

# Almanor Regional Transportation Assessment

Final Report

September 2008

Prepared in partnership by:

Lassen County

Plumas County

Caltrans District 2



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## Executive Summary

The Almanor Regional Transportation Assessment (ARTA) has been prepared in partnership by Lassen County, Plumas County, Tehama County, the U.S. Forest Service (USFS), Caltrans District 2, community members, and public organizations. The purpose of this study is to provide information and recommendations regarding future transportation infrastructure needs for the Almanor Basin in Lassen and Plumas Counties.

The ARTA participants have collaborated to identify and develop the transportation infrastructure needs and improvements for this growing area. The results of that work effort are contained in this assessment. The ARTA verifies and confirms the concerns of residents, elected officials, the local agencies, and Caltrans, that without investment in new transportation projects, traffic conditions will rapidly deteriorate as new development occurs. The ARTA presents three improvement scenarios for decision-makers to consider depending on the roadway Level of Service (LOS) standard that is adopted (“C/D”, “D” or “E”). In general, a higher LOS standard (such as “C/D”) will provide better operations than a lower standard (such as “E”), however, the level and cost of improvements will be greater.

The second report, the ARTA Financial Analysis, describes the challenges associated with transportation funding and provides an evaluation of new options to generate the funding needed for these improvements.

It is recommended that the ARTA and the Financial Analysis be used to develop and adopt a revenue program to implement the identified improvements.

### **ARTA Findings:**

- The Almanor Basin will experience continued growth with 2,500 new residential units, 1.7 million square feet of commercial development, and Phase-1 of the Dyer Mountain Resort Project by the year 2030.
- Traffic volumes will almost double by the year 2030, resulting in a declining level of service (LOS) and heavily congested traffic conditions. The year 2030 improvement costs are estimated to be \$54.5, \$81.5 or \$126 million (2007 dollars) depending upon the roadway LOS threshold that is selected for the Almanor Basin (“E”, “D” or “C/D” respectively).
- The year 2030 should be recognized as a critical year. The projected growth and the associated increase in traffic will require a minimum of six traffic signals and expansion of multiple roadway sections.

- Build-out of the Almanor Basin will include 11,000 new residential units, 7 million square feet of commercial development, and completion of the Dyer Mountain Resort Project. Based on historic growth trends and the analysis in this report, build-out is not anticipated to occur until approximately the year 2100.
- If significant infrastructure improvements have not been implemented, the transportation system will reach complete operational failure by build-out.
- A financing plan that includes new revenue sources should be considered, as existing transportation funding sources are not sufficient to provide the improvements that will be required as a result of new development.

The ARTA is based on the existing land use designations as provided in the Lassen County General Plan and the Plumas County General Plan. The purpose of the ARTA is to identify the traffic levels and impacts that will occur as a result of development of the land uses as identified in both general plans. Therefore, it does not address actions that deviate from the existing general plans such as general plan amendments, issues related to air quality, water capacity, or waste water treatment and disposal. General Plan Amendments will require updates to the ARTA in order to identify potential new traffic impacts and additional improvements that may be needed.

The ARTA received concurrence from the Lassen County Transportation Commission, Lassen County Board of Supervisors, Plumas County Transportation Commission, and Plumas County Board of Supervisors in 2008. The information in this report may now be considered during preparation and administration of General Plans, Regional Transportation Plans, Regional Transportation Improvement Programs and other local transportation funding programs.

## Introduction

The Almanor Regional Transportation Assessment (ARTA) is a coordinated effort between Lassen County, Plumas County, Tehama County, the U.S. Forest Service (USFS), and Caltrans. The participating agencies have come together to identify a preferred set of transportation system improvements and funding mechanisms to meet the needs associated with future growth in the Almanor Basin.

The transportation assessment is a document that includes a planning level analysis of multiple transportation routes or corridors. The ARTA considers a variety of factors that influence travel demand and behavior including: land uses, development policies, housing growth, economic conditions, alternative transportation modes, and environmental conditions. The ARTA development process has been a collaborative one, involving numerous internal and external stakeholders, as well as review of the land use and transportation plans of Federal, State, regional, and local agencies.

As a long-range plan, the ARTA is intended to help identify future issues on the transportation system before they occur, present improvement options to address the identified issues, and identify potential funding mechanisms for the needed improvements. The ARTA does not identify design level improvements or costs, and does not commit funding to projects.

The information from this assessment may be used during the preparation of regional transportation plans, general plans, the State Transportation Improvement Program, and regional or local traffic funding programs.

## Purpose and Need

### **Purpose:**

The purpose of the ARTA is to identify a preferred set of transportation improvements and funding mechanisms to relieve impacts/congestion associated with future growth within the study area.

### **Need:**

- Recent growth within the study area has increased traffic volumes on local and State transportation facilities to a level where congestion and operational issues are beginning to occur.
- Growth within the study area is expected to continue to increase during the next 20 years. This will result in a significant increase in demand and congestion on existing transportation infrastructure, most of which was designed/constructed to accommodate rural, low volume traffic conditions.

- The public will expect the agencies responsible for transportation facilities in and around the study area (Plumas, Lassen, Tehama Counties; Caltrans; USFS) to maintain a reasonable level of service on the facilities regardless of planning, funding and project delivery limitations the agencies face.
- Existing funding sources available for transportation are not sufficient to provide the improvements that will be necessary to accommodate the growth in traffic from development while maintaining a reasonable operating condition. Additional sources of funding therefore need to be identified and implemented.
- Identify transportation improvements/facilities that will be necessary to accommodate development within the study area as provided for in the General Plans and Regional Transportation Plans of the counties participating in the study.

### **Products/Outcomes:**

- Identification of existing traffic conditions within the study area.
- Identification of growth areas and development levels.
- Identification of impacts to the transportation system that will result from growth within the study area.
- Define the improvements needed to meet traffic thresholds.
- “Menu” of interim and ultimate improvements that will maintain desired operating condition.
- Identification of improvement options that allow for the selection of projects and sequence of delivery that maximizes the return on investment.
- Identification and/or implementation of funding mechanisms for identified improvements.

### **Organizational Structure**

To best complete the assessment, while meeting the needs and expectations of all stakeholders, the following organizational structure was established.

The “Working Group” (Group) is comprised of planners and engineers from each participating agency. The Group met regularly, and was responsible for traffic and land use data collection, organization, interpretation, and analysis. During each meeting the participants shared their data, and the Group decided how best to apply the information in the ARTA. As the Group reached each milestone, the information was presented to the “Executive Steering Committee” for approval.

The “Executive Steering Committee” (Committee) was designated to oversee and recommend approval of the work completed by the Group. The Committee was comprised of two Supervisors from Plumas County, two Supervisors from Lassen County, and the Director of Caltrans in District 2. In addition, at least one Supervisor from each county holds a seat on the Local Transportation Commission.

County staff provided regular updates to their respective Board of Supervisors and Local Transportation Commission. When complete, the draft ARTA document will be presented for approval to the Lassen County Transportation Commission, Lassen County Board of

Supervisors, Plumas County Transportation Commission, and Plumas County Board of Supervisors.

ARTA Working Group Members:

- Robert Perreault, Director – Plumas County Public Works
- Tom Hunter, Director - Plumas County Public Works (ret.)
- John Mannle, Transportation Engineer - Plumas County Public Works
- Steve Allen, Assistant Planning Director - Plumas County Planning Department (ret.)
- Larry Millar, Director - Lassen County Public Works
- Conrad Montgomery, Director – Lassen County Community Development Department
- Robert Sorvaag, Director - Lassen County Community Development Department (ret.)
- Rick Simon, Planner - Lassen County Community Development Department
- Jack Walton, Forest Engineer – Lassen National Forest
- Dorothy Watkins, Transportation Planner – Tehama County Transportation Commission
- Tim Huckabay, Deputy District Director for Planning - Caltrans District 2
- Scott White, Chief System Planning - Caltrans District 2
- Amber Kelley, Associate Transportation Planner – Caltrans District 2

ARTA Executive Steering Committee Members:

- Sharron Thrall, Plumas County Supervisor – District 3
- Bill Dennison, Plumas County Supervisor – District 3 (ret.)
- Robert Meacher, Plumas County Supervisor – District 2
- Brian Dahle, Lassen County Supervisor – District 4
- Robert Pyle, Lassen County Supervisor – District 1
- Brian Crane, District Director – Caltrans District 2

## Study Parameters and Methodology

This section outlines the limits and boundaries of the study and describes the methodology this transportation assessment is based upon.

The ARTA is a planning level assessment that provides land use and transportation forecasts for the year 2030 and build-out. The transportation improvements that best addressed the projected growth were identified, evaluated, and planning level cost estimates were developed. The ARTA Financial Analysis, describes potential funding sources and implementation strategies. Additional studies should be conducted if the participating agencies choose to pursue a local funding program, or consider design level improvements.

### Study Area

The study area is comprised of the Almanor Planning Area in Plumas County and the Westwood/Clear Creek Planning Area in Lassen County (see **Figures 1 and 2**). Together these two planning areas form the “Almanor Basin”. The study area boundaries were established with the following considerations:

- The two planning areas geographically encompass the area of high growth
- The two planning areas geographically encompass the key roadways
- Land use data was readily available for each planning area
- The planning areas are defined by the Lassen County General Plan and the Plumas County General Plan

### Study Facilities

The following selection criteria was used to determine which facilities (roadways and intersections) would be included in the analysis:

- Roadways classified as major collector or arterial
- Intersections that connect arterials or connect major collectors to arterials

Note: There are numerous Forest Service Roads within the study area and although these facilities are an integral part of the transportation system in the Lake Almanor Basin, the Annual Average Daily Traffic (AADT) volumes are not high enough to warrant analysis at this time. Caltrans and each of the Counties will continue to work with the USFS, and maintain communication regarding the traffic levels on these roads.

### General Plans

In order to achieve the most accurate land use forecasts possible, the assessment is based upon, and controlled by, the existing Lassen County General Plan and the existing Plumas County General Plan. Although it is not uncommon for the Counties to receive requests for general plan designation changes, it would not be appropriate to assume these changes within the ARTA

study. Therefore, all of the future land uses are based on the land use designations in the existing general plans and the development standards in each County's zoning ordinance.

## **Growth Projections**

The growth projections used in the ARTA are based on historical data, current development trends, and future development potential as identified by the Lassen County Community Development Department and the Plumas County Department of Planning and Building Services.

## **Study Approach**

The ARTA provides information for two future analysis periods: year 2030 and build-out. The build-out analysis provides a glimpse of the facilities that will ultimately be needed, and allows us to look at the year 2030 improvements in a critical manner to assure that the selected projects and sequence of delivery will maximize the return on investment.

## **Year 2030**

The year 2030 was selected as a future analysis period as it provides a 20-year time horizon in which to quantify anticipated growth. It is estimated that by 2030 the Almanor Planning Area will reach 20% of their remaining General Plan build-out, while the Westwood/Clear Creek Planning Area will experience about 35% of their remaining General Plan build-out.

## **Build-out**

For the purposes of this study, the term "build-out" is used to describe the condition when all available land has been developed (available land as identified by the respective county general plans, and zoned for residential or commercial use). The build-out condition has not been associated with a specific timeframe, as future growth and development is contingent upon many external factors that make it difficult to forecast.

## **Land Use**

Future forecasts of industrially zoned land were not included in the assessment, as the participating agencies do not anticipate significant growth in this area.

For the purposes of this assessment, the "available" land refers to undeveloped land that is commercially or residentially designated. The "available" land was evaluated and reductions were taken for areas that were environmentally or geographically constrained.

Future residential growth has been calculated assuming one dwelling unit per residentially designated parcel. In addition, 10% of the residentially designated parcels in the Almanor Planning Area are forecast to have a second residential unit as allowed by the Plumas County Zoning Ordinance.

To identify the available commercial land, a valuation filter was used for improvements over \$10,000. If the commercially designated parcels had an improvement with an assessed value

over \$10,000, they were considered developed. All parcels with improvements under \$10,000 were considered to be available for future development.

## **Dyer Mountain**

The trip generation for the Dyer Mountain Resort has been taken directly from the Dyer Mountain Resort Traffic Impact Analysis, January 2005, the Dyer Mountain Resort Re-circulated Draft Environmental Impact Report, July 2006, and the Dyer Mountain Resort Final Environmental Impact Report, June 2007. The trips have been applied directly to the road network, and were not included in the residential and commercial trip generation calculations. Additional information can be found in **Appendix A**.

## **Specific Developments/Winter Conditions**

The ARTA analysis is based on a typical summer Friday p.m. peak hour condition. The transportation system improvements identified through this analysis may not include improvements needed during peak winter conditions or improvement needs created by individual development projects (such as turn lanes, or signals at a project entrance). Development specific impacts and improvement needs must be evaluated in the traffic study or environmental document prepared for each development project.

