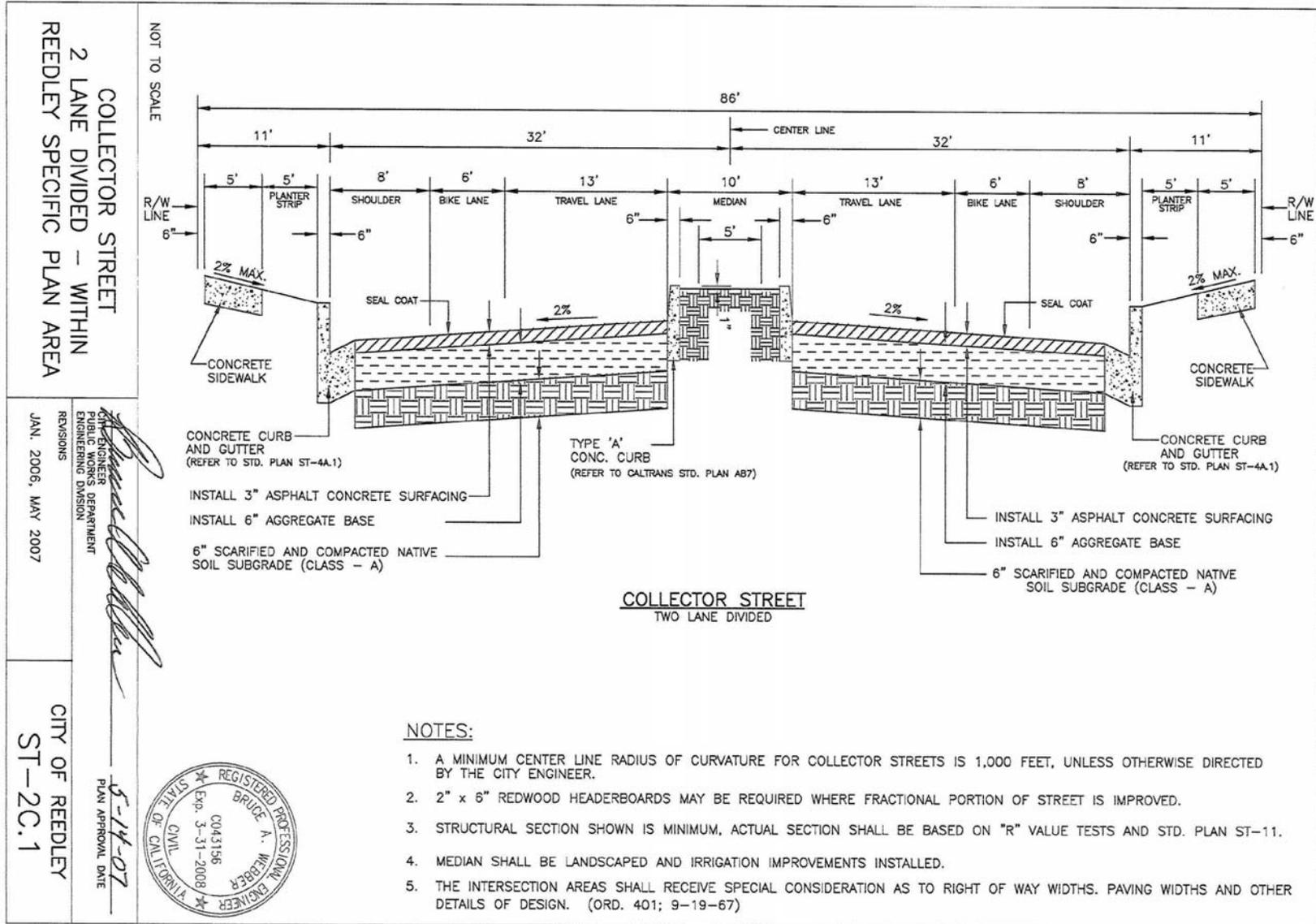
Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – COLLECTOR STREET



Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – COLLECTOR STREET WITHIN SPECIFIC PLAN



COLLECTOR STREET  
2 LANE DIVIDED – WITHIN  
REEDLEY SPECIFIC PLAN AREA

JAN. 2006, MAY 2007

REVISIONS  
CITY ENGINEER  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

*[Signature]*

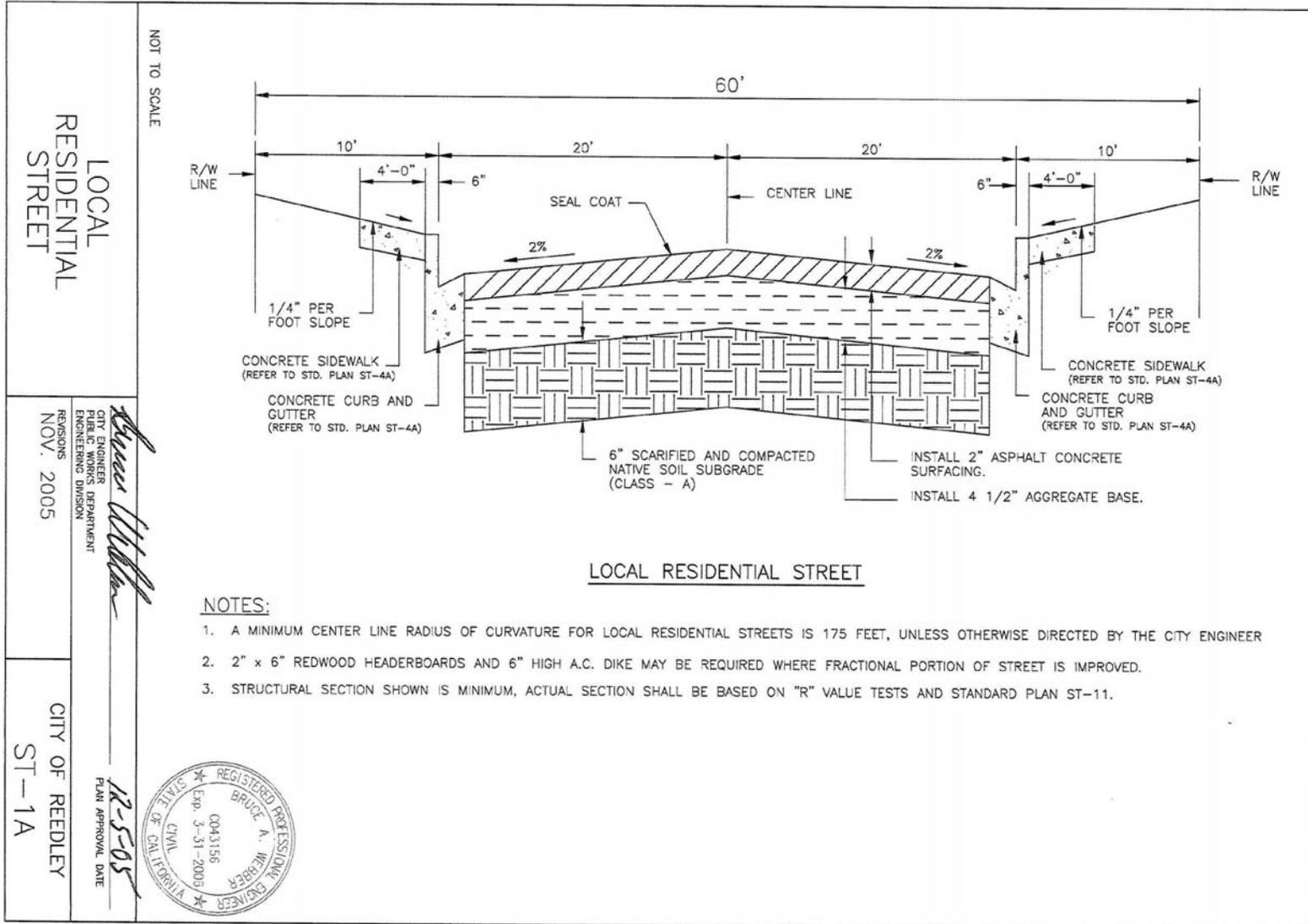
CITY OF REEDLEY  
ST-2C.1

5-14-07  
PLAN APPROVAL DATE



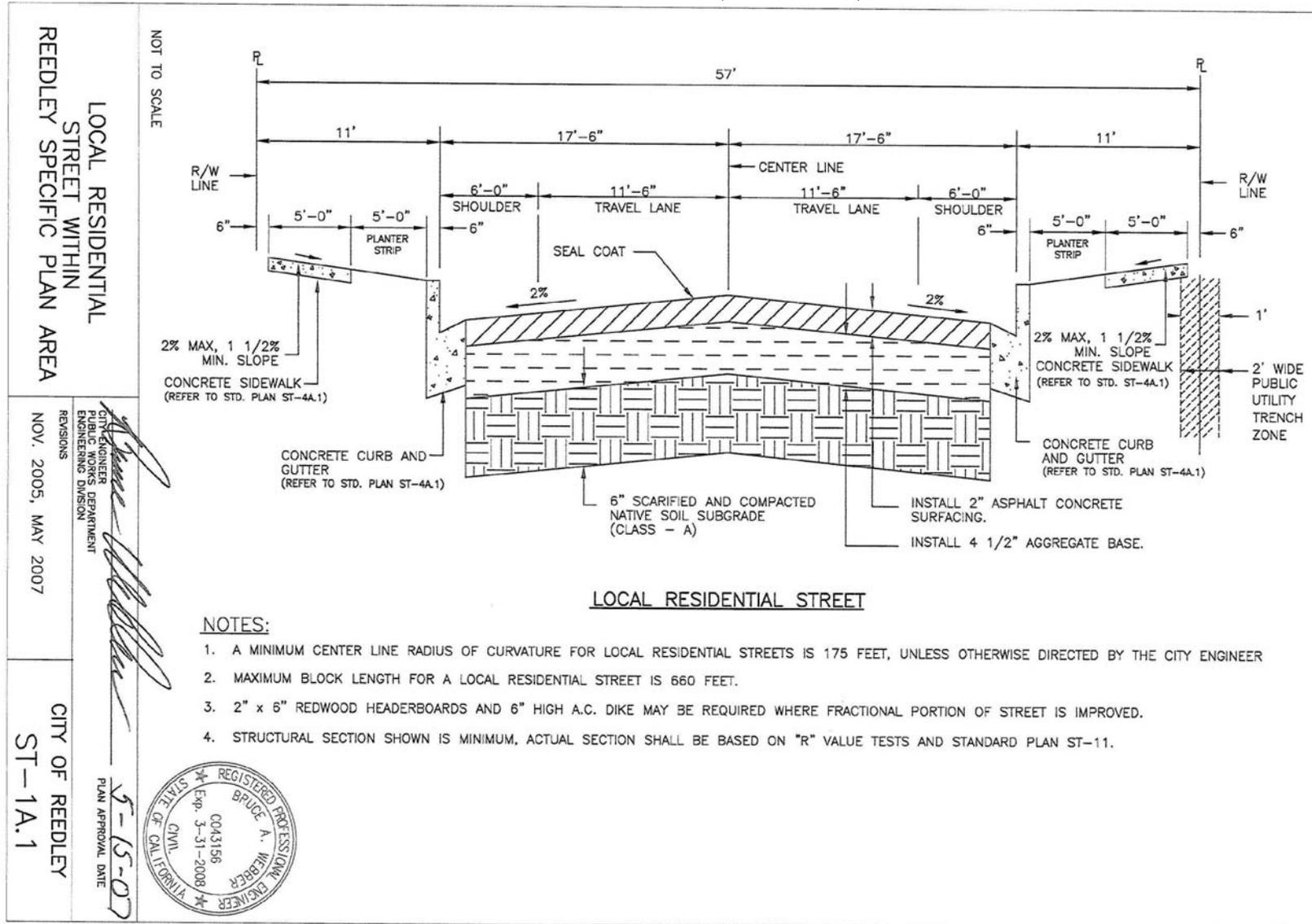
Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – LOCAL STREET (RESIDENTIAL)