## **Design Hour**

The traffic volumes in the ARTA are consistent with the 30<sup>th</sup> highest design hour as recommended by the American Association of State Highway and Transportation Officials (ASHTO). Design hour volumes are used for the geometric design of new transportation facilities. The design hour volume represents the 30<sup>th</sup> highest hourly volume (out of 8,760 hours in a year). Therefore, the design hour does not represent the highest traffic volume of the year. As a result, high traffic volumes during peak periods or special events can reduce the operating conditions for those periods of time. After reviewing the data from peak holiday periods and average summer conditions, the typical summer Friday p.m. peak hour was identified as the design hour for the ARTA.

## **Trip Generation**

Generalized land use and trip generation information was used to evaluate future conditions in this study. Use of generalized information is appropriate for evaluating future conditions when specific land uses (such as a fast-food restaurant, auto parts store, or beauty parlor) and locations are not known. Use of generalized information is not appropriate when evaluating specific land use proposals or conducting detailed traffic impact studies. For specific projects or studies, appropriate trip generation rates must be identified in consultation with the lead agency for the project (for the study area this will usually be either Lassen County or Plumas County). More information on the approach used in this study may be found in Chapter 6, of the Trip Generation Handbook, Institute of Transportation Engineers, March 2001.

## **Trip Distribution**

The existing trip distribution for the ARTA is based on summer Friday p.m. peak hour turning movement counts that were conducted at nine of the fourteen study intersections in 2005. The

directional splits for the mainline segments are based on the “2004 Traffic Volumes on California State Highways”. The future trip distribution is based on the existing distribution, and adjusted to reflect the trip pattern changes resulting from area specific growth.

## Level of Service (LOS)

LOS is a qualitative measure used to describe the operating conditions within a stream of traffic. Six letters designate each level, from “A” to “F”, with LOS “A” representing the best operating condition, and LOS “F” the worst.

### Roadway LOS

To calculate the roadway LOS in this study, traffic volumes and other information were input into the Highway Capacity Software (HCS+, developed at the McTrans Center, University of Florida), which uses the Highway Capacity Manual 2000 methodology to calculate the highway’s operating condition. The input parameters include traffic volumes, speed, lane width, shoulder width, percent trucks and buses, percent recreational vehicles, terrain, grade, number of access points, and number of lanes (for multi-lane facilities). On four-lane highways the LOS is defined by either average travel speed (when signals are present), or vehicle density (when signals are not present). On a two-lane highway, LOS is defined by vehicle travel speed and time spent following behind other vehicles. Higher travel speeds and less time following means better LOS. Lower travel speeds and more time following other vehicles equates to a lower LOS.

**Table 1** provides a description of the service levels for a two-lane highway categorized as a Class I facility.

<b>Table 1 – Roadway Level of Service (LOS) Descriptions</b>	
<b>LOS</b>	<b>Description*</b>
<b>A</b>	This is the highest quality of traffic service, when motorist are able to travel at their desired speed. Passing can be accomplished easily, as platoons of three or more vehicles are rare. Drivers are delayed no more than 35% of the time by slow moving vehicles. Without strict enforcement, average travel speeds could exceed the posted speed limit.
<b>B</b>	Traffic flow is stable and travel speeds at or near the posted speed limit can be expected on level terrain. Passing becomes slightly restricted as the LOS reaches the lower boundary of B. Drivers are in platoons less than 50% of the time.
<b>C</b>	Increased traffic flow results in additional platooning and noticeable passing constraints. The average travel speed is within 10 mph of the posted speed limit, however, the traffic flow is susceptible to congestion due to turning traffic and slow moving vehicles. The percent time spent following may reach 65%.
<b>D</b>	The traffic flow is variable and passing becomes difficult. Platoon sizes of five to ten vehicles are common, and motorists may be delayed as much as 80% of the time. The average travel speed is within 15 mph of the speed limit, but turning vehicles or roadside distractions can cause shock waves in the traffic stream.
<b>E</b>	Motorists can expect to be delayed by slow moving vehicles more than 80% of the time. Speeds can drop to as low as 25 mph. Passing is virtually impossible.
<b>F</b>	LOS F represents the poorest quality of traffic service. The volume of traffic is greater than the highway can effectively carry (demand exceeds capacity). Heavily congested.

\*These descriptions are for two-lane highways categorized as Class I.

## Intersection LOS

To calculate intersection LOS for the ARTA, traffic volumes and other information were input into the Synchro software program, which is based on the Highway Capacity Manual 2000 methodology. The input parameters include traffic volumes, speed, number of lanes, lane width, left or right turn lanes, on-street parking, percent trucks and buses, pedestrians, grade, and (for signalized intersections) signal cycle length. Intersection LOS is evaluated by the length of delay a vehicle encounters at an intersection. LOS is measured differently for unsignalized and signalized intersections. A brief description of each follows.

### Unsignalized (Stop Control) Intersections

LOS at unsignalized intersections is measured only for vehicles that must stop prior to proceeding through the intersection. It is measured separately for each movement (left turn, through, right turn). Waiting only a few seconds to turn left at a stop sign is a good LOS, while a wait of a minute or longer represents a poor LOS. **Table 2** shows the delay length and corresponding LOS for time spent waiting at unsignalized intersections.

<b>Table 2 – LOS Criteria for Two-Way Stop Control Intersections</b>	
LOS	Average Delay for Stopped Vehicles (seconds per vehicle)*
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

\* Average delay and LOS are determined separately for each movement – left, through, right.

### Signalized Intersections

The LOS at signalized intersections is measured for each lane group (left turn, through, right turn), on each approach to the intersection, as well as for the intersection as a whole. An intersection at which most vehicles experience little delay (little stopped/slowed time due to a red light) would have a good LOS, while an intersection where most vehicles experience considerable delay (wait through one or more red lights) would have a poor LOS. It is possible for a particular movement (such as a left turn) at a signalized intersection to experience a large amount of delay (a poor LOS), while the overall delay at the intersection is low (which would be a good average LOS).

**Table 3** shows the delay length and corresponding LOS for time spent waiting to move through a signalized intersection.

<b>Table 3 – LOS Criteria for Signalized Intersections</b>	
LOS	Average Delay per Vehicle (seconds per vehicle)*
A	≤ 10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

\* Average delay and LOS are determined for each movement – left, through, right – and the intersection as a whole.

## Level of Service Threshold

### Roadway

Caltrans District 2 seeks to implement improvements on State highways when the LOS is projected to fall below “C”. This improvement standard is commonly referred to as the “C/D” threshold.

The ARTA study provides the forecasted roadway deficiency and improvement information for the existing LOS “C/D” standard as well as for two possible alternative standards, the LOS “D” and LOS “E” thresholds. Each of these scenarios includes an assessment of operating conditions, improvement needs, and cost estimates. Providing the three Level of Service (LOS) alternatives will allow the decision makers to weigh the relative advantages and disadvantages of each. Should the participating agencies seek to implement funding mechanisms for future transportation system improvements, a policy decision will need to be made regarding the LOS threshold that is most appropriate for the State highways within the study area. The ARTA Financial Analysis also provides information for the three possible LOS standards.

### Intersection

The intersection LOS standard in District 2 is the “C/D” threshold. The ARTA participants are in concurrence that the existing intersection LOS threshold of “C/D” should remain the same for all future analysis periods.

## Access Management

Access management involves efforts by the state and local agencies to coordinate plans for placement of new roadway access points and to manage existing roadway access. The benefits of access management may include, improving safety, reducing traffic congestion, improving the appearance and quality of the built environment, and maintaining the efficiency of mainline operations. Methods to manage access may include consolidating access points, eliminating access points near major intersections, uniform signal spacing, roadway design, and acquiring access control.

Within the study area, access management efforts primarily focus on driveway and local road connections to State highways. It is the intent of the participating agencies to maintain areas of existing access control (see **Table 4**) and carefully review proposals for new access to State highways within the study area. New access control locations may be considered in the future. The analysis of year 2030 and build-out conditions assumes existing access control is maintained.

Route	Location
State Route 36	From 1.5 miles east of Chester to the Plumas/Lassen County Line
State Route 89	From the junction of State Route 147 to the junction of State Route 36

## Cost Estimates

The cost estimates for the ARTA have been calculated using the current (2007) construction and project support costs and have not been escalated for inflation, environmental mitigation, or right of way costs. The support costs include administrative and engineering support.

## Study Area and Study Facilities

### Regional Setting

Caltrans-District 2 is located in northern California and is comprised of seven Counties, two of which are Lassen and Plumas (see **Figure 1**).

### Study Area

As displayed in **Figure 2**, the study area (Almanor Basin) is comprised of two planning areas. The planning areas are located as follows.

The Westwood/Clear Creek Planning Area is located in the southwest corner of Lassen County. The unincorporated town of Westwood is approximately 21 miles southwest of Susanville via SR 36. The unincorporated community of Clear Creek is located about two miles west of Westwood, between Westwood and Lake Almanor.

The Almanor Planning Area is located in the northwest corner of Plumas County. The unincorporated town of Chester is approximately 30 miles northwest of Quincy, via SR 89. This planning area is also home to a number of small, unincorporated communities that surround Lake Almanor.

### Roadways

The transportation system in the Almanor Basin is comprised of State highways, local roads, and Forest Service Roads. Three State Routes (SR) form a triangle around Lake Almanor (SR 36 on the north, SR 89 on the west, and SR 147 on the east), with SR 32, SR 36, and SR 89 providing primary access to the study area. With the exception of SR 36 through the community of Chester, all of the state routes within the study area are two lane rural highways, with limited passing opportunities and posted speeds of 55 mph or less (Chester has a one-half mile section where the two-lane highway increases to four-lanes). Most of the county roads within the study area are low-speed local streets/collectors, with the two significant exceptions being Lassen County Road (CR) A-21 (Mooney Road) and Plumas CR A-13 (Big Springs Road), which are classified as major collectors. **Figure 2** displays the roadways that were evaluated in this study. **Table 5** displays the length of each study roadway within the study area boundaries.

Table 5 - Study Roadways				
Roadway	County	From	To	Study Length (Miles)
CR A-13	Plumas	Junction of SR 36	Junction of SR 147	3.79
CR A-21	Lassen	Junction of SR 147	Junction of SR 36	3.39
SR 36	Teh/Plu/Las	Junction of SR 32	Goodrich Creek Bridge	29.77
SR 89	Plumas	One Mile North of Greenville	Junction of SR 36	20.86
SR 147	Plu/Las	Junction of SR 89	Junction of SR 36	11.68