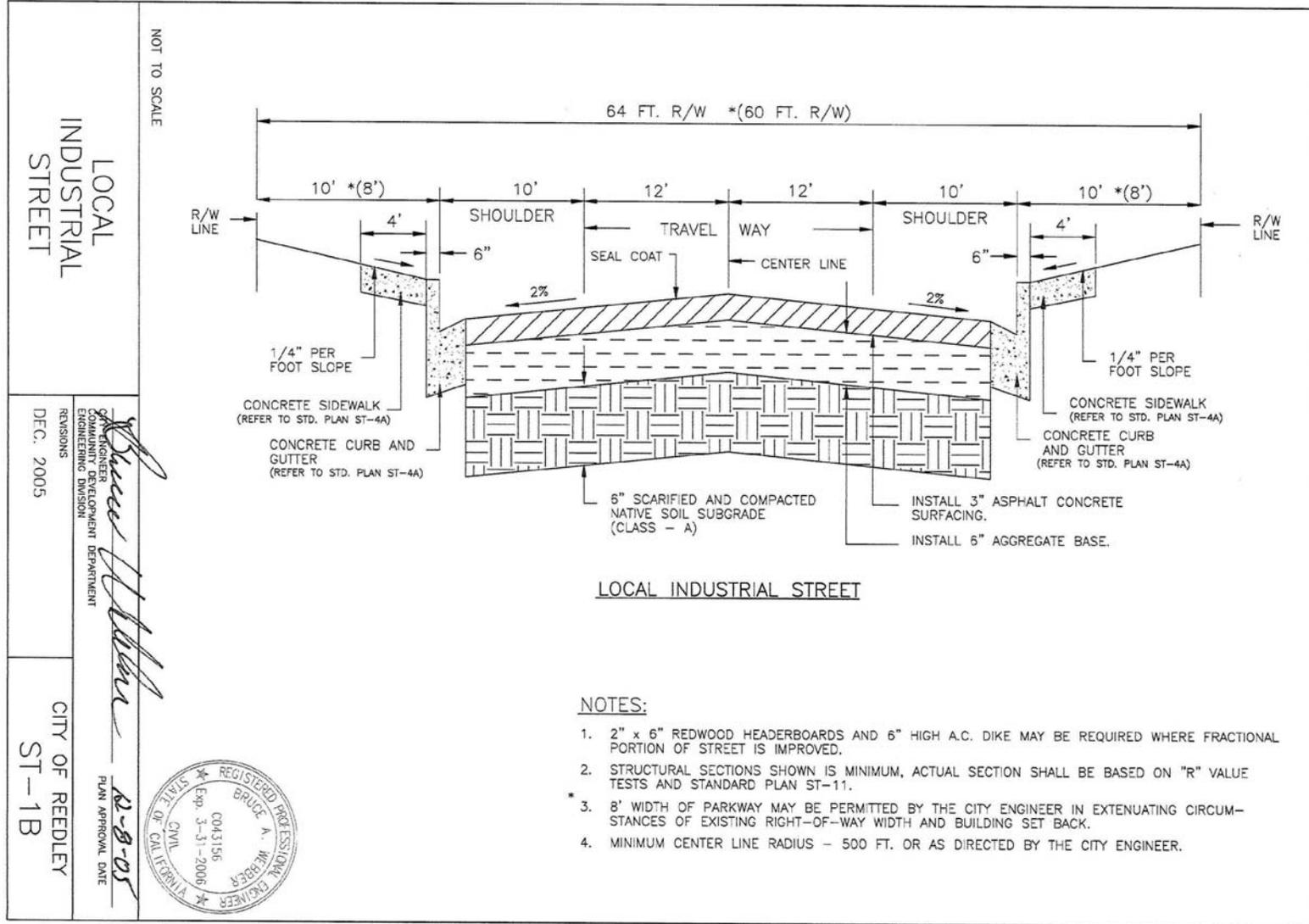
Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS - LOCAL STREET (RESIDENTIAL) WITHIN SPECIFIC PLAN AREA



Source: City of Reedley 2007 Street Standard Plans

REEDLEY TYPICAL CROSS SECTIONS – LOCAL STREET (INDUSTRIAL)



Source: City of Reedley 2007 Street Standard Plans

## PUBLIC TRANSPORTATION

### INTRODUCTION

This section describes the existing transit service providers in the City of Reedley. It also provides transit ridership data for Fixed Route and Dial-a-Ride services. A discussion is also included regarding the city's common transportation carriers.

### METHODS

In order to collect transit and common carrier information, transit providers in Fresno County were contacted. Fresno County Rural Transit Agency (FCRTA) provides transit service and oversight for municipalities and administration. FCRTA oversees transit funding and aids local transit providers with coordination and transfers. The City of Reedley is served by several other fixed route providers, including Dinuba Transit, as well as a demand response (Dial-a-Ride) for local trips. Reedley Dial-a-Ride is the only exclusively run transit service for the city. FCRTA also provides data related to the annual unmet transit needs hearings.

### EXISTING CONDITIONS

FCRTA is Fresno County's public transit provider for rural and urban transit operations. FCRTA provides the multiple fixed route service to the City of Fresno as well as the intercity travel between various cities and communities. The City of Reedley only provides the services listed below:

- **Demand responsive service:** Provided from 7:00 a.m. to 5:30 p.m., Monday through Friday and 8:00 a.m. to 5:00 p.m. Saturdays.
- **Scheduled, multiple round-trip, inter-city service:** Orange Cove Transit provides service through Parlier and Sanger to the Fresno-Clovis Metropolitan Area and Orange Cove from 7:23 a.m. to 5:05 p.m., Monday through Friday.

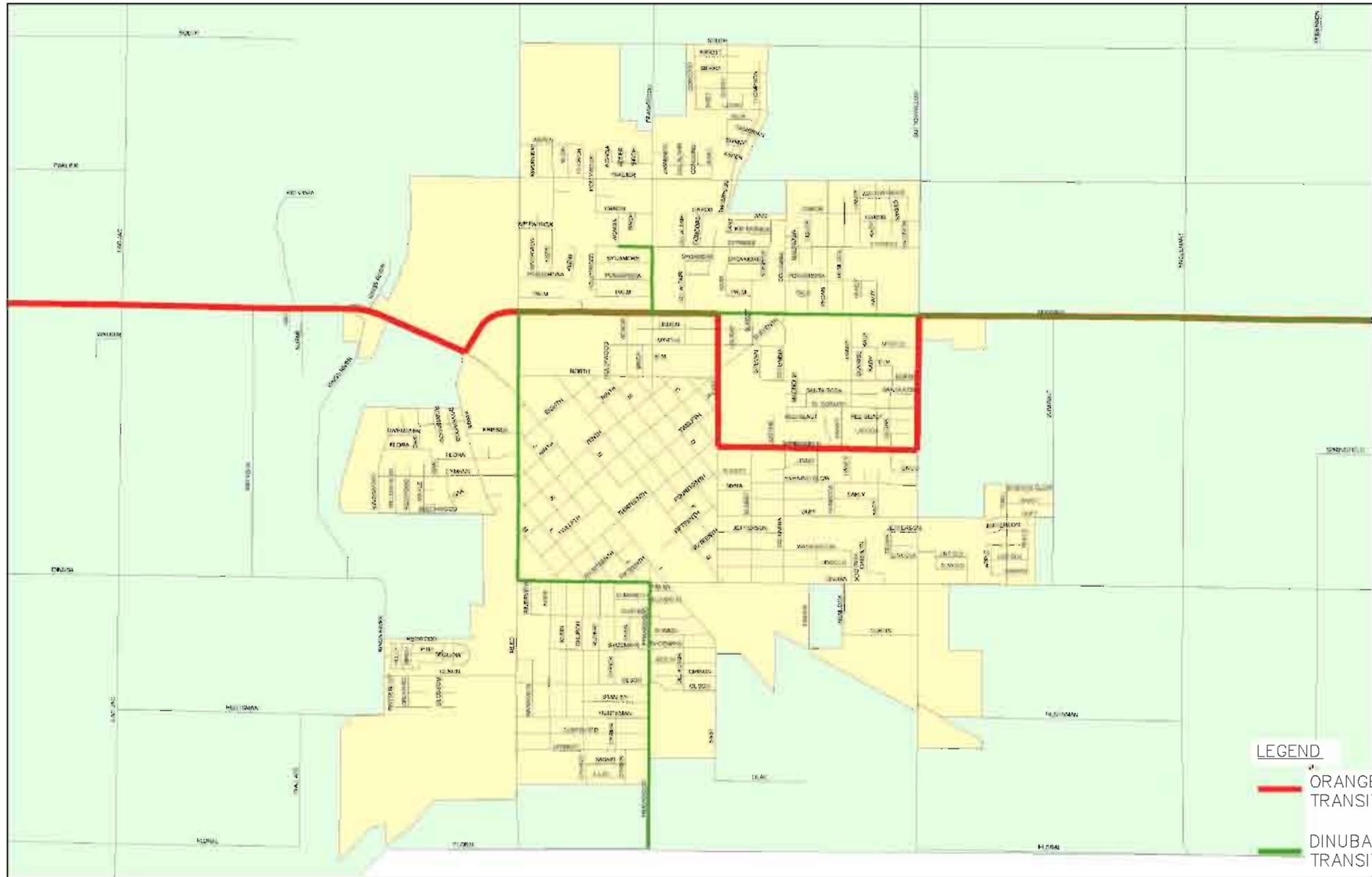
Dial-A-Ride (demand response) service is available for all residents of Reedley traveling within the city limits. FCRTA provides route service to Fresno on Monday, Wednesday and Friday. Passengers using this service for medical appointments must make medical appointments between the hours of 10:00 AM and 2:00 PM. The fare for all medical trips is \$1.50. All other fares are listed below:

**TABLE 6  
DIAL-A-RIDE FARES**

<b>Reedley Fares</b>	<b>Regular Fares</b>	<b>Discount Fares</b>	<b>Monthly Fares</b>
Dial-a-Ride	\$0.75	\$0.50	\$30.00

*Fares as of 3/27/09 from the Fresno County Rural Transit Agency.*

One common carrier (Orange Belt Stages) also provides private transit services within the city, linking it with other regions in the San Joaquin Valley and California (reference Figure 7). Orange Belt Stages also offers daily trips to Las Vegas and to areas along the Central Coast. Greyhound arrives/departs from the City of Fresno and in Tulare County communities (Goshen and Visalia) to the south.



## **UNMET TRANSIT NEEDS PROCESS**

Each year FCRTA holds an “unmet transit needs” hearing that is consistent with Section 99401.5 of the Transportation Development Act (TDA). The TDA governs the administration of the Local Transportation Funds (LTF). The referenced section of the Act clarifies that the RTPA must make a finding, after a public hearing, that there are no unmet public transit needs within a jurisdiction that can be reasonably met before it may approve LTF claims for streets and roads. The RTP address the ADA requirements in Title 23, CFR Section 450.316 9(b)(3) by meeting the needs of Fresno County’s disability community.

Transit in Fresno County is accessible equally by disabled, able bodied, senior citizens and minorities. Buses and facilities are equipped to handle wheelchairs and all schedules are prepared in Spanish to be consistent with the Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State, which ensure that no person shall, on grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving Federal assistance from the United States Department of Transportation.

In Fresno County, typical unmet needs are related to the number of routes per day, operating times, weekend and holiday service, etc. The results of the unmet needs process assists local transit agencies as they plan for future transit services.

## **PARK AND RIDE FACILITIES**

Park and ride facilities are used primarily by carpoolers, vanpoolers and transit riders for the daily commute; usually for free. Park and ride facilities in the city are open 24 hours a day, seven days a week. Currently, the only state sponsored park and ride facilities in Fresno County are in Prather, Coalinga and Auberry. Only one other local facility is located at Manning and I Street. Park and ride lots and their usage should bring positive contributions to air quality and congestion improvements in Fresno County.

## **RAIL TRANSPORTATION**

This section provides a description of the existing railroad operators and shows a map of existing railroads near the city. In order to obtain information related to rail transportation, the websites of Burlington Northern and Santa Fe Railroad (BN&SF), Rail America (formerly San Joaquin Valley Railroad and AMTRAK were utilized as the primary source of information. This information included maps, passenger/freight information, and schedule of routes (if known). In addition, information from the 2007 FCOG RTP was used.

## **EXISTING CONDITIONS**

San Joaquin Valley Railroad (SJVR), which is owned by RailAmerica, provides freight service to Reedley, connecting the city with other markets within California (Fresno County, Tulare County and Kings County). Although the SJVR does not provide long-haul service, there are ample opportunities for local transfers and interchange stations with both the Union Pacific and Burlington Northern Santa Fe railroads. Routes of principal rail lines in the region are shown in the following illustration.



## **NON-MOTORIZED SYSTEMS**

### **INTRODUCTION**

This section identifies non-motorized transportation modes including bicycle, pedestrian, and other non-vehicular facilities available to City of Reedley residents. Information and data from the City of Reedley 2010 Bicycle Transportation Plan was utilized for this section, along with other non-motorized transportation related documents.

### **BICYCLE FACILITIES AND PLANNING**

The City of Reedley updated the City of Reedley 2005 Bicycle Transportation Plan in 2010 to demonstrate a sound bicycle foundation, determine previous bicycle investments and ensure planning was in place to meet future needs. The current bicycle plan outlines safety concerns, planned improvements, bicycle maps and funding opportunities. The Bicycle Transportation Plan identifies various phases of planning and the implementation of bikeway facilities within the urban area boundary. Transit carriers are encouraged to provide bike racks on buses to enhance the use of transit and bicycling.

With the onset of air quality attainment strategies and congestion management concerns, bicycling is considered an effective alternative mode of transportation. Bicycling can help improve air quality and reduce the number of vehicles traveling along congested facilities within cities and communities. Reedley offers a relatively flat topography that allows for the opportunity to utilize bicycle facilities.

The Reedley Bicycle Transportation Plan, updated in December 2010, has been effective in encouraging bicycle investment, prioritizing bicycle projects and funding existing bikeways. Reedley has several miles of existing Class I, II and III bikeways with additional facilities planned for the future.

Reedley has built Class I (bicycle path) on available railroad right-of-way and will continue to promote such bicycle facilities. The shared use and development of the San Joaquin Cross Valley lines, within Fresno County, is an innovative way to achieve multiple objectives. Other existing bicycle paths are located adjacent to General Grant School. Additional Class I bicycle paths are planned for construction on the eastern bank of the King River, Buttonwillow Avenue, Huntsman Avenue, Parlier Avenue, Thompson Avenue and on the western side of Traver Creek, adjacent to the future Central Valley Transportation Center.

### **RECREATIONAL WALKWAYS**

The Class I bicycle facilities in the City of Reedley are generally multi-purpose and can be utilized as walkways as well. By making the experience easier and free of vehicle conflict, these facilities give people the incentive to walk to places of interest while enjoying a preserved corridor. As mentioned in previous sections, there are more of these facilities planned in the future.

### **SAFE ROUTES TO SCHOOL**

Safe Routes to Schools (SR2S) projects encourage and enable children to walk and cycle to school through a combined package of practical and educational measures.

The SR2S projects also:

- Improve road safety and reduce child casualties;
- Improve children's health and development; and
- Reduce traffic congestion and pollution.

SR2S projects involve:

- The whole school community;
- Local residents;
- Local authorities;
- Health and education workers; and
- Law Enforcement.

Successful SR2S projects are child-centered, build on small steps to raise awareness and change travel behavior and benefit the whole local community by helping to create safer, healthier environments. Active & Safe Routes to School is a national program encouraging the use of active modes of transportation to and from school.

The benefits include:

- Increased physical activity for children and youth;
- A healthier lifestyle for the whole family;
- Less traffic congestion around schools;
- Safer, calmer streets and neighborhoods; and
- Improved air quality and a cleaner environment.

The City of Reedley received \$105,000 in 2000 for installation of in-pavement crosswalk lights, \$160,000 in 2005 to construct sidewalks and curb ramps, upgraded crosswalks and install a pedestrian signal and \$100,000 in 2008 for installation of in-pavement crosswalk lights, sidewalks and curb ramps. FCOG encourages communities, school districts, and other agencies that are eligible to apply for SR2S funding.



## **AVIATION SYSTEM**

### **INTRODUCTION**

In this section, the existing airport facilities within the city are described. This section includes a discussion of airport types and locations.

### **EXISTING CONDITIONS**

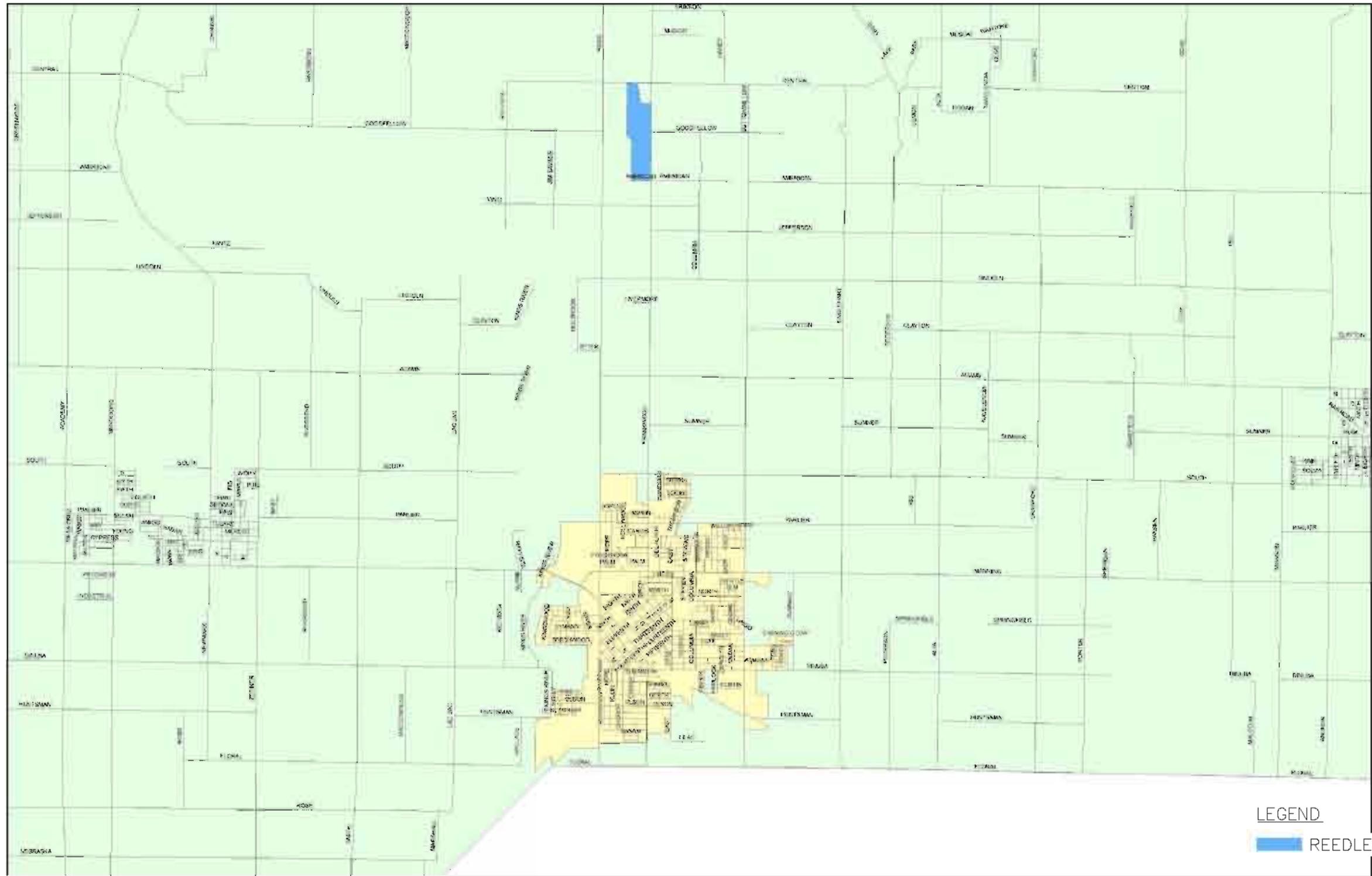
Reedley participated in a demonstration project to coordinate regional, state and federal aviation system planning with the development of the Central California Aviation System Plan (CCASP). This was a departure from previous airport planning that was done primarily between the federal and state aviation authorities and local airports.

The CCASP was developed over a four year period and included several elements. Issues impacting the aviation community and how they impacted each airport were identified; aviation goals objectives and policies were summarized; aviation funding resources and needs were described; airport profiles were developed to identify existing facilities and the role each airport had in the community; forecasts of based planes, flight operations, commercial service passengers and cargo were developed; needs were identified to accommodate the forecasts; and an action plan was developed to meet those needs. Airport projects included in future Capital Improvement Programs will reflect a more focused and accurate view of the airport's role to the community it serves.

The primary airport is described in detail in the following paragraphs:

- **Reedley Municipal Airport:** Serves the majority of aviation demand within the area of Reedley. The Reedley airport is the only city-owned air facility within the immediate area and will remain the most active public use, public airport for the foreseeable future. Today, the facility consists of one runway that is 3,300 feet in length; a 20 foot wide paved taxiway; 16 conventional hangers and 42 tee shelters. All types of General Aviation aircraft use the facility including recreation and business aircraft. The average daily aircraft operation in 2009 is approximately 10 with a majority of those being single engine propeller aircraft. Annual operations are forecasted to be 36,538 and the number of based aircraft is expected to be 95 in 2020. The City of Reedley released an updated master plan in March 2004.

Of the airports in the county, only Fresno Yosemite International Airport (FAT) provides convenient commercial passenger service that is available to Reedley residents. Figure 9 shows the location of the City of Reedley airport. The only other commercial passenger air service within the vicinity is located in Visalia, in neighboring Tulare County. This service offers flights to/from Ontario, CA, with connections to other destinations.



## **GOODS MOVEMENT**

### **INTRODUCTION**

This section discusses traditional ways that goods are transported in the City of Reedley. Heavy-duty trucks account for the majority of goods movement in Reedley with rail providing a more regional option.

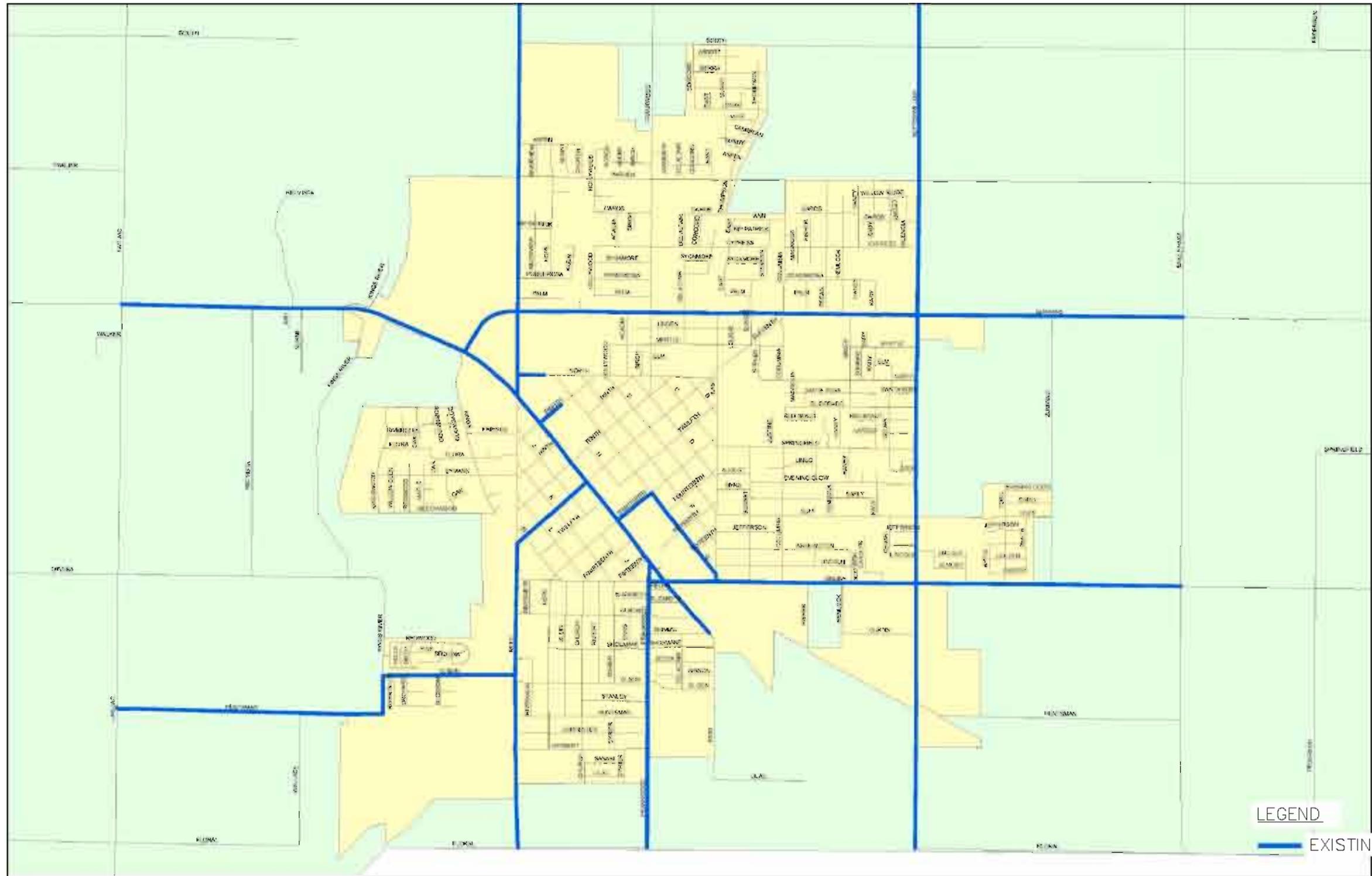
### **EXISTING CONDITIONS**

Retail, agricultural and industrial land uses are the principal generators of truck traffic in Reedley. Since agriculture is a relatively mature industry in the county, overall truck traffic generated by agricultural uses should remain stable in the future. However, relocation and replacement of individual agricultural processing plants and other new industries can significantly alter both regional and localized patterns and concentrations of truck traffic within cities. As continued industrial growth is expected to increase within the area, the scale of industrial-related and retail truck traffic will continue to increase.