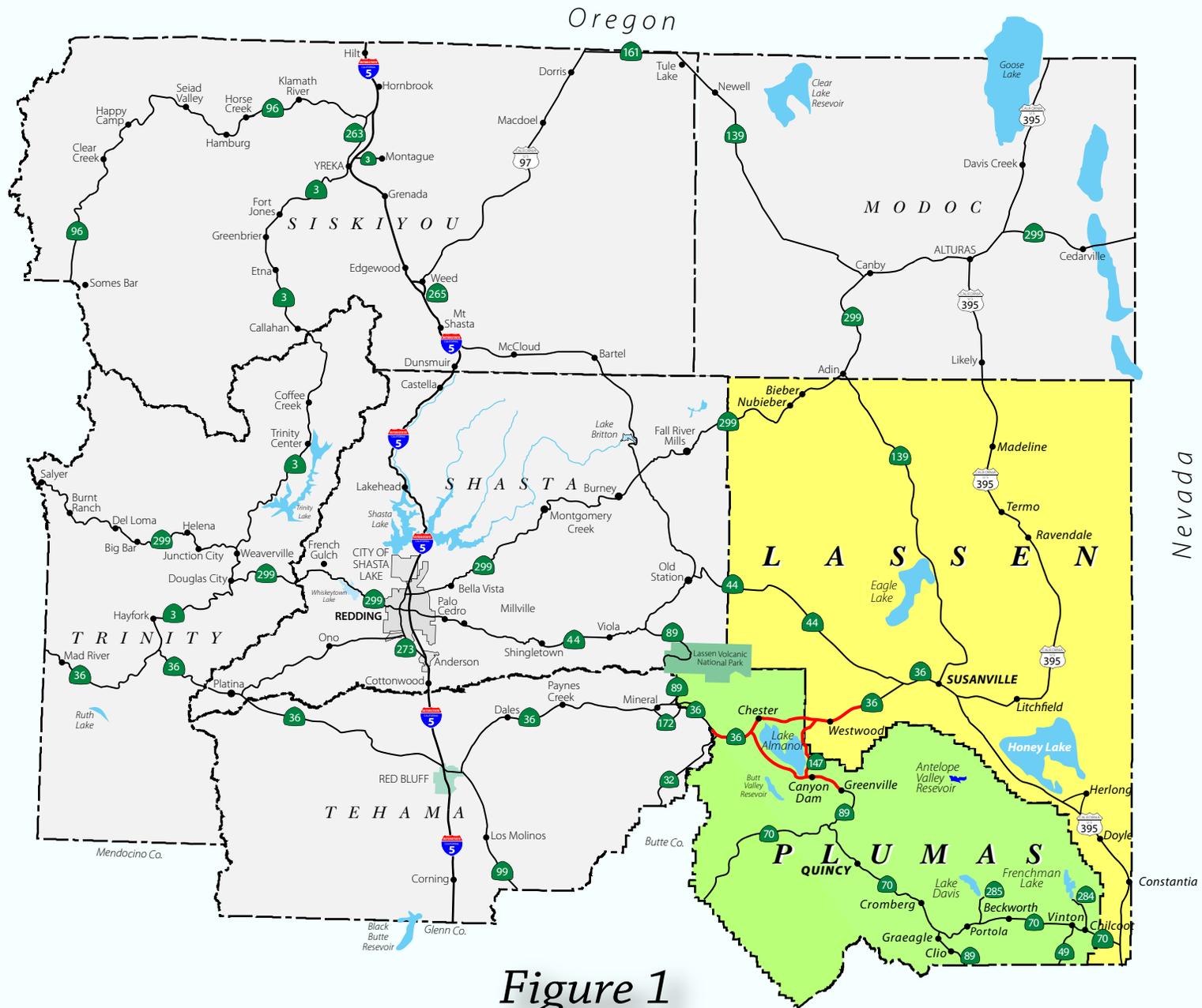


Figure 1  
 Regional Map  
 Lassen and Plumas Counties



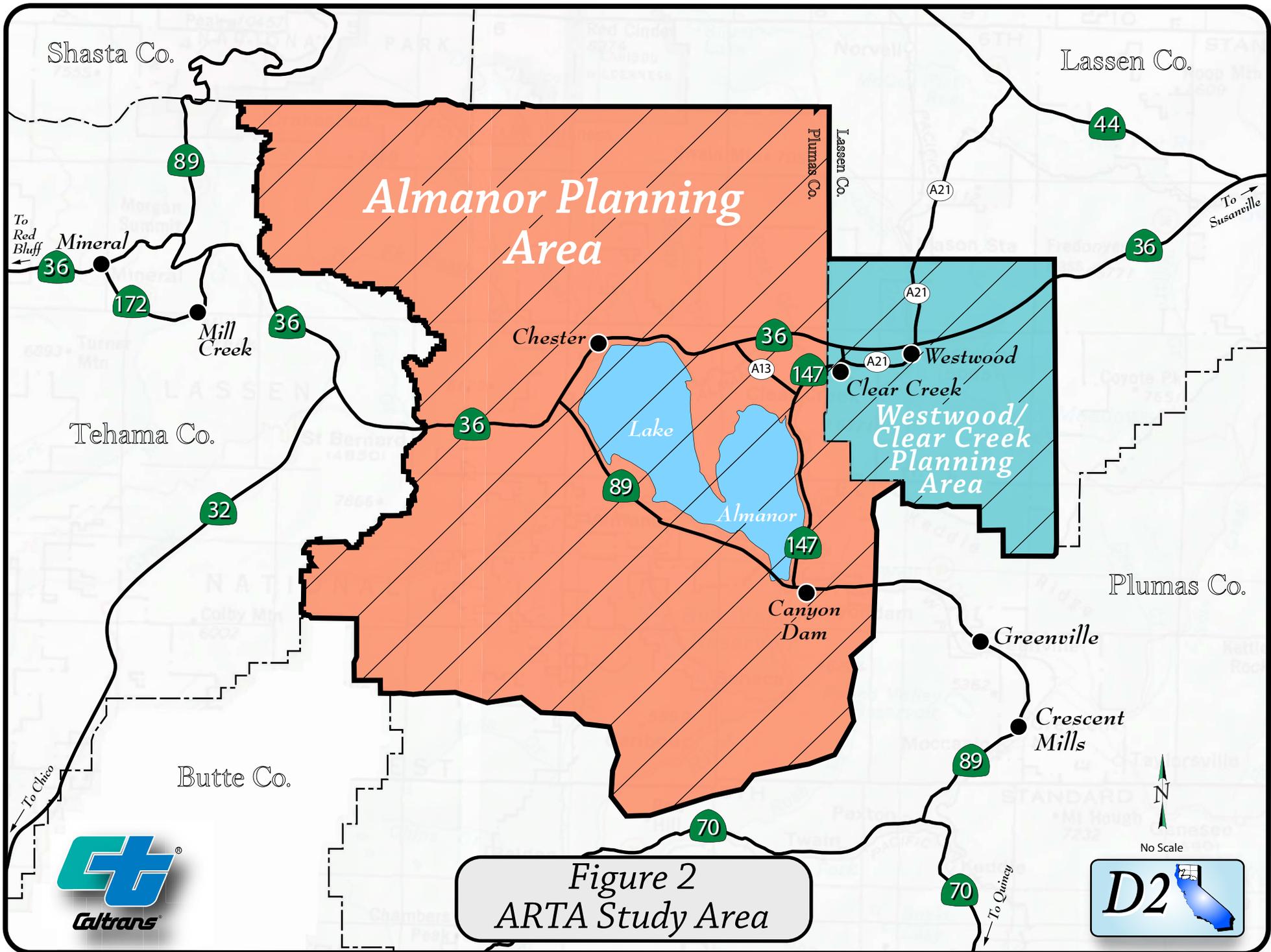


Figure 2  
ARTA Study Area

A brief description of each study roadway follows:

- CR A-13 - provides access to Hamilton Branch and the Lake Almanor Peninsula communities. It also serves as a connection between SR 36 and SR 147 on the northeast side of the lake. This roadway is a two-lane facility with a current AADT of 4,300.
- CR A-21 – this roadway provides access to the community of Westwood in Lassen County, and provides an alternate connection for SR 36 and SR 147. This is a two-lane facility with a current AADT of 2,200.
- SR 36 - serves as a primary east/west corridor for northern California, and provides a connection from the California coast to the State of Nevada. Within the study area, the highway runs through the unincorporated town of Chester and functions as the “Main Street” for this community. The route also traverses the highway commercial portion of Westwood in Lassen County. SR 36 connects with SR 32, SR 44, SR 89, CR A-13, and CR A-21. This is primarily a two-lane facility with a current AADT that ranges from 2,200 to 6,300 within the study area.
- SR 89 - provides a north-south link between central and northern California. Within District 2, the route traverses four counties, serves as a goods movement link, and provides access to multiple recreational areas. This highway runs along the western portion of Lake Almanor and connects to SR 36 and SR 147. This is a two-lane facility with a current AADT from 940 to 2,000 within the study area.
- SR 147 – This scenic route runs along the eastern shore of Lake Almanor, providing access to the communities of East Shore and Clear Creek and serving as a connector for CR A-13, CR A-21, SR 36, and SR 89. This is a two-lane facility with a current AADT from 1,100 to 2,300.

## Intersections

There are fourteen intersections evaluated in the Almanor Regional Transportation Assessment. Twelve of the intersections are within the study area boundaries, while two are outside. The two intersections outside the boundaries (SR 32/SR 36 and SR 36/SR 44) serve much of the traffic entering and exiting the study area. All of the study intersections are stop-controlled, with no signalization. The intersections have been grouped as either corridor or individual based on the location and function. The individual intersections connect major routes and were fully evaluated for the following time periods: existing, year 2030, and build-out. The corridor intersections serve local traffic in Chester and were evaluated as part of a corridor analysis. **Table 6** displays the study intersections.

**Table 6 – Study Intersections**

<b>Intersection</b>	<b>County</b>	<b>Community</b>	<b>Analysis Type</b>
SR 32 / SR 36	Tehama	N/A	Individual
SR 36 / SR 89	Plumas	Chester	Individual
SR 36 / Chester Airport Road	Plumas	Chester	Corridor
SR36 / Watson Road	Plumas	Chester	Corridor
SR 36 / First Street	Plumas	Chester	Corridor
SR 36 / Willow Street	Plumas	Chester	Corridor
SR 36 / First Ave / Feather River Road	Plumas	Chester	Corridor
SR 36 / C.R. A-13 (Big Springs Road)	Plumas	N/A	Individual
SR 36 / SR 147	Lassen	N/A	Individual
SR 36/ C.R. A-21 (Mooney Road)	Lassen	Westwood	Individual
SR 36 / SR 44	Lassen	N/A	Individual
SR 89 / SR 147	Plumas	N/A	Individual
SR 147 / C.R. A-13	Plumas	Hamilton Branch	Individual
SR 147 / C.R. A-21	Lassen	N/A	Individual

## Existing Land Use

The Almanor Basin, originally called Big Meadows, was recognized in the 1800's for its beauty and abundance of natural resources. The land was used for ranching, cattle grazing, logging, and mining. In 1914 the first dam was completed and Big Meadows became the bed of Lake Almanor (at less than one-fifth the current size). In 1930 the lake area was purchased and expanded by Pacific Gas and Electric (PG&E). The expansion required massive timber harvesting, which was accomplished by the Red River Lumber Company in Westwood. As the lake grew, so too did the communities surrounding it.

The Almanor Basin has grown increasingly popular over the last thirty years, with many people building secondary and retirement homes near the lake. The last decade has brought larger developments offering luxury homes on lakefront and golf course properties. While some choose to spend the entire summer season in the Almanor Basin, others visit for a short time and utilize the motels, resorts, campgrounds, RV parks, and rental homes.

At an elevation of 4,500 feet this area offers year-round recreational opportunities. The mild summer conditions are perfect for camping, or enjoying the lake. Hiking, biking, golfing, boating, fishing, water skiing, and swimming are popular summer activities. With an average winter snowfall of eleven feet, snowmobiling is quite common. Skiing will soon be added to the list of local winter activities as the Dyer Mountain Resort moves forward with plans for a ski resort.

## Forest

The Almanor Basin is bordered by the Lassen National Forest to the north and west, and the Plumas National Forest to the south and east. Both forests provide recreational opportunities and are largely responsible for the tourism and seasonal population that provides economic support to the area.

Much of the private land in the Almanor Basin is zoned for timber production, with the primary ownership of these lands being held by Collins Pine Lumber, Roseburg Resources, and Sierra Pacific Industries.

## Lake Almanor

Lake Almanor is part of the Upper North Fork Feather River Hydroelectric Project owned by Pacific Gas and Electric Company (PG&E). The lake covers 75 square miles and is 90-feet deep. It is one of the largest man-made lakes in California and is a central attraction for the study area. The lake offers water-skiing, swimming, boating, fishing, and camping.

## Industrial

The existing industrial uses in the study area include an airport, a lumber mill, public utility facilities, manufacturing, building material suppliers, and storage facilities.

## Residential

The Almanor Planning Area, in Plumas County, currently has 4,170 residential dwelling units, and a year-round population of 4,681. The population grows to more than twice that amount during the summer months, as summer is the peak season for this area.

The Westwood/Clear Creek planning area currently has 1,155 residential units, with only 10% being used seasonally. Westwood and Clear Creek have a combined year-round population of 2,572.

In total, the study area has approximately 5,325 residential units, and is comprised of many small communities. **Table 7** shows the number of existing residential units in each community or sub-area.

<b>Table 7 – Existing Residential</b>	
Census Designated Places/Residential Sub-Areas	Existing Residential Units
Almanor-Prattville	171
Big Meadows	0
Butt Valley	0
Canyon Dam	62
Caribou	0
Chester	1,130
Eastshore	332
Hamilton Branch	445
Humboldt/Humbug	0
Lake Almanor Country Club	1,190
Lake Almanor Peninsula	413
Lake Almanor West	367
Midland	0
Seneca	0
Soldier Meadows	0
Stover Mountain	0
Swain Mountain	0
Walker Ranch	60
Warner Valley	0
<b>Subtotal Almanor</b>	<b>4,170</b>
Westwood	997
Clear Creek	158
<b>Subtotal Westwood/Clear Creek</b>	<b>1,155</b>
<b>Total Existing Residential</b>	<b>5,325</b>

## Commercial

- There are approximately 1.5 million square feet of commercial development in the Almanor planning area, and 500,000 square feet of commercial development in the Westwood/Clear Creek area.
- Chester and Westwood are the largest commercial centers within their respective planning areas.
- Typical commercial uses include markets, gas stations, restaurants, small retail, and general office.
- Plumas and Lassen Counties are recreational in nature and support seasonal commercial development including marinas, golf courses, resorts, recreational vehicle (RV) parks, and campgrounds.

## Existing Transportation

### Air, Rail, & Transit

There are five publicly owned airports in Lassen County, and three publicly owned airports in Plumas County. Rogers Field is located in Chester and is the only operating airport within the study area. The airport currently experiences an increase in use during peak summer holiday periods. With the area growth potential, and the Dyer Mountain Resort project, it is likely that this facility will continue to see an increase in aircraft operations. The nearest locations for airline flight service are Reno, Nevada and Redding, California.

The Burlington Northern Santa Fe (BNSF) operates approximately 25 rail miles of track within the study area. The rail line travels along SR 89 to Lake Almanor, then up the east side of SR 147, and continues east through the community of Westwood and on to the town of Bieber.

The Almanor Railroad is the only short line railroad in the study area. The railroad is owned and operated by Collins Pine Lumber Company. The line begins in Chester and runs along SR 36 into Lassen County, then down to the BNSF connection point near the community of Clear Creek on SR 147. Collins Pine previously used the rail line to transport lumber from their sawmill in Chester to the BNSF railroad. Due to the increasing cost of rail maintenance, Collins Pine is no longer using the rail line.