There are currently no state highway facilities and thus no Surface Transportation Assistance Act (STAA) routes or terminal access routes exist within the city. Although there are no state truck routes, there are significant local truck routes. The truck routes in the City, as identified in the City of Reedley's *General Plan 2012 – Circulation Element* are:

- Manning Avenue – entire length of city;
- I Street – Manning Avenue to Curtis Avenue;
- Reed Avenue – I Street to northern City Limit and Eleventh Street to southern City Limit;
- Olson Avenue – west of Reed Avenue;
- Frankwood Avenue – south of Dinuba Avenue;
- Eleventh Street – Reed Avenue to I Street;
- Buttonwillow Avenue – entire length of city; and
- Dinuba Avenue – east of Frankwood Avenue.

Existing city truck routes are listed in Figure 10.



Existing Truck Routes (Local Truck Routes)



## **TRANSPORTATION SYSTEM MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT**

### **INTRODUCTION**

This section discusses strategies to increase roadway capacity without relying on major construction improvements. The FCOG documents were used to obtain data regarding Transportation Systems Management (TSM) and Transportation Demand Management (TDM) programs.

### **EXISTING CONDITIONS**

TSM provides for short-range transportation strategies designed to improve the movement of people, goods and the operational efficiency of the existing transportation system at minimal cost. The TSM strategies that are currently implemented in the cities within Fresno County on an on-going basis include traffic signal synchronization, provision of left-turn, parking and access management, and similar traffic engineering treatments that maximize the use of existing streets and roads without major construction. These improvements have increased the overall capacity of the highway system in Reedley without the provision of major capital expenditures.

### **TRANSPORTATION DEMAND MANAGEMENT**

TDM consists of managing behavior regarding how, when and where people travel. TDM strategies are designed to reduce vehicular trips during peak hours by shifting trips to other modes of transportation and reduce trips by providing jobs and housing balance. TDMs are specifically targeted at the work force that generates the majority of peak hour traffic. Reedley participates in the *Central Valley Ridesharing* outreach program (with the FCOG), which is designed to educate employers and employees toward the benefits of TDMs. Some of the TDM strategies include the following techniques:

- Rideshare programs;
- Transit usage;
- Flex hours;
- Vanpools;
- Bicycling & walking;
- Telecommuting; and
- Mixed land uses.

Through education, TDM strategies can be implemented and utilized in the circulation system. However, in order to change peoples traveling habits, employers must suggest transportation alternatives such as encouraging employees to reduce vehicle single occupant trips. In Reedley, the areas with the most severe traffic congestion and which are potential candidates for TDM strategies include the Manning Avenue corridor, Reed Avenue, I Street and the downtown core. The City of Reedley has federal funding to become available in 2014 to construct signal interconnect conduit for a future Intelligent Transportation System (ITS) along the I Street corridor.

### **STRATEGIES**

A valuable TDM resource is available to Reedley. FCOG actively educates and encourages employers to inform their employees about alternatives for transportation. FCOG provides its member agency with TDM programs such as the Central Valley Rideshare outreach program, which matches compatible commuters. As a tool to reduce congestion and environmental improvements the SJVAPCD, FCOG and

local agencies endorse TDM strategies. Employers are encouraged to endorse the following TDM strategies:

- Economic incentives;
- Regulatory parking spaces; locker rooms and showers (for pedestrians and bikers);
- Satellite work stations;
- Institute flexible work hours;
- Subsidize transit cost;
- Award extra times off; and
- Join a Transportation Management Agency (TMA).

## COMMUTE MODES OF TRANSPORTATION

### INTRODUCTION

The purpose of this section is to provide information related to commuter patterns throughout the county. Specific information is provided for cities; however, information pertaining to unincorporated communities is not as detailed. Overall, a general commute pattern between the cities within Reedley is summarized.

### METHODS

The information presented is based upon 2001 California Household Travel Survey.

### EXISTING CONDITIONS

Table 7 shows the mode choice of commuters in Fresno County based upon the 2001 California Statewide Household Travel Survey. This table also identifies the duration of travel to work.

**TABLE 7  
TRANSPORTATION TO WORK**

% Car, truck or van to work	94 %
% Public transportation to work	0.5 %
% Other transportation to work	5.5 %
% Travel time less than 15 minutes	46 %
% Travel time 15-29 minutes	28 %
% Travel time 30-59 minutes	20 %
% Travel time 60+ minutes	6 %

*Source: 2001 California Household Travel Survey (January 2007)*

As shown in Table 7, the majority of commuter trips are vehicular in nature. Public transportation only makes up for one-half of a percent for commuters. Table 7 also indicates that nearly 74 percent of commuters spend less than 29 minutes to travel to/from work. Only 6 percent have travel times greater than an hour; these are likely jobs outside of the county.

## **FUTURE CONDITIONS**

The year 2035 was chosen as the cumulative year to correspond with the updated Fresno Council of Governments (FCOG) Regional Travel Demand Forecast Model build-out year of 2035. Although the General Plan Update is has identified the future year as 2030, utilizing 2035 as the build-out year is more conservative and is consistent with FCOG's model.

For the future cumulative conditions two scenarios were analyzed; the "Year 2035 Base" and the "Year 2035 Base plus Project". The "Year 2035 Base" conditions scenario is assumed to be the "no-build, without project" condition and reflects anticipated future conditions per the existing General Plan 2012 land use and sphere of influence. The "Year 2035 Base plus Project" conditions scenario reflects anticipated future conditions of the General Plan 2030 Update.

## **FUTURE TRAFFIC VOLUMES**

OMNI-MEANS worked with FCOG to ensure both the roadway network and socioeconomic data reflect existing conditions and anticipated future conditions. Modifications were made to the roadway network and existing facilities were added. Lanes, speeds and capacity classes were also verified and adjusted.

The City of Reedley General Plan 2012 is currently the adopted long-range planning guide for the City of Reedley, therefore its land use and roadway network assumptions are reflected in the current FCOG 2035 build-out year traffic model. As with the existing conditions, OMNI-MEANS worked with FCOG to ensure these assumptions match those in the General Plan 2012.

As discussed previously, this TIAR is being completed in support of the City of Reedley General Plan 2030 update. This update to the General Plan has identified new growth areas and designated an expanded Sphere of Influence boundary. It has also added additional roadways and corridors to the circulation system and reclassified others as higher capacity facilities. As a result of the new growth areas, it is anticipated that some roadways will experience higher traffic volumes than previously forecasted in the current FCOG 2035 build-out year traffic model. OMNI-MEANS worked with FCOG to develop a separate 2035 build-out year model run that included the assumptions from the General Plan 2030 update.

The future traffic volumes were forecasted utilizing the FCOG 2035 build-out year traffic model runs detailed above for both the "Year 2035 Base" and the "Year 2035 Base plus Project" scenarios. Since FCOG has a validated peak hour model, it was utilized for the development of the future peak-hour volumes and analysis. OMNI-MEANS used the peak-hour directional traffic volumes at each leg of the intersection to balance the turning movement volumes. The turning movement volumes were computed using techniques provided in NCHRP 255 through the use of TurnsW32 computer application. Based upon future trip "ins" and "outs" for each leg of the intersection, TurnsW32 runs several iterations to calculate future traffic volumes by turning movement. Following this process, OMNI-MEANS reviewed the forecasted turning movements for reasonableness and made adjustments as necessary.

## **FUTURE ROADWAY NETWORK**

Numerous roadway and intersection improvement projects in the City of Reedley are programmed and will be funded through the FCOG 2011 Regional Transportation Plan (RTP) and Fresno County's Measure "C", the ½ cent sales tax measure described previously in this report. Improvements identified as a Financially Constrained Federal Transportation Improvements Program Project in the RTP are assumed to be constructed by the year 2035 and are included in the future analysis. The projects in and around the City of Reedley included on the Financially Constrained Federal Transportation Improvements

Program Project list in the RTP are shown in Table 8. Although there will likely be funding available through Measure “C” for roadway improvement projects in the City of Reedley, none are currently identified. A conceptual list of the projects funded through Measure “C” that was developed in conjunction with the Measure “C” Extension program are shown on Figure 11.

**TABLE 8  
FINANCIALLY CONSTRAINED FEDERAL TRANSPORTATION  
IMPROVEMENTS PROGRAM PROJECTS FOR THE CITY OF REEDLEY;  
2011 RTP**

<b>PROJECT ID</b>	<b>PROJECT DESCRIPTION</b>	<b>STREET NAME</b>	<b>PROJECT LIMITS</b>	<b>ESTIMATED TOTAL COST</b>
FRE020633	<i>Intersection of Dinuba and Buttonwillow. Construct a modern roundabout, widen and improve intersection approaches. -- COMPLETED</i>		<i>From: Dinuba Ave To: Buttonwillow Ave</i>	<b>\$1,058,000</b>
FRE040115	Install sidewalks and ramps on both sides of Manning Ave. between Frankwood and Buttonwillow Ave.	Manning Ave	From: Frankwood Avenue To: Buttonwillow Ave	<b>\$690,000</b>
FRE040609	Reconstruct & overlay, remove & replace curb, gutter & sidewalks and signal retrofit.	Frankwood Ave	From: Manning Ave To: North City Limits	<b>\$940,000</b>
FRE070614	N. Frankwood Ave. between Manning Ave. and North Ave. Realignment and reconstruction. Move east curb line back to its proper alignment matching the existing curb return	N. Frankwood Ave	From: Manning Ave To: North Ave	<b>\$855,000</b>
FRE070615	Reed Avenue Reconstruction and Widening from I Street to South Avenue.	Reed Ave	From: I street To: South Ave	<b>\$2,622,000</b>
FRE090115	Construction of a clean air alternative fueling center for compressed natural gas (CNG), ultra Low Sulfur Diesel, bio-diesel and E-85 ethanol fuel to be located in the Regional Transportation Center.	N/A	Future Central Valley Transportation Center	<b>\$1,195,000</b>
FRE040501	Manning Avenue Bridge Replacement	Manning Ave	Bridge over Kings River	<b>\$16,000,000</b>
FRE090616	Construct medians on North Frankwood Ave. from Manning Ave. to north city limits replacing the center dual turn lane & installing street lights & in-pavement x-walk at elementary school.	Frankwood Ave	From: Manning Ave To: North City Limits	<b>\$564,000</b>
FRE110121	On I St from Manning to 13th Install Traffic Interconnect and Signal Synchronization Hardware and Software	I St	From :Manning To: 13th	<b>\$295,000</b>
FRE110148	Add approximately 2700' of bicycle and pedestrian pathway to provide connectivity from the existing Rails and Trails pathway to the newly constructed Reedley Sports Park	Reedley Parkway Trail	From: Rails to Trails pathway To: Reedley Sports Park	<b>\$240,000</b>

Although it was not included in the 2011 RTP, the “Manning Avenue Widening and Overlay” project will be included in the 2014 RTP financially constrained projects list and is assumed to be completed by the year 2035. It is likely Measure “C”: funds will also be used to complete the project, which will include Right of Way acquisition, the widening Manning Avenue to four lanes throughout the City of Reedley and the construction of sidewalks and pedestrian facilities.

The assumed roadway networks for both the “Year 2035 Base” and the “Year 2035 Base Plus Project” scenarios incorporate the improvement projects listed in Table 8 and the Manning Avenue Widening and Overlay project, but do not include any of the conceptual Measure “C” projects. It is assumed that intersection improvements, including signalization or potential modern roundabouts, would be included in the roadway improvement projects of Reed Avenue (RTP - FRE070615) and Manning Avenue (Manning Avenue Widening project). It is also assumed that the roadway improvements would be constructed to reflect the updated roadway classifications as specified in the General Plan Update 2030, in which both Reed Avenue and Manning Avenue are classified as Major Arterials. No other intersection improvements were assumed although they were included in the conceptual Measure “C” projects list.

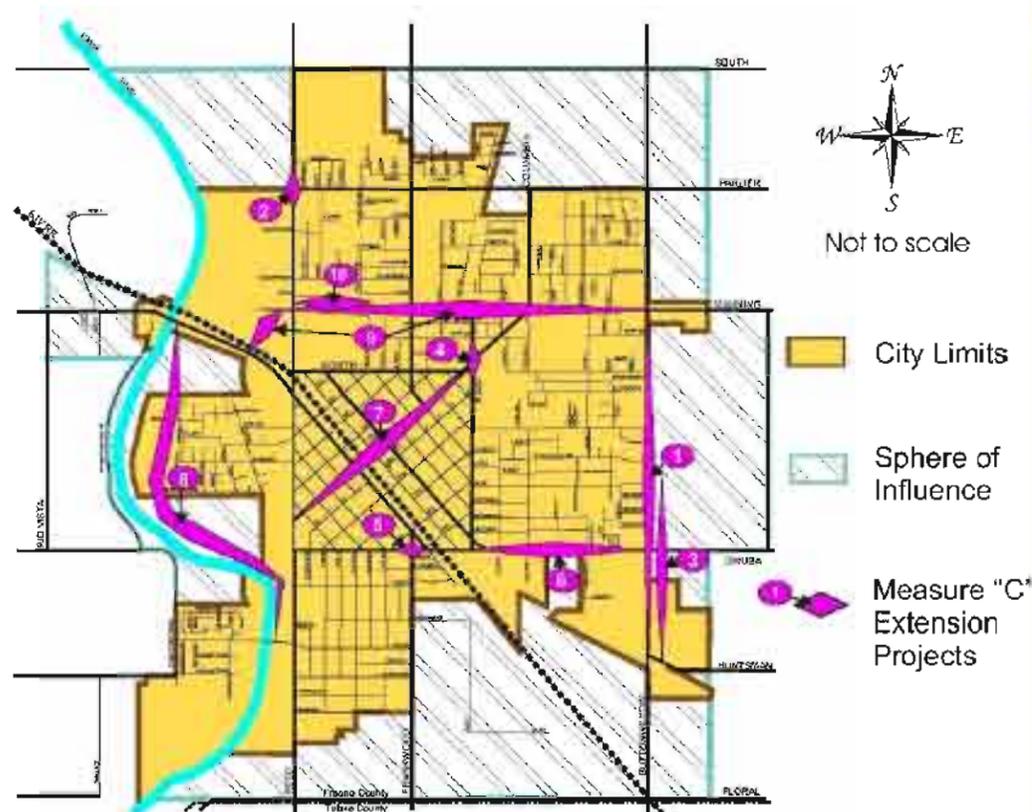
# City of Reedley

## Local Measure "C" Extension Projects

### \$14,299,040 Total Local Allocation

Estimated Local Measure C Funds	Annual Allocation	20-Year Allocation
Street Maintenance	\$320,082	\$6,401,635
Pedestrian Trails/ Bike Lanes	\$74,789	\$1,495,770
ADA Compliance	\$11,203	\$224,057
Flexible Funding	\$308,879	\$6,177,578
<b>Total Local Measure C Funds</b>	<b>\$714,953</b>	<b>\$14,299,040</b>

#### Projects not Listed in Priority Order



#	Route	Project Description
1	Buttonwillow	Widen to 4 Lane w/ New Pavement
2	Reed	Install Traffic Signal
3	Buttonwillow	Construct Class 1 Bike Route
4	11th Street	Install Traffic Signal
5	Frankwood	Install Traffic Signal
6	Dinuba	Pavement Rehabilitation
7	11th Street	Pavement Rehabilitation
8	Kingswood Pky	Construct Bike Route
9	Manning	Widen to 4 Lanes
10	Manning	Widen & Improve Pavement

#### NOT SHOWN ON MAP

- |    |  |  |
|----|--|--|
| 11 | Various Rdwys.   | Shoulder Paving & Widening for Class II bike lanes             |
| 12 | City Wide  | Miscellaneous Sturries & Overlays for Preventative Maintenance |
| 13 | Various Reconstruction, Maintenance, Rehabilitation Projects |  |

- **ADA Compliance (\$11,203 annually, \$224,057 over life of extension)** Continue to improve ADA accessibility throughout the City of Reedley according to the approved Master Plan
- **Flexible Local Funding (\$308,879 annually, \$6,177,578 over life of extension)** Flexible funding can be applied to any transportation project eligible for funding under the California Streets & Highways Code including public transit, bikeways, trails, street and highway improvements, and other transportation programs and projects.
- **Leveraging federal, state, local funds** Local Measure C funds will be applied to leverage federal, state, and other local funds to address additional street maintenance activity within the zones, as well as other transportation improvements (street widening, transit enhancements, trails, bikeways, etc.)
- **Public Transportation Infrastructure Study (PTIS), Phase II** The Regional Public Transit Program will fund Phase II of the PTIS to design a consolidated public transit service for the metropolitan area and all of Fresno County, and identify how Fresno County residents can take advantage of new technologies and advances in public transit and land use planning.



**YEAR 2035 BASE CONDITIONS**

“Year 2035 Base” peak-hour intersection traffic operations were quantified applying “Year 2035 Base” traffic volumes as derived from the current FCOG 2035 build-out year traffic model as described in the previous section and are identified in Figure 12. The “Year 2035 Base” intersection lane geometrics and control were derived by incorporating the roadway and intersection improvements previously identified and are shown in Figure 13. Table 9 presents the “Year 2035 Base” peak hour intersection LOS.

**TABLE 9  
YEAR 2035 BASE CONDITIONS:  
INTERSECTION LEVELS OF SERVICE**

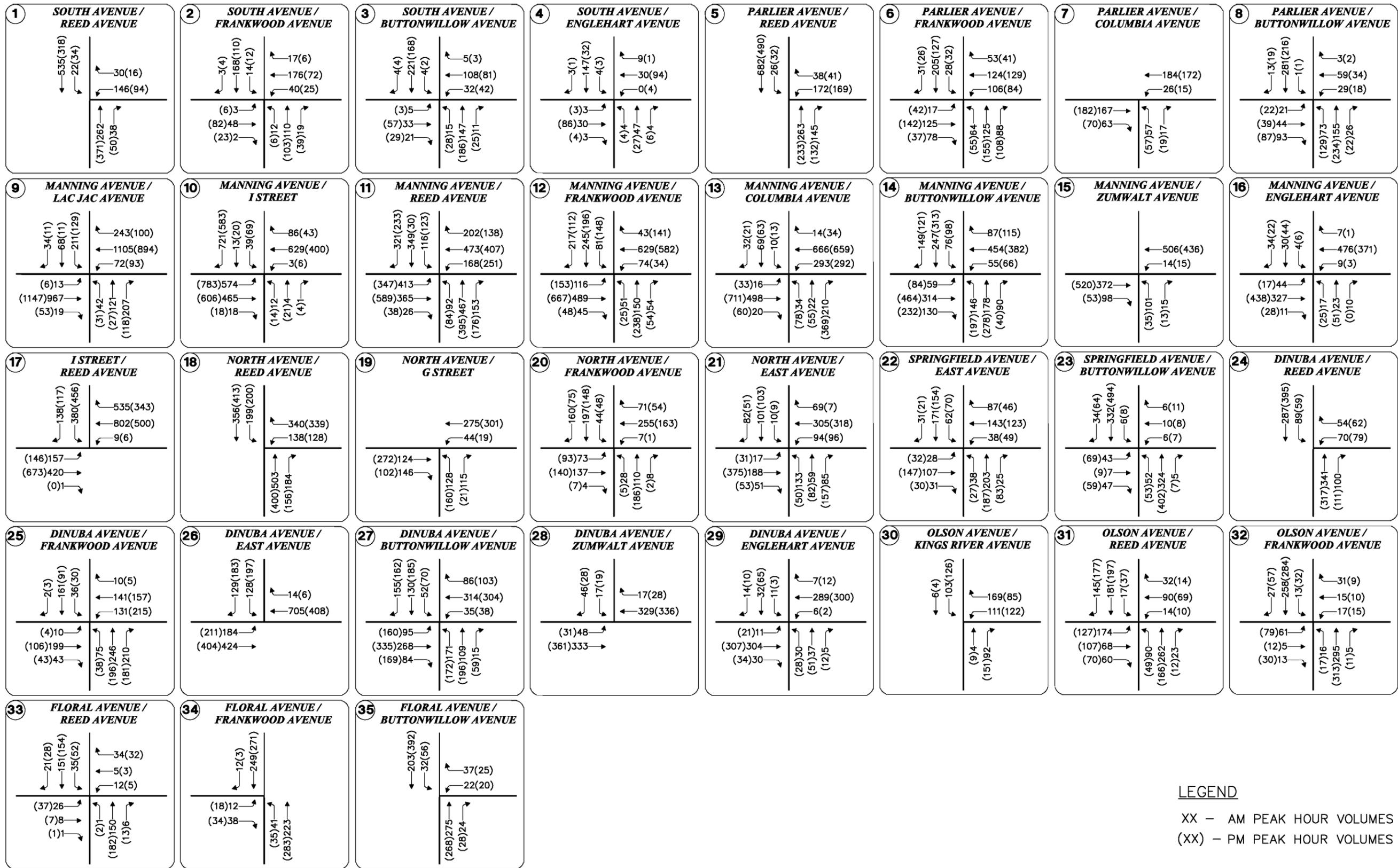
	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
1	South Avenue/Reed Avenue	Signal	10.1	B	NO	10.4	B	NO
2	South Avenue/Frankwood Avenue	AWSC	9.9	A	NO	8.7	A	NO
3	South Avenue/Buttonwillow Avenue	TWSC	12.5	B	NO	16.8	C	NO
4	South Avenue/Englehart Avenue	TWSC	10.8	B	NO	10.3	B	NO
5	Parlier Avenue/Reed Avenue	Signal	11.8	B	--	12.0	B	--
6	Parlier Avenue/Frankwood Avenue	AWSC	12.2	B	NO	11.5	B	NO
7	Parlier Avenue/Columbia Avenue	OWSC	12.3	B	NO	12.1	B	NO
<b>8</b>	<b>Parlier Avenue/Buttonwillow Avenue</b>	<b>TWSC</b>	<b>22.8</b>	<b>C</b>	<b>NO</b>	<b>25.1</b>	<b>D</b>	<b>NO</b>
<b>9</b>	<b>Manning Avenue/Lac Jac Avenue</b>	<b>Signal</b>	<b>40.4</b>	<b>D</b>	<b>--</b>	<b>21.2</b>	<b>C</b>	<b>--</b>
10	Manning Avenue/I Street	Signal	31.2	C	--	25.6	C	--
11	Manning Avenue/Reed Avenue	Signal	33.2	C	--	33.0	C	--
12	Manning Avenue/Frankwood Avenue	Signal	27.3	C	--	27.3	C	--
13	Manning Avenue/Columbia Avenue	Signal	19.3	B	--	24.3	C	--
14	Manning Avenue/Buttonwillow Avenue	Signal	25.7	C	--	29.0	C	--
<b>15</b>	<b>Manning Avenue/Zumwalt Avenue</b>	<b>OWSC</b>	<b>30.1</b>	<b>D</b>	<b>NO</b>	<b>21.9</b>	<b>C</b>	<b>NO</b>
<b>16</b>	<b>Manning Avenue/Englehart Avenue</b>	<b>TWSC</b>	<b>26.4</b>	<b>D</b>	<b>NO</b>	<b>30.5</b>	<b>D</b>	<b>NO</b>
17	I Street/Reed Avenue	Signal	20.5	C	--	19.1	B	--
<b>18</b>	<b>North Avenue/Reed Avenue *</b>	<b>OWSC</b>	<b>30.9</b>	<b>D</b>	<b>YES</b>	<b>20.2</b>	<b>C</b>	<b>YES</b>
19	North Avenue/G Street	AWSC	9.1	A	NO	10.8	B	NO
20	North Avenue/Frankwood Avenue	AWSC	14.8	B	NO	12.3	B	NO
21	11 <sup>th</sup> Street/East Avenue	AWSC	14.2	B	--	24.2	C	--
22	Springfield Avenue/East Avenue	OWSC	13.9	B	NO	13.9	B	NO

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
23	Springfield Avenue/Buttonwillow Avenue	OWSC	14.4	B	NO	21.9	C	NO
24	Dinuba Avenue/Reed Avenue	OWSC	18.6	C	NO	19.2	C	NO
<b>25</b>	<b>Dinuba Avenue/Frankwood Avenue</b>	<b>AWSC</b>	<b>28.6</b>	<b>D</b>	<b>YES</b>	20.6	C	YES
26	Dinuba Avenue/East Avenue	AWSC	19.9	C	NO	17.2	C	NO
27	Dinuba Avenue/Buttonwillow Avenue *	Round	7.1	A	--	12.7	B	--
28	Dinuba Avenue/Zumwalt Avenue	OWSC	13.1	B	NO	13.8	B	NO
29	Dinuba Avenue/Englehart Avenue	TWSC	19.2	C	NO	21.4	C	NO
30	Olson Avenue/Kings River Road	OWSC	11.4	B	NO	11.9	B	NO
31	Olson Avenue/Reed Street	AWSC	15.2	C	NO	12.7	B	NO
32	Olson Avenue/Frankwood Avenue	TWSC	19.0	C	NO	23.4	C	NO
33	Floral Avenue/Reed Avenue	TWSC	12.9	B	NO	14.4	B	NO
34	Floral Avenue/Frankwood Avenue	OWSC	11.2	B	NO	12.1	B	NO
35	Floral Avenue/Buttonwillow Avenue	OWSC	12.0	C	NO	14.0	B	NO