The Lassen Rural Bus and the Plumas Transit both have routes within the study area. These two transit systems have a coordinated stop in Hamilton Branch, so passengers can transition smoothly between the two Counties. Plumas Transit also offers service to Chico, California and Reno, Nevada.

### Primary Mode of Transportation

The private passenger vehicle is the primary mode of transportation in the Almanor Basin. Due to the rural nature of the area, residents are often required to travel longer distances to reach their destinations.

### Traffic Conditions

Although there is a small percentage of interregional traffic, much of the study area traffic is locally generated. This is reflected by the increased traffic volumes at the center of the study area, and the lower volumes near the boundaries. **Table 8** displays the existing roadway traffic volumes.

**Table 8 - Existing Traffic Volumes**

Segment	County	Route	Segment Begin	Segment End	Existing P.M. Peak Hour Volume
<b>State Route 36</b>					
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	440
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	620
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	960
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	960
5	PLU	36	Melissa Avenue	Begin Passing Lane	750
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	355
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	315
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	320
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	210
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	390
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	360
<b>State Route 89</b>					
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	215
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	175
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	213
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	167
<b>State Route 147</b>					
1	PLU	147	Jct. SR 89	County Road A-13	350
2	PLU/LAS	147	County Road A-13	Begin 35 mph	350
3	LAS	147	Begin 35 mph	County Road A-21	400
4	PLU	147	County Road A-21	Jct. SR 36	150

Notes:

1. Source: 2004 Traffic Volumes on California State Highways, State of California.
2. The traffic volumes are two-way (both directions of travel) unless a direction of travel is shown (Eastbound=EB, Westbound=WB, Northbound=NB, or Southbound=SB).
3. The postmile locations for these segments are provided in **Appendix B**.

## System Performance

### Roadway LOS

A LOS analysis was performed for the State highways and intersections included in the ARTA. The existing roadway LOS is shown in **Table 9**, while the existing intersection volumes and LOS are shown in **Figure 3**.

<b>Table 9 - Existing Roadway Level of Service (LOS)</b>					
<b>Segment</b>	<b>County</b>	<b>Route</b>	<b>Road From</b>	<b>Road to</b>	<b>Existing LOS</b>
<b>State Route 36</b>					
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	C
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	D
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	D
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	D
5	PLU	36	Melissa Avenue	Begin Passing Lane	C
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	B
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	D
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	C
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	B
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	B
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	B
<b>State Route 89</b>					
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	C
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	D
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	C
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	C
<b>State Route 147</b>					
1	PLU	147	Jct. SR 89	County Road A-13	B
2	PLU / LAS	147	County Road A-13	Begin 35 mph	B
3	LAS	147	Begin 35 mph	County Road A-21	B
4	PLU	147	County Road A-21	Jct. SR 36	A



**- YEAR 2030 -**

## Year 2030 Land Use

The Almanor Basin is expected to see steady growth in both residential and commercial land development over the next 20-years. Plumas County estimates that approximately 20% of the available land in the Almanor Planning Area will develop by Year 2030, while Lassen County estimates that 35% of the Westwood/Clear Creek Planning Area will develop during this interim.

Tables 10 and 11 display the projected growth for the Year 2030.

<b>Table 10 - Projected New Residential Units at Year 2030</b>	
<b>Census Designated Place/Sub-Area</b>	<b>Projected New Residential Parcels/Units at Year 2030</b>
Almanor-Prattville	0
Big Meadows	5
Butt Valley	40
Canyon Dam	0
Caribou	5
Chester	40
Eastshore	80
Hamilton Branch	100
Humboldt/Humbug	0
Lake Almanor Cnty Club	140
Lake Almanor Peninsula	40
Lake Almanor West	70
Midland	0
Seneca	20
Soldier Meadows	0
Stover Mountain	0
Swain Mountain	15
Walker Ranch	1,130
Warner Valley	80
<b>Almanor Subtotal</b>	<b>1,765</b>
Clear Creek	255
Westwood	480
<b>Westwood/Clear Creek Subtotal</b>	<b>735</b>
<b>Total</b>	<b>2,500</b>

Notes:

1. The figures have been rounded.
2. Data provided by Lassen and Plumas Counties.

<b>Table 11 - Projected New Commercial at Year 2030</b>	
<b>Commercial Areas</b>	<b>Projected Sq Ft of Commercial Development for Year 2030</b>
Almanor / Prattville	7,840
Canyon Dam	92,090
Chester	448,795
Eastshore	43,130
Hamilton Branch	64,645
Lake Almanor Peninsula	158,745
Lake Almanor West	1,915
Walker Ranch	139,140
<b>Almanor Subtotal</b>	<b>956,300</b>
Westwood	683,520
Clear Creek	61,140
<b>Westwood/Clear Creek Subtotal</b>	<b>744,660</b>
<b>Total</b>	<b>1,700,960</b>

Notes:

1. This table includes only those areas/locations that have commercially designated land.
2. The figures have been rounded.
3. Data provided by Lassen and Plumas Counties.

## Year 2030 Transportation

### Trip Generation

The published Institute of Transportation Engineers (ITE) trip generation rate for a single-family residence is 1.02 trips in the p.m. peak hour, and the ITE trip generation rate for a recreational home is 0.26 trips in the p.m. peak hour. Based on these rates, existing traffic count data, and development patterns the residential rate used in the ARTA study is 0.8 trips in the p.m. peak hour. **Table 12** displays the projected new residential trip generation for the year 2030.

Table 12 - Year 2030 Residential Trip Generation					
Area	Future Units		P.M. Peak Hour Trip Rate		Total New P.M. Peak Hour Trips
Almanor	1,754	x	0.8	=	1,403
Westwood	480	x	0.8	=	384
Clear Creek	253	x	0.8	=	202
<b>Total</b>	<b>2,487</b>	<b>x</b>	<b>0.8</b>	<b>=</b>	<b>1,990</b>

Notes:  
 1. This data represents new units and new trips, and does not include existing data.  
 2. The table does not include Dyer Mountain Resort

To calculate a reasonable estimate of commercial trips, a generalized trip rate was used for each planning area. The generalized rates are based on the ITE trip generation rates for the allowable land uses in each commercial zone and include rural area reductions. **Table 13** shows the commercial trip generation rates and projected new p.m. peak hour trips for each planning area.

Table 13 - Year 2030 Commercial Trip Generation					
Area	Future Commercial Sq. Ft.		P.M. Peak Hour Trip Rate		Total New P.M. Peak Hour Trips
Almanor	956,303	x	0.00165	=	1,578
Westwood/ Clear Creek	744,652	x	0.00220	=	1,638
<b>Total New P.M. Peak Hour Commercial Trips</b>					<b>3,216</b>

Notes:  
 1. This data represents new commercial development and new trips, and does not include existing data.  
 2. The table does not include the Dyer Mountain Resort

### Traffic Patterns

The future traffic patterns are based on the existing trip patterns, and have been adjusted to reflect the changes resulting from area specific growth.

- Chester and Westwood will remain the largest commercial centers within their respective planning areas at year 2030.
- Although the smaller communities will experience some commercial growth, many residents and visitors will continue travel to Chester and Westwood for goods and services.
- The majority of residential growth will occur outside of Chester and Westwood.
- Dyer Mountain Resort will attract vehicle trips as phase one of the project is complete.

## Traffic Volumes

**Table 14** displays the year 2030 roadway traffic volumes. The 2030 traffic volumes include the existing traffic volumes, the projected new residential and commercial trips, and the Phase 1 Dyer Mountain Resort trips.

As the table shows, the traffic volumes double in many locations by the year 2030. The year 2030 traffic volumes in Chester, on a typical summer Friday, will be higher than the traffic volumes currently seen in Chester during the Fourth of July holiday period.

Traffic from the Dyer Mountain Resort (Phase 1) will be at its highest at or near the junction of SR 36/SR 147. However, at most study locations the traffic from Dyer equates to less than one-third of the new p.m. peak hour traffic.

**Table 14 - Year 2030 Traffic Volumes**

Segment	County	Route	Segment Begin	Segment End	Existing P.M. Peak Hour Volume	Year 2030 P.M. Peak Hour Volume
<b>State Route 36</b>						
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	440	785
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	620	1,025
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	960	1,610
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	960	1,640
5	PLU	36	Melissa Avenue	Begin Passing Lane	750	1,450
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	355	740
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	315	710
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	320	945
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	210	685
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	390	865
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	360	670
<b>State Route 89</b>						
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	215	367
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	175	288
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	213	285
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	167	285
<b>State Route 147</b>						
1	PLU	147	Jct. SR 89	County Road A-13	350	690
2	PLU/LAS	147	County Road A-13	Begin 35 mph	350	850
3	LAS	147	Begin 35 mph	County Road A-21	400	870
4	PLU	147	County Road A-21	Jct. SR 36	150	540

Notes:

- The traffic volumes are two-way (both directions of travel) unless a direction of travel is shown (Eastbound=EB, Westbound=WB, Northbound=NB, or Southbound=SB).
- The postmile locations for these segments are provided in **Appendix B**.

## System Performance – Without Improvements

The “without improvements” data is essentially a no build scenario. It provides a view of what the conditions will be if the area grows as anticipated, with no implementation of transportation system improvements.

**Table 15** and **Figure 4** show the LOS for year 2030, with no transportation system improvements.

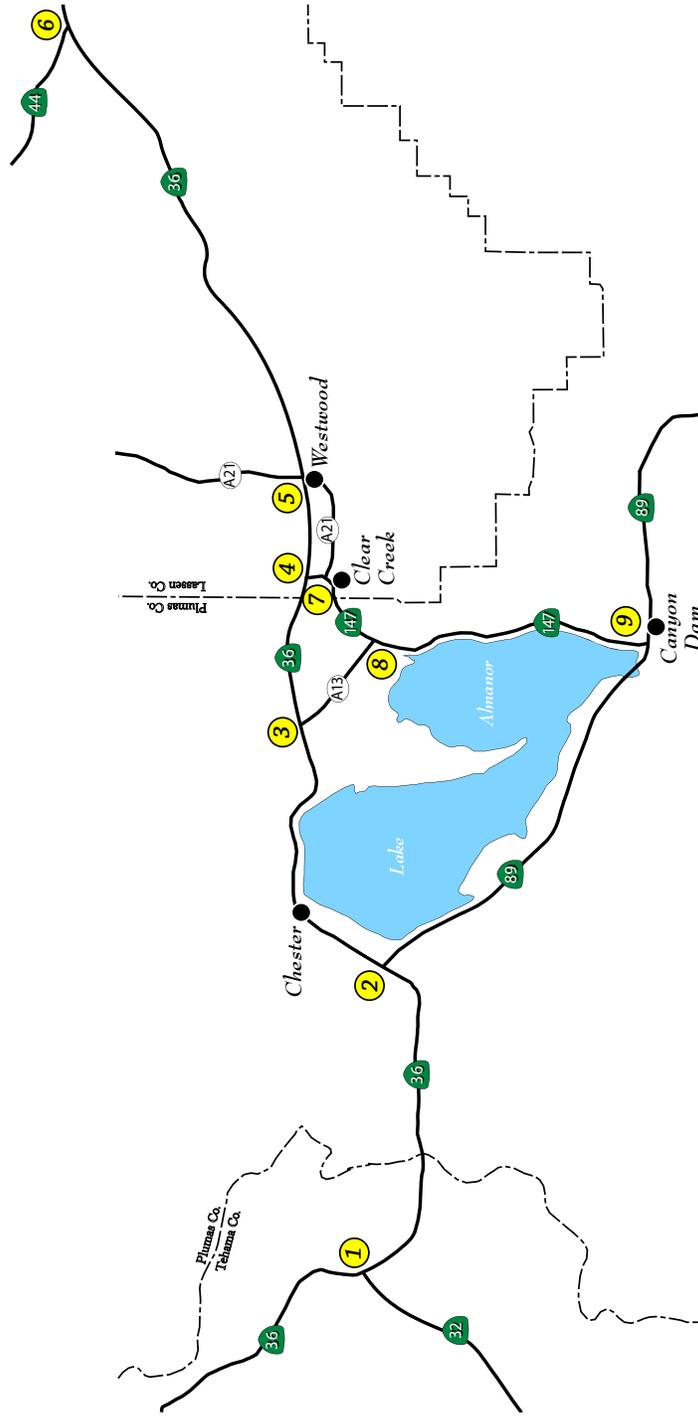
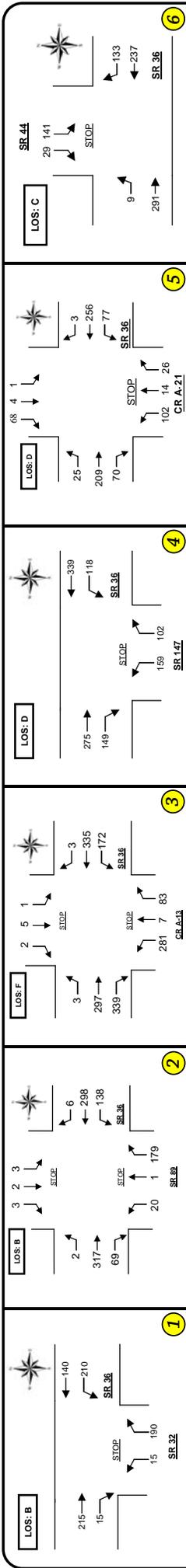
As displayed in **Figure 4**, the LOS for the SR36/SR147 and SR 36/CR A-21 intersections (intersections 4 and 5 as shown in the figure) will drop from a LOS “B” to a LOS “D” by the year 2030. The intersection of SR 36/CR A-13 (intersection 3) will decline from a LOS “C” to a LOS “F” by the year 2030.