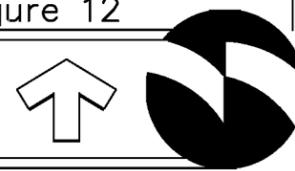
Legend: OWSC = One-Way Stop Control TWSC = Two-Way Stop Control. AWSC = All-Way Stop Control.  
ROUND = Roundabout  
Average Delay = Average Intersection Delay for Signalized Intersections.  
Average Delay = Worst-Case Intersection Movement Delay for OWSC & TWSC Intersections.  
LOS = Average Intersection Level-of-Service for Signalized Intersections.  
LOS = Worst-Case Movement's Level-of-Service for OWSC & TWSC Intersections.  
N/A = Not Applicable (Intersection does not Exist for this Scenario)  
OVRFL = Overflow Conditions (>100 Seconds)  
Warrant = MUTCD Peak Hour Warrant 3.  
\* = SimTraffic delay reported

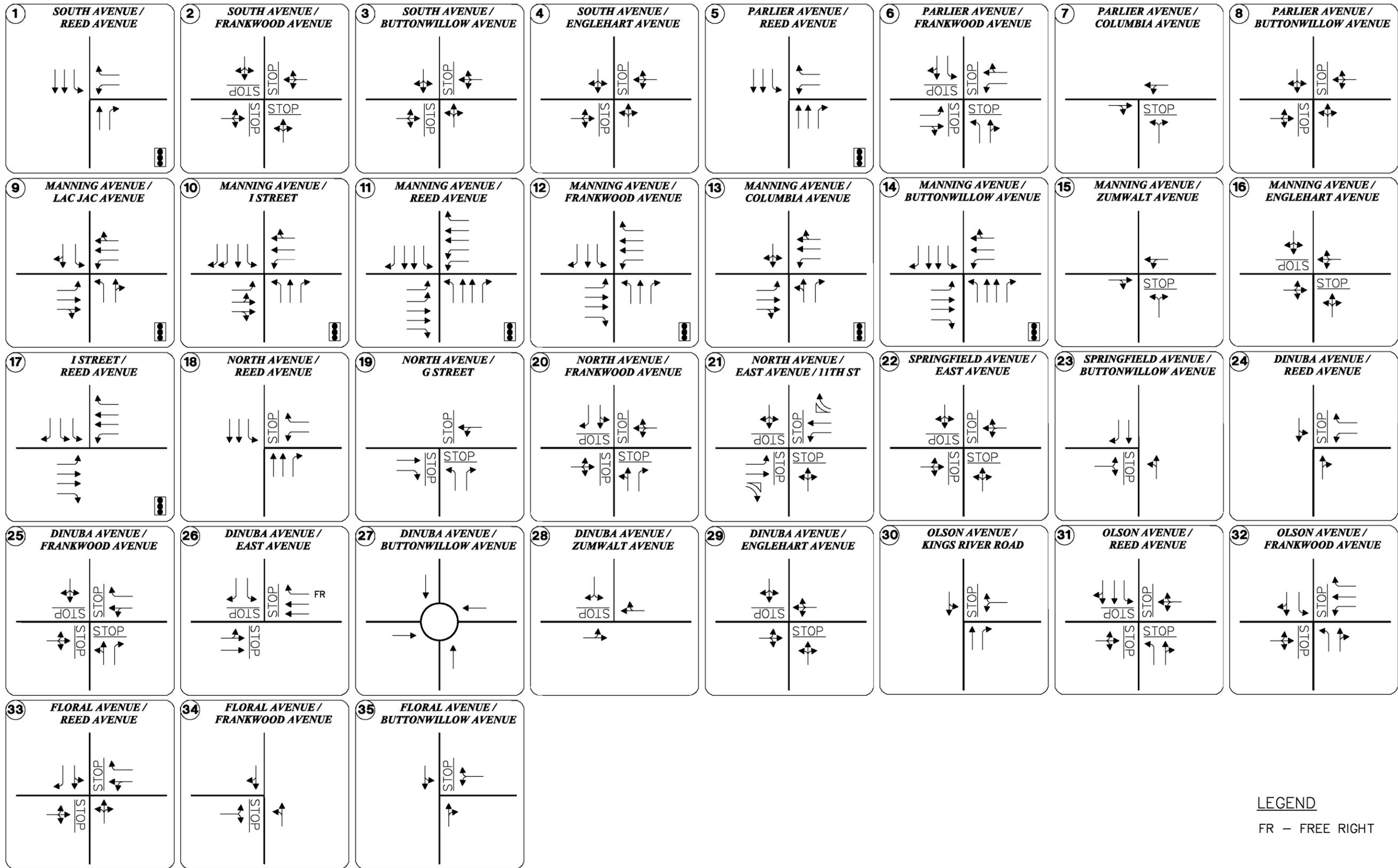
As shown in Table 9, six of the study intersections are projected to operate at an unacceptable LOS during the AM and/or PM peak hour periods for “Year 2035 Base” conditions. These include the intersections at Parlier Avenue/Buttonwillow Avenue, Manning Avenue/Lac Jac Avenue, Manning Avenue/Zumwalt Avenue, Manning Avenue/Englehart Avenue, North Avenue/Reed Avenue and Dinuba Avenue. In addition, two of these intersections are expected to meet the MUTCD Peak Hour Warrant 3 during “Year 2035 Base” peak hour conditions. These intersections are North Avenue/Reed Avenue and Dinuba Avenue/Frankwood Avenue.

All mitigation measures are discussed in a subsequent section of this report.



# Year 2035 Base Intersection Traffic Volumes





## 2035 BASE ROADWAY OPERATING CONDITIONS

Table 10 identifies the LOS for the study segments under the “Year 2035 Base” scenario utilizing the roadway ADT-based LOS thresholds presented previously in Table 2.

**TABLE 10  
YEAR 2035 BASE CONDITIONS:  
ROADWAY SEGMENT LEVEL OF SERVICE**

<b>Roadway Segment</b>	<b>From</b>	<b>To</b>	<b>Facility Type</b>	<b>No. of Lanes</b>	<b>ADT (LOS)</b>
Reed Avenue	Floral Avenue	Dinuba Avenue	Arterial	4	4,830 (A)
Reed Avenue	Dinuba Avenue	Manning Avenue	Arterial	2	7,020 (A)
Reed Avenue	Manning Avenue	South Avenue	Arterial	4	14,670 (A)
Frankwood Avenue	Floral Avenue	Dinuba Avenue	Arterial	2	7,470 (A)
Frankwood Avenue	North Avenue	Parlier Avenue	Arterial	2	5,650 (A)
East Avenue	Dinuba Avenue	North Avenue	Collector	2	7,202 (A)
Columbia Avenue	Manning Avenue	Parlier Avenue	Collector	2	1,910 (A)
Buttonwillow Avenue	Dinuba Avenue	Manning Avenue	Major Arterial	4	13,504 (A)
Buttonwillow Avenue	Manning Avenue	South Avenue	Major Arterial	2	9,514 (B)
Dinuba Avenue	Reed Avenue	East Avenue	Arterial	2	3,680 (A)
Dinuba Avenue	East Avenue	Buttonwillow Avenue	Arterial	4	14,579 (A)
Springfield Avenue	East Avenue	Buttonwillow Avenue	Collector	2	6,010 (A)
North Avenue	Reed Avenue	East Avenue	Collector	2	4,080 (A)
Manning Avenue	Lac Jac Avenue	Reed Avenue	Major Arterial	4	29,437 (C)
Manning Avenue	Reed Avenue	Frankwood Avenue	Major Arterial	4	19,890 (A)
Manning Avenue	Frankwood Avenue	Buttonwillow Avenue	Major Arterial	4	25,650 (B)
Parlier Avenue	Reed Avenue	Frankwood Avenue	Collector	2	5,180 (A)
Parlier Avenue	Frankwood Avenue	Buttonwillow Avenue	Collector	2	3,760 (A)
South Avenue	Reed Avenue	Buttonwillow Avenue	Arterial	2	2,680 (A)

As shown in Table 10, all study roadway segments are forecasted to operate at acceptable LOS “C” conditions or better.

## YEAR 2035 BASE PLUS PROJECT CONDITIONS

“Year 2035 Base plus Project” peak-hour intersection traffic operations were quantified applying “Year 2035 Base plus Project” traffic volumes as derived from the modified FCOG 2035 build-out year traffic model as described in the previous section and are identified in Figure 14. The “Year 2035 Base plus Project” intersection lane geometrics and control is assumed to be the same as for the “Year 2035 Base” scenario and is shown in Figure 15. Table 11 presents the “Year 2035 Base plus Project” peak hour intersection LOS.

**TABLE 11  
YEAR 2035 BASE PLUS PROJECT CONDITIONS:  
INTERSECTION LEVELS OF SERVICE**

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
1	South Avenue/Reed Avenue	Signal	10.1	B	--	8.8	A	--
2	South Avenue/Frankwood Avenue	AWSC	15.4	C	NO	11.4	B	NO
<b>3</b>	<b>South Avenue/Buttonwillow Avenue</b>	<b>TWSC</b>	<b>71.4</b>	<b>F</b>	<b>NO</b>	<b>68.8</b>	<b>F</b>	<b>NO</b>
4	South Avenue/Englehart Avenue	TWSC	11.8	B	NO	11.0	B	NO
5	Parlier Avenue/Reed Avenue	Signal	9.7	A	--	9.4	A	--
6	Parlier Avenue/Frankwood Avenue	AWSC	17.1	C	NO	15.8	C	NO
7	Parlier Avenue/Columbia Avenue	OWSC	13.6	B	NO	13.3	B	NO
<b>8</b>	<b>Parlier Avenue/Buttonwillow Avenue</b>	<b>TWSC</b>	<b>57.3</b>	<b>F</b>	<b>NO</b>	<b>55.5</b>	<b>F</b>	<b>NO</b>
<b>9</b>	<b>Manning Avenue/Lac Jac Avenue</b>	<b>Signal</b>	<b>49.4</b>	<b>D</b>	<b>--</b>	<b>27.8</b>	<b>C</b>	<b>--</b>
10	Manning Avenue/I Street	Signal	33.1	C	--	28.4	C	--
11	Manning Avenue/Reed Avenue	Signal	34.2	C	--	35.0	C	--
12	Manning Avenue/Frankwood Avenue	Signal	26.6	C	--	28.6	C	--
13	Manning Avenue/Columbia Avenue	Signal	21.5	C	--	30.6	C	--
14	Manning Avenue/Buttonwillow Avenue	Signal	30.7	C	--	33.4	C	--
<b>15</b>	<b>Manning Avenue/Zumwalt Avenue</b>	<b>OWSC</b>	<b>58.8</b>	<b>F</b>	<b>NO</b>	<b>30.9</b>	<b>D</b>	<b>NO</b>
<b>16</b>	<b>Manning Avenue/Englehart Avenue</b>	<b>TWSC</b>	<b>40.9</b>	<b>E</b>	<b>NO</b>	<b>55.3</b>	<b>F</b>	<b>NO</b>
17	I Street/Reed Avenue	Signal	21.2	C	--	20.8	C	--
<b>18</b>	<b>North Avenue/Reed Avenue *</b>	<b>OWSC</b>	<b>52.0</b>	<b>F</b>	<b>YES</b>	<b>30.0</b>	<b>D</b>	<b>YES</b>
19	North Avenue/G Street	AWSC	9.2	B	NO	11.9	B	NO
20	North Avenue/Frankwood Avenue	AWSC	15.9	C	NO	13.2	B	NO
21	11 <sup>th</sup> Street/East Avenue	AWSC	16.5	C	NO	13.1	B	NO

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			Delay (sec/veh)	LOS	Warrant Met?	Delay (sec/veh)	LOS	Warrant Met?
22	Springfield Avenue/East Avenue	OWSC	14.4	B	NO	15.3	B	NO
23	Springfield Avenue/Buttonwillow Avenue	OWSC	16.7	B	NO	22.7	C	NO
24	Dinuba Avenue/Reed Avenue	OWSC	19.8	C	NO	20.9	C	NO
<b>25</b>	<b>Dinuba Avenue/Frankwood Avenue</b>	<b>AWSC</b>	<b>96.1</b>	<b>F</b>	<b>YES</b>	<b>115.1</b>	<b>F</b>	<b>YES</b>
26	Dinuba Avenue/East Avenue	AWSC	21.8	C	NO	22.0	C	NO
27	Dinuba Avenue/Buttonwillow Avenue *	Round	10.1	B	--	24.3	C	--
28	Dinuba Avenue/Zumwalt Avenue	OWSC	13.9	B	NO	18.4	C	NO
<b>29</b>	<b>Dinuba Avenue/Englehart Avenue</b>	<b>TWSC</b>	<b>24.3</b>	<b>C</b>	<b>NO</b>	<b>41.6</b>	<b>E</b>	<b>NO</b>
30	Olson Avenue/Kings River Road	OWSC	12.6	B	NO	13.4	B	NO
31	Olson Avenue/Reed Street	AWSC	17.4	C	NO	14.7	B	NO
<b>32</b>	<b>Olson Avenue/Frankwood Avenue</b>	<b>TWSC</b>	<b>44.1</b>	<b>E</b>	<b>NO</b>	<b>153.2</b>	<b>F</b>	<b>NO</b>
33	Floral Avenue/Reed Avenue	TWSC	15.1	C	NO	19.0	C	NO
34	Floral Avenue/Frankwood Avenue	OWSC	16.1	C	NO	20.9	C	NO
35	Floral Avenue/Buttonwillow Avenue	OWSC	14.7	B	NO	18.8	C	NO

Legend: OWSC = One-Way Stop Control TWSC = Two-Way Stop Control. AWSC = All-Way Stop Control.