As **Table 15** reflects, with no improvement SR 36 will be heavily congested from the junction of SR 89 to CR A-13.

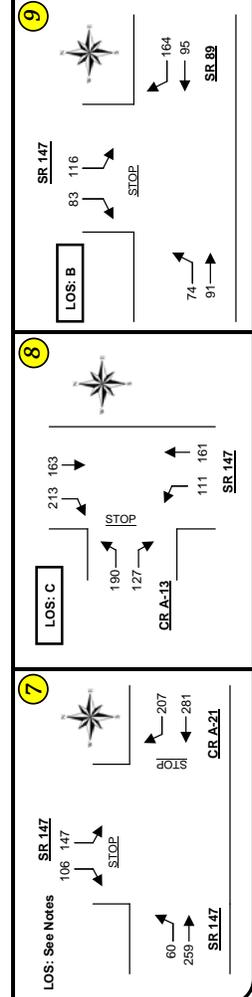
Table 15 - Year 2030 Roadway LOS, Without Improvements						
Segment	County	Route	Road From	Road to	Existing LOS (2005)	Year 2030 LOS
<b>State Route 36</b>						
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	C	D
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	D	E
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	D	E
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	D	E
5	PLU	36	Melissa Avenue	Begin Passing Lane	C	E
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	B	C
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	D	E
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	C	D
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	B	C
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	B	C
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	B	C
<b>State Route 89</b>						
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	C	D
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	D	D
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	C	C
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	C	C
<b>State Route 147</b>						
1	PLU	147	Jct. SR 89	County Road A-13	B	C
2	PLU / LAS	147	County Road A-13	Begin 35 mph	B	C
3	LAS	147	Begin 35 mph	County Road A-21	B	C
4	PLU / LAS	147	County Road A-21	Jct. SR 36	A	C

Notes:

1. The year 2030 service levels assume the predicted land use growth, without capacity improvements to the transportation system.



**Figure 4**  
**ARTA**  
**Year 2030**  
**“No Improvement”**  
**P.M. Peak Hour**  
**Intersection Volumes**  
**and LOS**



- Notes:
1. The existing intersections are stop controlled, with no signalization.
  2. The LOS applies only to the stop - controlled movements.
  3. The LOS represents the turn movement with the longest delay.
  4. The intersections in Chester were not evaluated individually.
  5. The SR 147/CR A-21 intersection cannot be evaluated using HCM unsignalized analysis.

## Year 2030 Transportation System Improvements

**Table 16** shows the transportation system improvements and cost estimates needed to maintain the roadway LOS at the “C/D” threshold and **Figure 5** displays the improvement locations.

**Table 17** shows the improvements needed to maintain the roadway LOS at the “D” threshold and **Figure 6** displays these improvement locations. **Table 18** shows the improvements needed to maintain the roadway LOS at the “D” threshold and **Figure 6** displays these improvement locations.

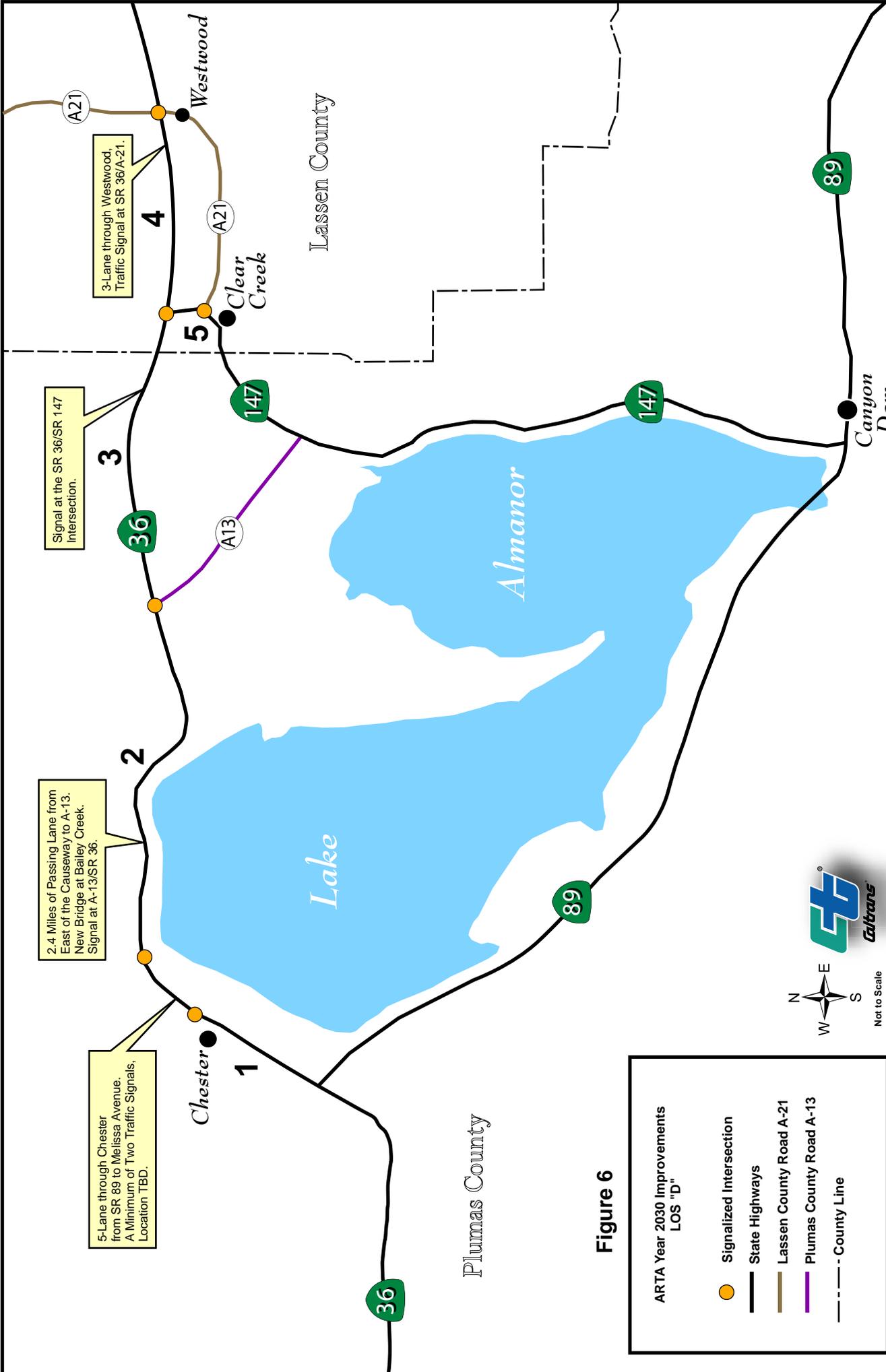
**Table 16 – Year 2030 Improvements and Cost Estimates for LOS “C/D”**

County	From	To	Improvements	Improvement Map Location (Figure 5)	Construction Cost (\$Million)	Support Cost (\$Million)	Section Total (\$Million)
<b>SR 36</b>							
PLU	PLU-PM 3.0	PLU-5.6	1 mile passing lane each direction (with taper, net 2.4 lane miles).	1	9	3	12
PLU	Jct. SR 89	Melissa Ave.	5-lane with shoulders and drainage improvements through downtown Chester (curb, gutter, and sidewalks from Watson Road to Melissa Ave), and a minimum of two traffic signals (location to be determined).	2	36	13	49
PLU	Melissa Ave.	Jct. A-13	4-lane from east of the causeway to A-13, signal at CR A-13/SR 36, new bridge over Bailey Creek. Can be a divided or undivided facility.	3	30	10	40
PLU/LAS	Jct. A-13	Jct. SR 147	0.5 mile passing lane each direction (with taper, net 1.4 miles), and a signal at SR 36/ SR 147.	4	5	2	7
LAS	Jct. SR 147	Jct. A-21	1 mile of 5-lane through Westwood, includes curb, gutter, and sidewalk, and a traffic signal at SR 36/ CR A-21.	5	8	3	11
<b>Subtotal for Route 36</b>							<b>119</b>
<b>SR 89</b>							
PLU	Greenville	Jct. SR 147	Add passing lanes - 0.5 mile each direction (with taper, net 1.4 mils).	6	5	2	7
<b>Subtotal for Route 89</b>							<b>7</b>
<b>SR 147 - Signal at the SR 36/SR 147 intersection - included above, signal at the SR147/A-21 intersection - see footnote.</b>				7			<b>0</b>
<b>Subtotal</b>							<b>\$126</b>
<p>1. The estimates do not include Right of Way or Environmental Mitigation costs.</p> <p>2. The identified improvements would provide a LOS of "C" or higher.</p> <p>3. The support costs are estimated at approximately 35% of the construction cost.</p> <p>4. The estimates have been calculated at the current (2007) cost.</p> <p>5. The SR 147/A-21 intersection will require relocation and signalization. This improvement is the responsibility of the Dyer Mountain Resort as identified in the Final Environmental Impact Report for the project. Costs for this improvement are therefore not included in the ARTA.</p>							



**Table 17 – Year 2030 Improvements and Cost Estimates for LOS “D”**

County	From	To	Improvements	Improvement Map Location (Figure 6)	Construction Cost (\$Million)	Support Cost (\$Million)	Section Total (\$Million)
<b>SR 36</b>							
PLU	Jct. SR 89	Melissa Ave.	5-lane with shoulders and drainage improvements through downtown Chester (curb, gutter, and sidewalks from Watson Road to Melissa Ave) and a minimum of two traffic signals (location to be determined).	1	36	13	49
PLU	Melissa Ave.	Jct. A-13	2.4 miles of passing lane from east of the causeway to A-13, signal at CR A-13/SR 36, and new bridge over Bailey Creek.	2	17	6	23
PLU/LAS	Jct. A-13	Jct. 147	Add a traffic signal at the SR 36/SR 147 intersection.	3	1	0.5	1.5
LAS	Jct. SR 147	Jct. A-21	1 mile of 3-lane through Westwood, includes curb, gutter, sidewalk, and traffic signal at SR 36/A-21.	4	6	2	8
<b>Subtotal for Route 36</b>							<b>81.5</b>
SR 147 - Signal at the SR 36/SR 147 intersection - included above, signal at the SR147/A-21 intersection - see footnote.				5			<b>0</b>
							<b>\$81.5</b>
<p>1. The estimates do not include Right of Way or Environmental Mitigation costs.</p> <p>2. The identified improvements would provide an LOS of "D" or higher.</p> <p>3. The support costs are estimated at approximately 35% of the construction cost.</p> <p>4. Improvements are shown only for SR 36, as both SR 89 and SR 147 are anticipated to operate at an LOS of "D" or higher at the year 2030.</p> <p>5. The estimates have been calculated at the current (2007) cost.</p> <p>6. The SR 147/A-21 intersection will require relocation and signalization. This improvement is the responsibility of the Dyer Mountain Resort as identified in the Final Environmental Impact Report for the project. Costs for this improvement are therefore not included in the ARTA.</p>							



2.4 Miles of Passing Lane from East of the Causeway to A-13. New Bridge at Bailey Creek. Signal at A-13/SR 36.

5-Lane through Chester from SR 89 to Melissa Avenue. A Minimum of Two Traffic Signals, Location TBD.

Signal at the SR 36/SR 147 Intersection.

3-Lane through Westwood, Traffic Signal at SR 36/A-21.

**Figure 6**

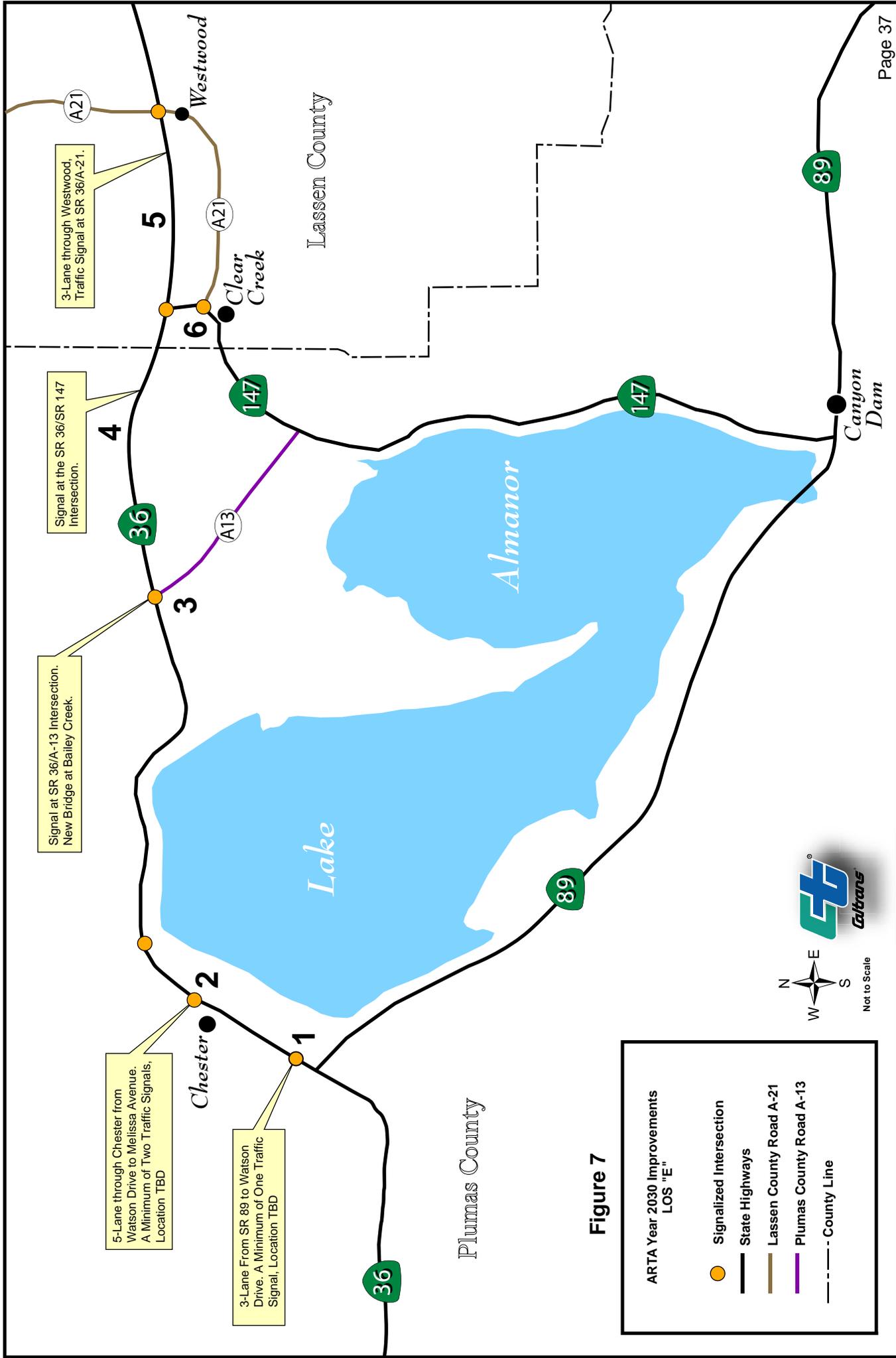
ARTA Year 2030 Improvements LOS "D"

- Signalized Intersection
- State Highways
- Lassen County Road A-21
- Plumas County Road A-13
- County Line

Not to Scale

**Table 18 – Year 2030 Improvements and Cost Estimates for LOS “E”**

County	From	To	Improvements	Improvement Map Location (Figure 7)	Construction Cost (\$Million)	Support Cost (\$Million)	Section Total (\$Million)
<b>SR 36</b>							
PLU	Jct. SR 89	Watson Drive	3-lane with shoulders and drainage improvements, minimum one signal (location to be determined).	1	5.9	2.1	8.0
PLU	Watson drive	Melissa Ave.	5-lane with shoulders and drainage improvements through downtown Chester and a minimum of two traffic signals (location to be determined).	2	18.5	6.5	25.0
PLU	Jct. SR 36	Jct. A-13	Signal at CR A-13/SR 36, includes new bridge over Bailey Creek.	3	9.0	3.0	12.0
LAS	Jct. SR 36	Jct. 147	Add a traffic signal at the SR 36/SR 147 intersection.	4	1.0	0.5	1.5
LAS	Jct. SR 147	Jct. A-21	1 mile of 3-lane through Westwood, includes curb, gutter, sidewalk, and traffic signal at SR 36/A-21.	5	6.0	2.0	8.0
<b>Subtotal Route 36</b>							<b>54.5</b>
<b>SR 147</b> - Signal at the SR 36/SR 147 intersection - included above, signal at the SR147/A-21 intersection - see footnote.				6			<b>0</b>
							<b>\$54.5</b>
<p>1. The estimates do not include Right of Way or Environmental Mitigation costs.</p> <p>2. The identified improvements would provide an LOS of "E" or higher.</p> <p>3. The support costs are estimated at approximately 35% of the construction cost.</p> <p>4. Improvements are shown only for SR 36, as both SR 89 and SR 147 are anticipated to operate at an LOS of "E" or higher at the year 2030.</p> <p>5. The estimates have been calculated at the current (2007) cost.</p> <p>6. The SR 147/A-21 intersection will require relocation and signalization. This improvement is the responsibility of the Dyer Mountain Resort as identified in the Final Environmental Impact Report for the project. Costs for this improvement are therefore not included in the ARTA.</p>							



5-Lane through Chester from Watson Drive to Melissa Avenue. A Minimum of Two Traffic Signals, Location TBD

3-Lane From SR 89 to Watson Drive. A Minimum of One Traffic Signal, Location TBD

Signal at SR 36/A-13 Intersection, New Bridge at Bailey Creek.

Signal at the SR 36/SR 147 Intersection.

3-Lane through Westwood, Traffic Signal at SR 36/A-21.

**Figure 7**

**ARTA Year 2030 Improvements  
LOS "E"**

- Signalized Intersection
- State Highways
- Lassen County Road A-21
- Plumas County Road A-13
- - - County Line



## Year 2030 System Performance with Improvements

**Table 19** provides a roadway LOS comparison for the future transportation improvements. The first column shows the year 2030 LOS with no transportation system improvements, while the second, third and fourth columns show the LOS that will result from implementation of the improvements provided in **Tables 16, 17** and **18** respectively.

As shown in **Table 19**, the number of segments that are improved and the level of improvement (in LOS) that occurs are dependent on the LOS standard. Generally speaking, more segments are improved and at a greater level under the higher LOS standards. For example, eleven study segments require improvement to maintain the LOS C/D standard while only seven require improvement to meet the LOS D standard and four to meet the LOS E standard.

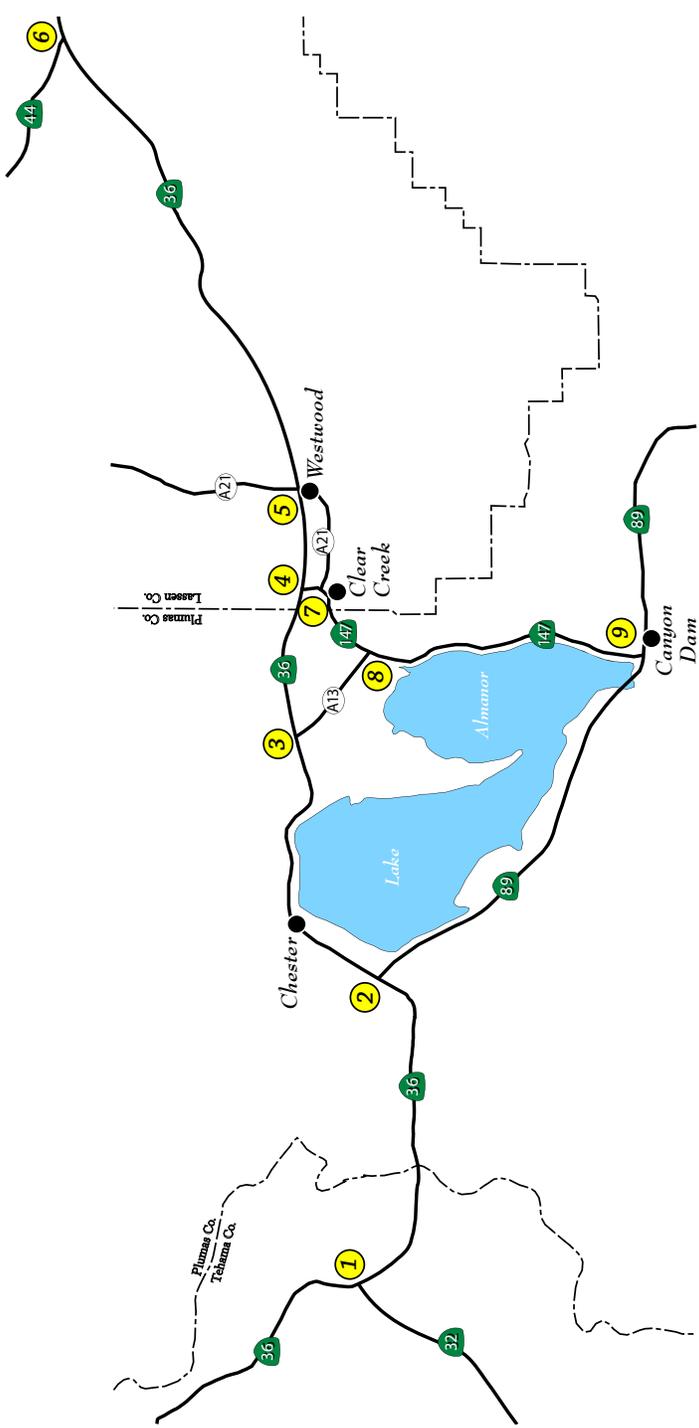
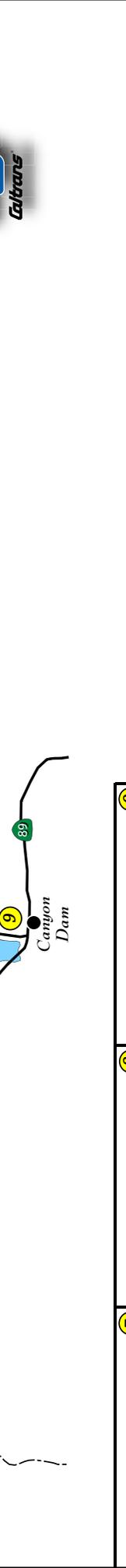
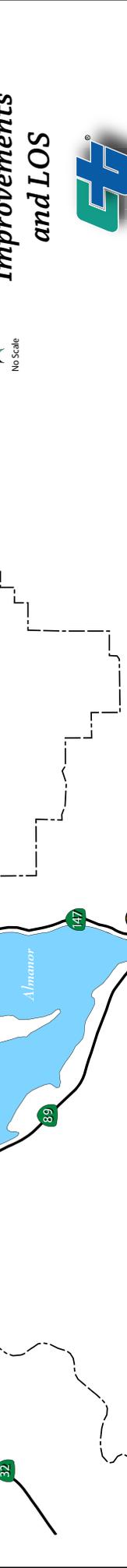
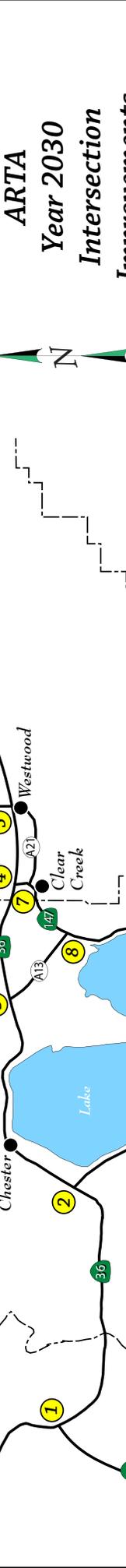
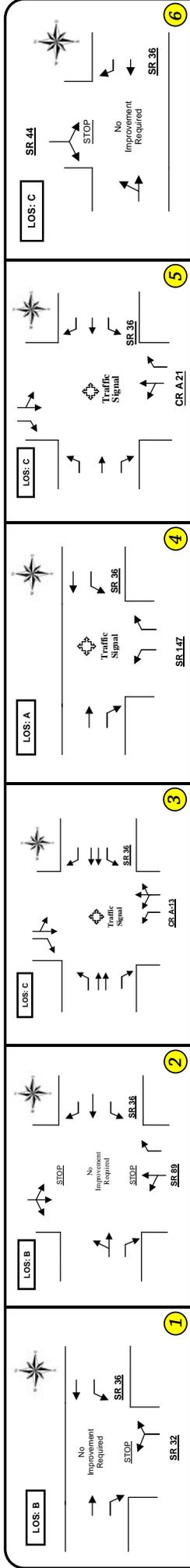
In some cases an improvement meets the LOS standard. In other cases, the minimum improvement needed to meet the LOS standard can result in significant improvement to above standard. An example of this can be seen in **Table 19**, segment five. The LOS “D” standard can be achieved with the addition of a passing lane. However, to improve this segment to the LOS “C/D” standard, the roadway must be improved to a 4-lane facility. The four-lane facility will bring the LOS above the “C/D” standard, and the roadway will operate at a LOS “A”.

**Figure 8** shows the year 2030 intersection improvements and LOS. Traffic signals will be required at six of the study intersections by the year 2030. A minimum of two traffic signals will be required on SR 36 in the town of Chester. These are not shown on the figure because the exact location of the signals will be determined as future development occurs.