ROUND = Roundabout

Average Delay = Average Intersection Delay for Signalized Intersections.

Average Delay = Worst-Case Intersection Movement Delay for OWSC & TWSC Intersections.

LOS = Average Intersection Level-of-Service for Signalized Intersections.

LOS = Worst-Case Movement's Level-of-Service for OWSC & TWSC Intersections.

N/A = Not Applicable (Intersection does not Exist for this Scenario)

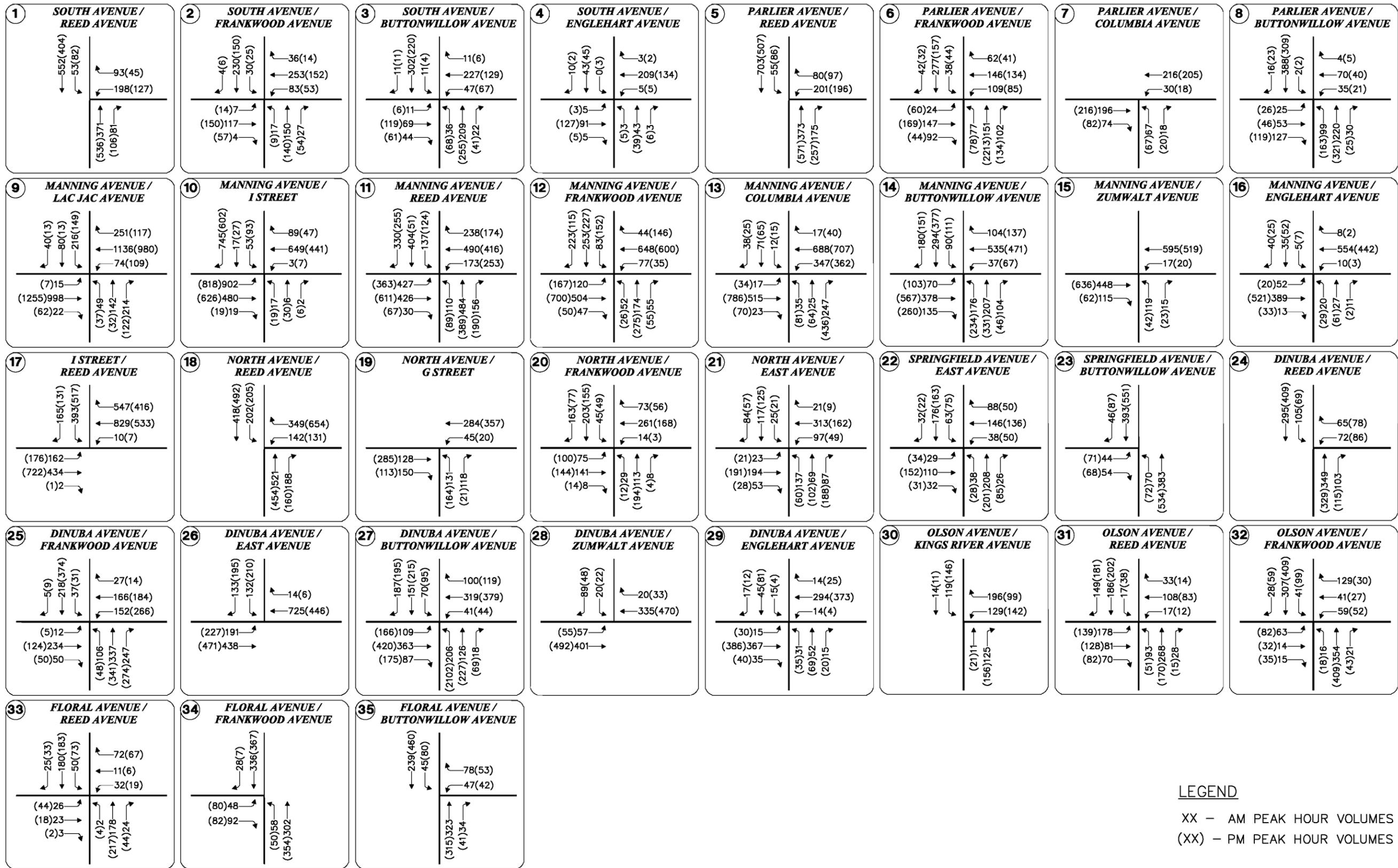
OVRFL = Overflow Conditions (>100 Seconds)

Warrant = MUTCD Peak Hour Warrant 3.

\* = SimTraffic delay reported

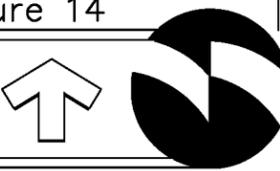
As shown in Table 11, nine of the study intersections are projected to operate at an unacceptable LOS during the AM and/or PM peak hour periods for “Year 2035 Base plus Project” conditions. These include the intersections at South Avenue/Buttonwillow Avenue, Parlier Avenue/Buttonwillow Avenue, Manning Avenue/Lac Jac Avenue, Manning Avenue/Zumwalt Avenue, Manning Avenue/Englehart Avenue, North Avenue/Reed Avenue, Dinuba Avenue, Frankwood Avenue, Dinuba Avenue/Englehart Avenue and Olson Avenue/Frankwood Avenue. In addition, two of these intersections are expected to meet the MUTCD Peak Hour Warrant 3 during “Year 2035 Base plus Project” peak hour conditions. These intersections are North Avenue/Reed Avenue and Dinuba Avenue/Frankwood Avenue.

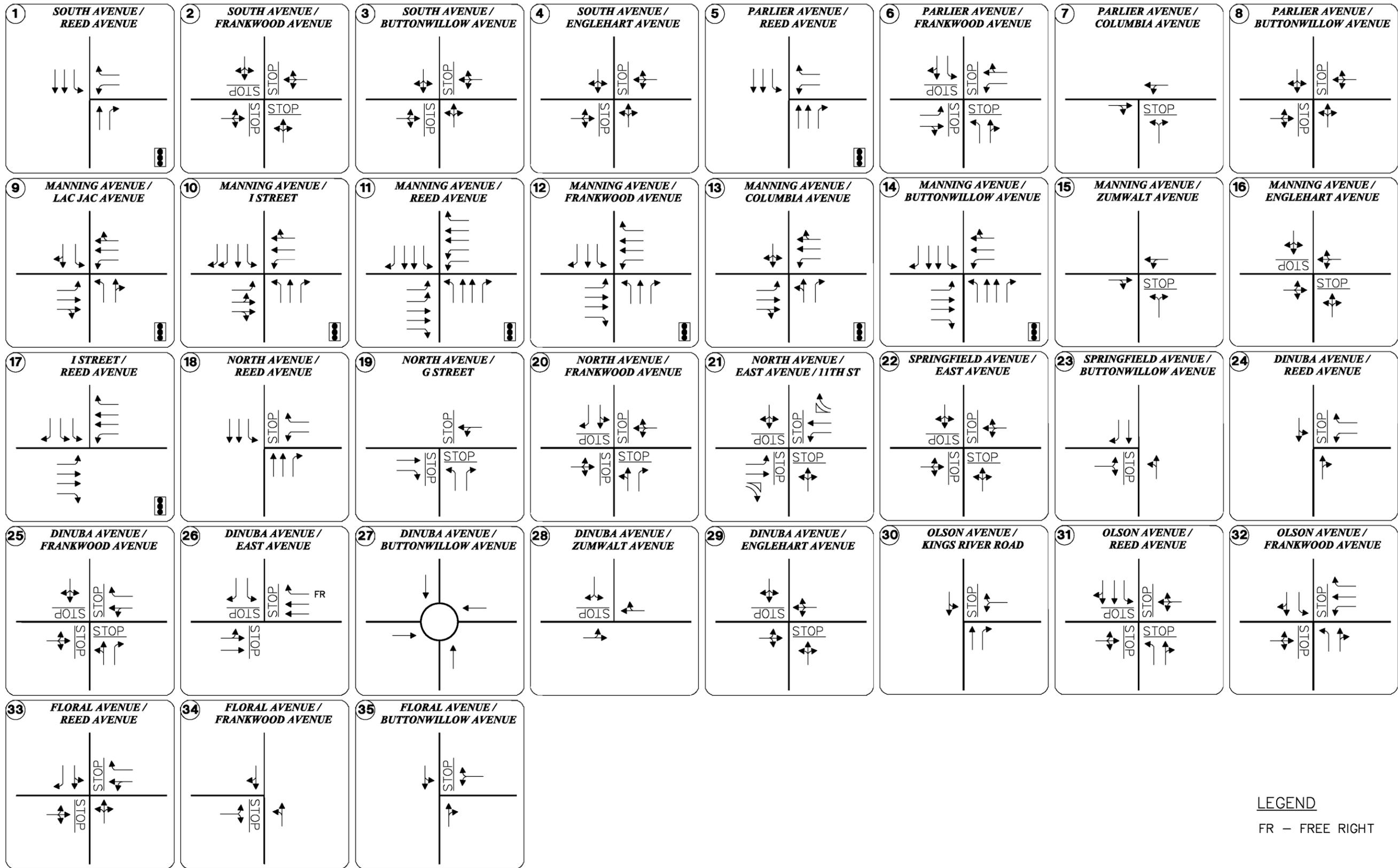
All mitigation measures are discussed in a subsequent section of this report.



**LEGEND**  
 XX – AM PEAK HOUR VOLUMES  
 (XX) – PM PEAK HOUR VOLUMES

# Year 2035 Base plus Project Intersection Traffic Volumes





## 2035 ROADWAY BASE PLUS PROJECT OPERATING CONDITIONS

Table 12 identifies the LOS for the study segments under the “Year 2035 Base plus Project” scenario utilizing the roadway ADT-based LOS thresholds presented previously in Table 2.

**TABLE 12  
YEAR 2035 BASE PLUS PROJECT CONDITIONS:  
ROADWAY SEGMENT LEVEL OF SERVICE**

<b>Roadway Segment</b>	<b>From</b>	<b>To</b>	<b>Facility Type</b>	<b>No. of Lanes</b>	<b>ADT (LOS)</b>
Reed Avenue	Floral Avenue	Dinuba Avenue	Arterial	4	5,270 (A)
Reed Avenue	Dinuba Avenue	Manning Avenue	Arterial	2	7,530 (A)
Reed Avenue	Manning Avenue	South Avenue	Arterial	4	17,920 (A)
Frankwood Avenue	Floral Avenue	Dinuba Avenue	Arterial	2	9,890 (B)
Frankwood Avenue	North Avenue	Parlier Avenue	Arterial	2	5,970 (A)
East Avenue	Dinuba Avenue	North Avenue	Collector	2	7,860 (A)
Columbia Avenue	Manning Avenue	Parlier Avenue	Collector	2	2,510 (A)
Buttonwillow Avenue	Dinuba Avenue	Manning Avenue	Major Arterial	4	17,680 (A)
Buttonwillow Avenue	Manning Avenue	South Avenue	Major Arterial	2	11,790 (C)
Dinuba Avenue	Reed Avenue	East Avenue	Arterial	2	4,200 (A)
Dinuba Avenue	East Avenue	Buttonwillow Avenue	Arterial	4	16,220 (A)
Springfield Avenue	East Avenue	Buttonwillow Avenue	Collector	2	6,460 (A)
North Avenue	Reed Avenue	East Avenue	Collector	2	4,390 (A)
Manning Avenue	Lac Jac Avenue	Reed Avenue	Major Arterial	4	30,980 (C)
Manning Avenue	Reed Avenue	Frankwood Avenue	Major Arterial	4	21,510 (A)
Manning Avenue	Frankwood Avenue	Buttonwillow Avenue	Major Arterial	4	27,450 (B)
Parlier Avenue	Reed Avenue	Frankwood Avenue	Collector	2	6,180 (A)
Parlier Avenue	Frankwood Avenue	Buttonwillow Avenue	Collector	2	4,650 (A)
South Avenue	Reed Avenue	Buttonwillow Avenue	Arterial	2	3,320 (A)

As shown in Table 12, all study roadway segments are projected to operate at acceptable LOS “C” conditions or better.