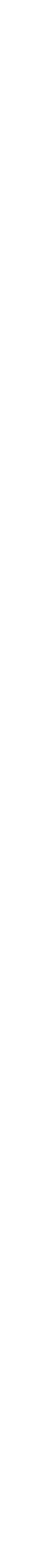
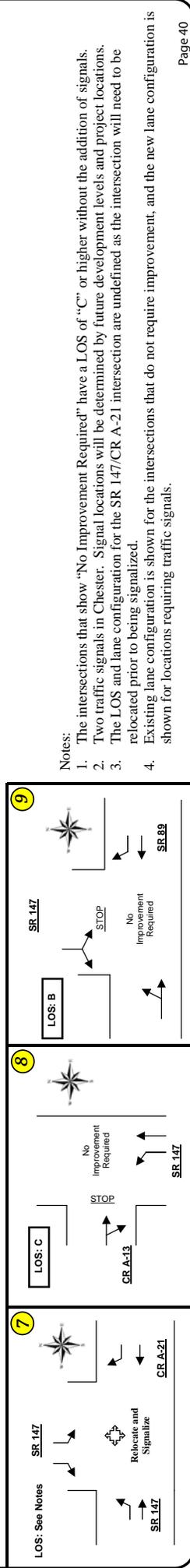
**Table 19 - Roadway LOS Comparison for Year 2030, With Improvements**

Segment	County	Rte.	Road From	Road to	Year 2030 No Improvement	Year 2030 Improved for LOS "C/D"	Year 2030 Improved for LOS "D"	Year 2030 Improved for LOS "E"
<b>State Route 36</b>								
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	D	<b>C</b>	D	D
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	E	<b>A</b>	<b>A</b>	<b>D</b>
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	E	<b>A</b>	<b>A</b>	<b>A</b>
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	E	<b>B</b>	<b>B</b>	<b>B</b>
5	PLU	36	Melissa Avenue	Begin Passing Lane	E	<b>A</b>	<b>D</b>	E
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	C	<b>A</b>	<b>A</b>	C
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	E	<b>A</b>	<b>C</b>	E
7	PLU/LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	D	<b>C</b>	D	D
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	C	C	C	C
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	D	<b>A</b>	<b>C</b>	<b>C</b>
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	C	C	C	C
<b>State Route 89</b>								
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	D	<b>C</b>	D	D
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	D	<b>C</b>	D	D
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	C	C	C	C
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	C	C	C	C
<b>State Route 147</b>								
1	PLU	147	Jct. SR 89	County Road A-13	C	C	C	C
2	PLU/LAS	147	County Road A-13	Begin 35 mph	C	C	C	C
3	LAS	147	Begin 35 mph	County Road A-21	C	C	C	C
4	PLU	147	County Road A-21	Jct. SR 36	C	C	C	C

LOS in **BOLD** in "Year 2030 Improved" indicates segments where improvements will be made.



**Figure 8**  
**ARTA**  
**Year 2030**  
**Intersection**  
**Improvements**  
**and LOS**



- Notes:
1. The intersections that show "No Improvement Required" have a LOS of "C" or higher without the addition of signals.
  2. Two traffic signals in Chester. Signal locations will be determined by future development levels and project locations.
  3. The LOS and lane configuration for the SR 147/CR A-21 intersection are undefined as the intersection will need to be relocated prior to being signalized.
  4. Existing lane configuration is shown for the intersections that do not require improvement, and the new lane configuration is shown for locations requiring traffic signals.

## Analysis Summary – Year 2030

It is anticipated that the Almanor Basin will experience continued growth over the next 20 years with an estimated 2,500 new residential units, 1.7 million square feet of new commercial development, and Phase 1 of the Dyer Mountain Resort Project. The traffic volumes are forecast to double in many locations.

- If the roadway LOS is maintained at the “C/D” threshold, the improvement cost is estimated at \$126 million (2007 dollars). The estimate is based on roadway improvements for eleven of the study segments (including two on SR 89), and improvements at six study intersections.
- If the roadway LOS is maintained at the “D” threshold, the improvement cost is estimated at \$81.5 million (2007 dollars). This estimate includes improvements for seven roadway segments and six study intersections.
- If the roadway LOS is maintained at the “E” threshold, the improvement cost is estimated at \$54.5 million (2007 dollars). This estimate includes improvements for four roadway segments and six study intersections.

**- BUILD-OUT -**

## Purpose of the Build-out Assessment

The primary purpose of the ARTA is to evaluate traffic conditions and transportation improvement needs at the Year 2030 within the study area. In order to accomplish this, however, an understanding of conditions at Build-out (the condition when all available land designated for development has been developed) is needed. The build-out assessment:

- Allows decision-makers and the public to understand the development potential that exists within both Lassen and Plumas Counties based on the existing General Plans. The build-out condition represents future conditions that will likely exist if no changes are made to the plans and policies that exist today. It provides an opportunity for elected officials and residents to consider whether the adopted General Plans will help to establish the communities they want in the future and, if not, to make changes that will. Based on historic growth trends and the analysis in this report, build-out is not expected to occur until around the year 2100.
- Helps local, regional and State transportation agencies to identify the location, type and size of the transportation facilities that will be needed to serve all of the future development that may occur. This information is valuable for many purposes, especially for preserving the right-of-way needed for long-term transportation improvements and limiting or avoiding the impacts of the transportation system on the environment.
- Fosters better near-term transportation decisions and helps to maximize the long-term value of transportation investments by reducing “throw-away”. An example will help to illustrate this point: A ten-mile stretch of two-lane highway may need four miles of passing lane added to operate acceptably twenty years in the future. However, the entire ten-mile stretch may need to be four-lanes by the time build-out is reached. Without knowing the improvement needed at build-out, the additional passing lanes could be added adjacent to the existing two-lane highway. However, when additional improvements are needed to accommodate build-out demand (a four-lane highway in this example) it may be found that the passing lanes built previously conflict. To the extent that the previous investment in the passing lanes does not help achieve the four-lane highway, that investment is lost (or “thrown-away”). Knowledge of the long-term need for four-lanes at the time the passing lanes are added may help to foster a different, and better, decision (perhaps the need for passing lanes could be met by constructing a two-mile section of four-lane facility now, rather than separate passing lanes that may need to be removed in the future).

Actions to implement the transportation improvements identified in the ARTA build-out assessment are not intended at this time. Rather, the knowledge of what improvements are needed at build-out is intended to help guide decisions regarding the improvements identified for the year 2030.

## Build-out Land Use

The build-out scenario assumes cumulative growth of all available residential and commercially designated land in the study area. **Tables 20 and 21** display the projected growth at build-out.

<b>Table 20 - Projected New Residential Units at Build-out</b>	
<b>CDP/Area</b>	<b>Projected New Residential Parcels/Units at Build-out</b>
Almanor-Prattville	0
Big Meadows	15
Butt Valley	180
Canyon Dam	0
Caribou	15
Chester	215
Eastshore	340
Hamilton Branch	500
Humboldt/Humbug	5
Lake Almanor Country Club	720
Lake Almanor Peninsula	180
Lake Almanor West	350
Midland	0
Seneca	110
Soldier Meadows	0
Stover Mountain	0
Swain Mountain	70
Walker Ranch	5,630
Warner Valley	400
<b>Almanor Subtotal</b>	<b>8,790</b>
Clear Creek	730
Westwood	1,380
<b>Westwood/Clear Creek Subtotal</b>	<b>2,110</b>
<b>Total</b>	<b>10,900</b>

Notes:

1. The figures have been rounded.
2. Data provided by Lassen and Plumas Counties.

<b>Table 21 - Projected New Commercial at Build-out</b>	
<b>Commercial Areas</b>	<b>Projected Sq Ft of Commercial at Build-out</b>
Almanor / Prattville	39,100
Canyon Dam	460,500
Chester	2,243,800
Eastshore	215,600
Hamilton Branch	323,300
Lake Almanor Peninsula	793,700
Lake Almanor West	9,800
Walker Ranch	695,700
<b>Almanor Subtotal</b>	<b>4,781,500</b>
Westwood	1,953,000
Clear Creek	174,500
<b>Westwood/Clear Creek Subtotal</b>	<b>2,127,500</b>
<b>Total</b>	<b>6,909,000</b>

Notes:

1. This table includes only those areas/locations that have commercially designated land.
2. The figures have been rounded.
3. Data provided by Lassen and Plumas Counties.

## Build-out Transportation

### Trip Generation

The trip generation rates used for build-out are the same as those used for the year 2030. **Tables 22 and 23** illustrate the trip generation at build-out.

<b>Table 22 – New Residential Trip Generation at Build-out</b>					
Area	Future Units		P.M. Peak Hour Trip Rate	=	Trips
Almanor	8,762	x	0.8	=	7,010
Westwood	724	x	0.8	=	579
Clear Creek	1371	x	0.8	=	1,097
<b>Total</b>	<b>10,857</b>	<b>x</b>	<b>0.8</b>	<b>=</b>	<b>8,686</b>

Notes:

1. This data represents new residential units and trips (including the year 2030 data), and does not include existing data.
2. The table does not include the Dyer Mountain Resort.

<b>Table 23 – New Commercial Trip Generation at Build-out</b>					
Area	Commercial Sq. Ft.		P.M. Peak Hour Trip Rate	=	Trips
Almanor	4,781,517	x	0.00165	=	7,890
Westwood & Clear Creek	2,127,576	x	0.00220	=	4,681
<b>Total Trips</b>					<b>12,570</b>

Notes:

1. This data represents new commercial development and new trips (including the year 2030 data), and does not include existing data.
2. The table does not include the Dyer Mountain Resort.

### Traffic Patterns

Future traffic patterns are based on the existing patterns, and have been adjusted to reflect the changes resulting from area specific growth between the year 2030 and build-out.

- Chester and Westwood will remain the largest commercial centers within their respective planning areas.
- Many of the small communities will have commercial development.
- Most goods and services will be available locally, reducing the number of commercial trips outside the study area.
- Dyer Mountain Resort will have reached complete project development and will be operating at full capacity.

## Traffic Volumes

As displayed in **Table 24**, the build-out traffic volumes are forecast to be three to six times higher than the existing traffic volumes. The build-out traffic volumes include the existing traffic volumes, the projected new residential and commercial trips (including the year 2030), and the trips from full development of the Dyer Mountain Resort.

<b>Table 24 - Build-out Traffic Volumes</b>							
Segment	County	Route	Segment Begin	Segment End	Existing P.M. Peak Hour Volume	Year 2030 P.M. Peak Hour Volume	Build-out P.M. Peak Hour Volume
<b>State Route 36</b>							
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	440	785	1,650
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	620	1,025	2,200
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	960	1,610	3,500
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	960	1,640	3,400
5	PLU	36	Melissa Avenue	Begin Passing Lane	750	1,450	3,500
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	355	740	2,030
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	315	710	1,470
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	320	945	2,200
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	210	685	1,350
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	390	865	1,500
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	360	670	1,425
<b>State Route 89</b>							
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	215	367	557
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	175	288	493
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	213	285	528
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	167	285	672
<b>State Route 147</b>							
1	PLU	147	Jct. SR 89	County Road A-13	350	690	1,500
2	PLU/LAS	147	County Road A-13	Begin 35 mph	350	850	1,950
3	LAS	147	Begin 35 mph	County Road A-21	400	870	2,100
4	PLU	147	County Road A-21	Jct. SR 36	150	540	1,725