## RECOMMENDED MITIGATION MEASURES

This section presents a list of recommended mitigation measures at the study intersections and roadways based on the results of the analysis presented in this report. All of the study intersections are projected to operate at acceptable LOS “C” or better conditions through the future year 2035 with mitigation measures identified in this section. Figure 16 shows the recommended mitigated conditions lane geometrics and control for the “Year 2035 Base plus Project” scenario. Because some of the mitigation measures are recommended for future year 2035 and do not provide an implementation year, the study intersections requiring mitigation to achieve acceptable LOS should be monitored on a regular basis by the City of Reedley. FCOG has an annual regional traffic monitoring program that might be able to be utilized to assist the City in this effort.

It should be noted that in instances where traffic signalization or a modern roundabout is recommended that it is further recommended that additional studies and analysis be performed. For signalization, specific traffic signal warrants should be conducted before installation and signals should be coordinated with nearby traffic signals to improve traffic flow conditions, specifically along the primary corridors of Manning Avenue, Reed Avenue, North Avenue and Frankwood Avenue. For modern roundabouts, it is recommended that additional counts be performed and analysis conducted using computer software that has roundabout specific analysis capabilities such as Sidra.

## EXISTING CONDITIONS

As discussed previously there are number of roadway improvement projects in the City of Reedley identified in FCOG's 2011 RTP. Also, the Manning Avenue Widening project will be added to the 2014 RTP. It is realistic and reasonable to assume that projects identified on the Financially Constrained Federal Transportation Improvement Program Projects list in the 2011 RTP will be constructed. All deficiencies identified under “Existing” conditions occur on facilities that will be improved by the projects identified in the RTP. The following mitigation measures are recommended for “Existing” conditions:

### Intersections:

*Manning Avenue/Reed Avenue* intersection: Widen northbound and southbound approaches to provide for two thru lanes and widen the westbound approach to provide for a right turn lane. It is assumed these improvements, as well as others, will be constructed as part of the Reed Avenue Reconstruction and Widening project identified in the 2011 RTP and the Manning Avenue Widening project to be included in the 2014 RTP. Implementation of this mitigation measure is projected to result in an acceptable LOS under “Existing Conditions” based upon the City of Reedley standards.

*Manning Avenue/Frankwood Avenue* intersection: Widen Manning Avenue to provide two thru lanes. It is assumed that this improvement, as well as others, will be constructed as part of the Manning Avenue Widening project to be included in the 2014 RTP. Implementation of this mitigation measure is forecasted to result in an acceptable LOS under “Existing Conditions” based upon the City of Reedley standards.

### Roadway Segments:

*Manning Avenue between Reed Avenue and Frankwood Avenue* roadway segment: Widen to a four-lane arterial. It is assumed that this improvement, as well as others, will be constructed as part of the Manning Avenue Widening project to be included in the 2014 RTP. Implementation of this mitigation measure is

projected to result in an acceptable LOS under “Existing Conditions” based upon the City of Reedley standards.

*Manning Avenue between Frankwood Avenue and Buttonwillow Avenue* roadway segment: Widen to a four-lane arterial. It is assumed that this improvement, as well as others, will be constructed as part of the Manning Avenue Widening project to be included in the 2014 RTP. Implementation of this mitigation measure is projected to result in an acceptable LOS under “Existing Conditions” based upon the City of Reedley standards.

## **YEAR 2035 BASE CONDITIONS**

Under “Year 2035 Base” conditions, it is assumed that mitigation measures recommended under “Existing” conditions have been implemented as part of the improvement projects identified in the RTP. The following mitigation measures are recommended for the “Year 2035 Base” conditions:

### Intersections:

*Parlier Avenue/Buttonwillow Avenue* intersection: Install stop signs on the Buttonwillow Avenue approaches to make the intersection all-way stop controlled. Implementation of this mitigation measure is expected to result in an acceptable LOS under “Year 2035 Base” conditions based upon the City of Reedley standards.

*Manning Avenue/Lac Jac Avenue* intersection: Widen the westbound approach to provide for a right turn lane. Implementation of this mitigation measure is projected to result in an acceptable LOS under “Year 2035 Base” conditions based upon the City of Reedley standards

*Manning Avenue/Zumwalt Avenue* intersection: This intersection is forecasted to operate at unacceptable LOS “D” conditions under “Year 2035 Base” conditions; however, this intersection does not meet the peak hour traffic warrant because the minor street (Zumwalt Avenue) approaches do not carry enough traffic volume to justify signalization. Therefore, it is recommended that the City of Reedley monitor this one-way stop controlled intersection in the future to identify if a traffic signal is warranted.

*Manning Avenue/Englehart Avenue* intersection: This intersection is forecasted to operate at unacceptable LOS “D” conditions under “Year 2035 Base” conditions; however, this intersection does not meet the peak hour traffic signal warrant because the minor street (Englehart Avenue) approaches do not carry enough traffic volume to justify signalization. Therefore, it is recommended that the City of Reedley monitor this two-way stop controlled intersection in the future to identify if a traffic signal is warranted.

*North Avenue/Reed Avenue* intersection: This intersection is forecasted to meet the peak hour traffic warrant under the “Year 2035 Base” conditions; however given the close proximity to the I Street/Reed Avenue intersection (approximately 150 feet) and the San Joaquin Valley Railroad tracks (approximately 75 feet) it is recommended that additional studies be performed. Either the installation of a traffic signal or construction of a modern roundabout is projected to result in an acceptable LOS under “Year 2035 Base” conditions.

*Dinuba Avenue/Frankwood Avenue* intersection: Install a traffic signal or construct a modern roundabout at this intersection. Implementation of either of these mitigation measures is anticipated to result in an acceptable LOS under “Year 2035 Base” conditions based upon the City of Reedley standards. It should be noted that intersection improvements at this location have been included in the conceptual list of Measure “C” projects and funding may be available.

Roadway Segments:

With improvements to street segments identified in the FCOG RTP, mitigation measures are not necessary for roadway segments under this scenario.

**YEAR 2035 BASE PLUS PROJECT CONDITIONS**

Under “Year 2035 Base plus Project” conditions, it is assumed that mitigation measures recommended under “Existing Conditions” and “Year 2035 Base” conditions have been implemented.

Intersections:

*South Avenue/Buttongwillow Avenue* intersection: Install stop signs on the Buttongwillow Avenue approaches to make the intersection all-way stop controlled. Implementation of this mitigation measure is expected to result in an acceptable LOS under “Year 2035 Base plus Project” conditions based upon the City of Reedley standards.

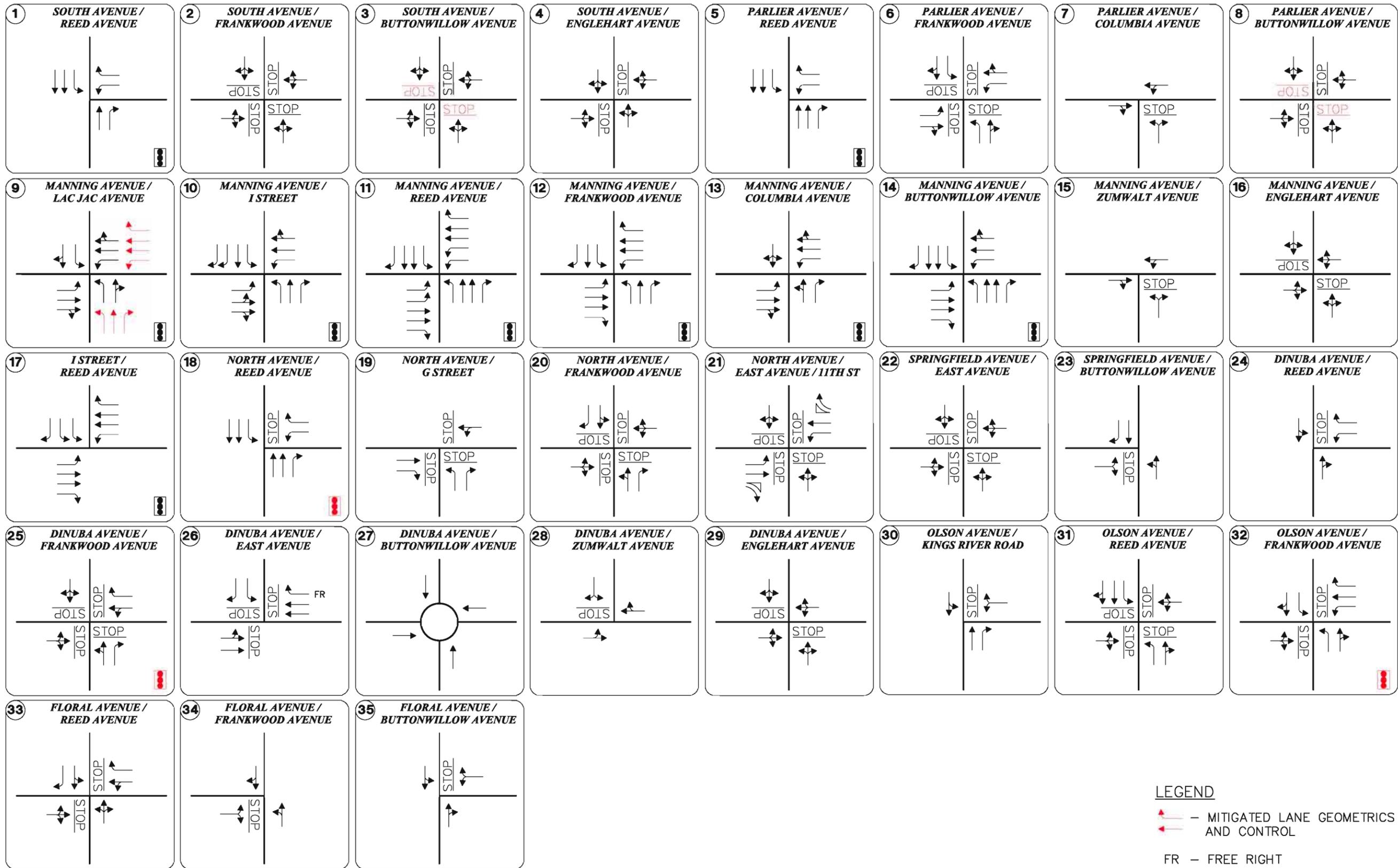
*Manning Avenue/Lac Jac Avenue* intersection: In addition to the mitigation recommended under “Year 2035 Base” conditions, widen the northbound approach to provide for a right turn lane. Implementation of this mitigation measure is projected to result in an acceptable LOS under “Year 2035 Base plus Project” conditions based upon the City of Reedley standards.

*Dinuba Avenue/Englehart Avenue* intersection: This intersection is forecasted to operate at unacceptable LOS “E” conditions under “Year 2035 Base plus Project” conditions; however, this intersection does not meet the peak hour traffic signal warrant because the minor street (Englehart Avenue) approaches do not carry enough traffic volume to justify signalization. Therefore, it is recommended that the City of Reedley monitor this two-way stop controlled intersection in the future to identify if a traffic signal is warranted.

*Olsen Avenue/Frankwood Avenue* intersection: Install a traffic signal or construct a modern roundabout at this intersection. Implementation of either of these mitigation measures is anticipated to result in an acceptable LOS under “Year 2035 Base plus Project” conditions based upon the City of Reedley standards.

Roadway Segments:

With improvements to street segments identified in the FCOG RTP, mitigation measures are not necessary for roadway segments under this scenario.



**LEGEND**

- MITIGATED LANE GEOMETRICS AND CONTROL

FR - FREE RIGHT



**APPENDIX**

*(Provided under separate cover)*