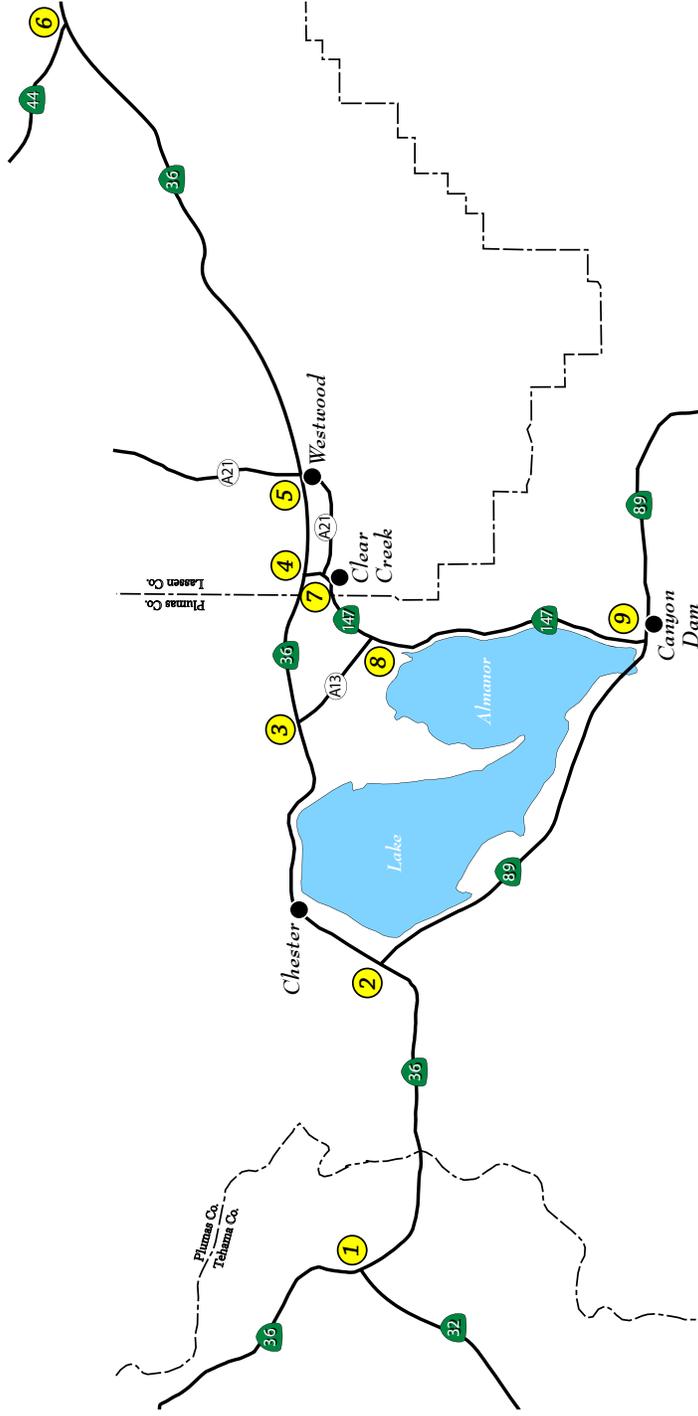
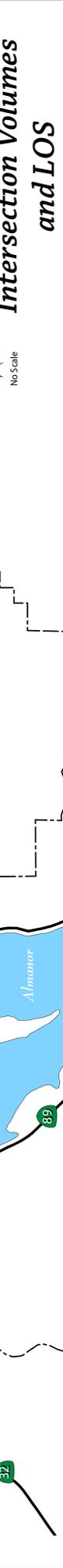
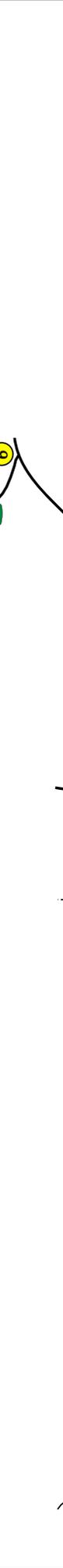
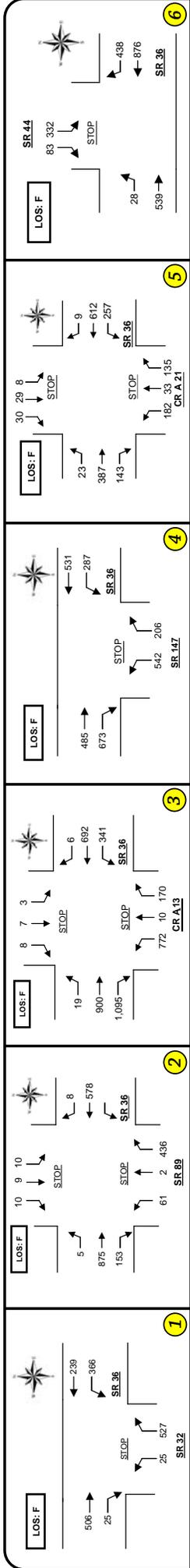
**Notes:**

1. The traffic volumes are two-way (both directions of travel) unless a direction of travel is shown (Eastbound=EB, Westbound=WB, Northbound=NB, or Southbound=SB).
2. The postmile locations for these segments are provided in **Appendix B**.

## System Performance – Without Improvements

**Table 25** and **Figure 9** show what the LOS will be at build-out, if no transportation system improvements are made (no improvements at 2030). As reflected, nearly all roadway segments and intersections will operate at an unacceptable level at build-out. In many locations the traffic volumes exceed the roadway capacity, and the segments reach complete operational failure (LOS “F”).

Table 25 - Build-out Roadway LOS, Without Improvements						
Segment	County	Route	Road From	Road to	Existing LOS (2005)	Build-out LOS No Improvement
<b>State Route 36</b>						
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	C	E
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	D	E
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	D	F
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	D	F
5	PLU	36	Melissa Avenue	Begin Passing Lane	C	F
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	B	E
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	D	F
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	C	F
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	B	E
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	B	E
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	B	E
<b>State Route 89</b>						
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	C	D
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	D	E
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	C	D
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	C	E
<b>State Route 147</b>						
1	PLU	147	Jct. SR 89	County Road A-13	B	E
2	PLU / LAS	147	County Road A-13	Begin 35 mph	B	E
3	LAS	147	Begin 35 mph	County Road A-21	B	F
4	PLU	147	County Road A-21	Jct. SR 36	A	E



**Figure 9**  
**ARTA**  
**Build-Out**  
**“No Improvement”**  
**P.M. Peak Hour**  
**Intersection Volumes**  
**and LOS**



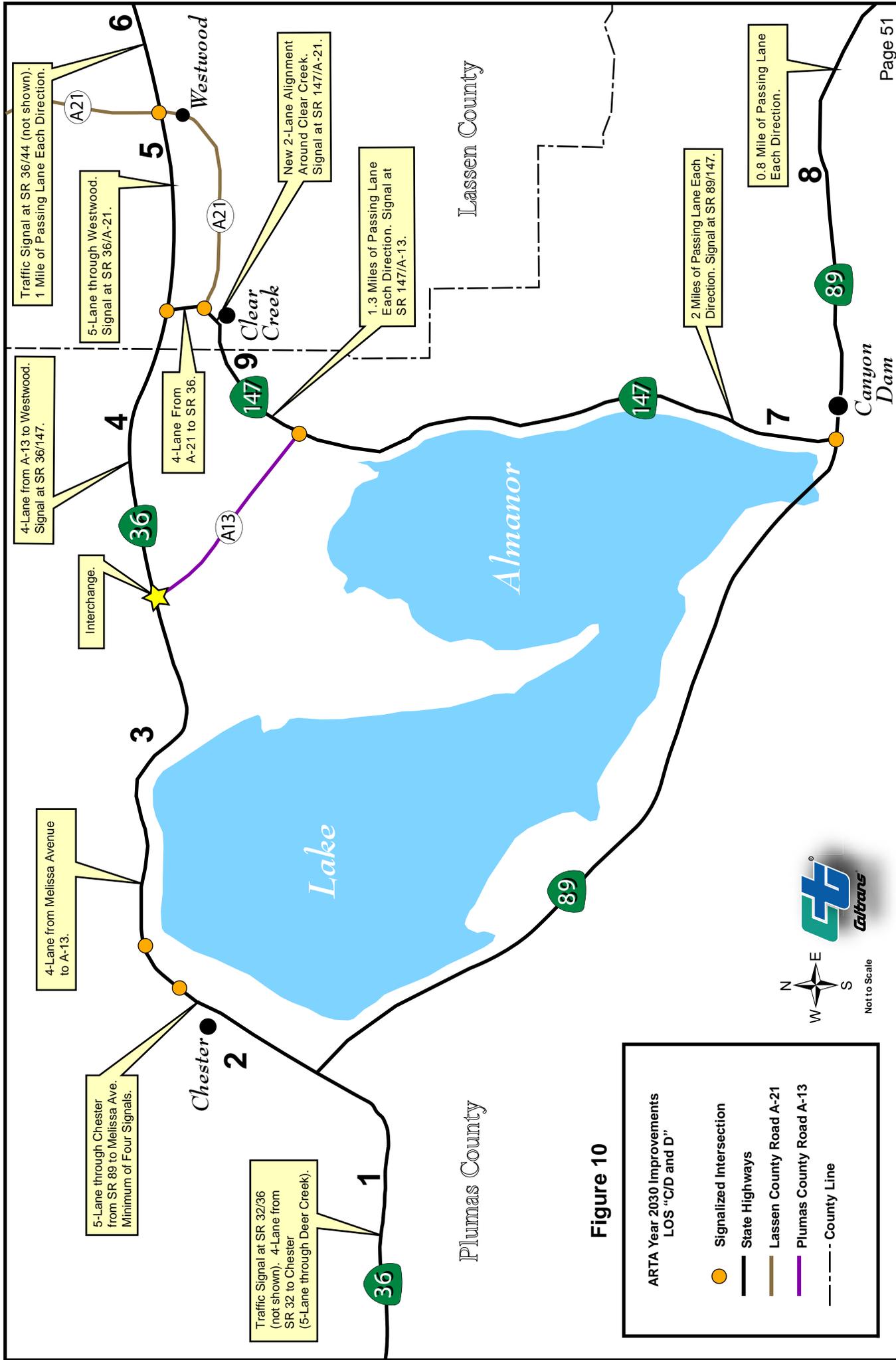
- Notes:
1. The LOS reflects full land use build-out, with no transportation system improvements.
  2. The LOS represents the turn movement with the longest delay.
  3. The intersections in Chester were not evaluated individually.
  4. The SR 147/CR A-21 intersection cannot be evaluated using HCM unsignalized analysis.

## Build-out Transportation System Improvements

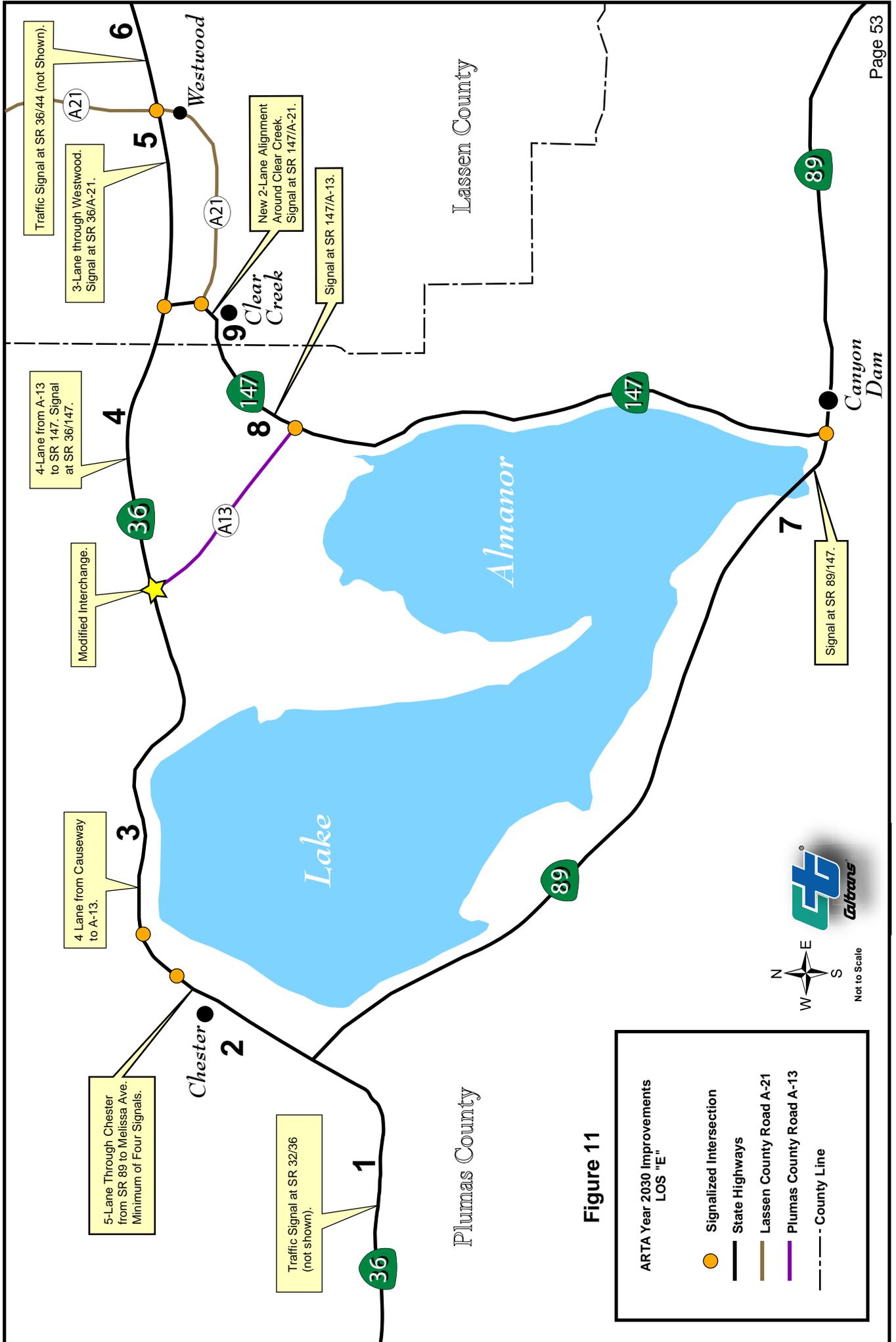
The ARTA study provides the forecasted roadway deficiency and improvement information for the LOS “C/D”, LOS “D” and LOS “E” scenarios. However, when the analysis was run for build-out it was determined that there was no difference in the resulting improvement needs for the LOS “C/D” and LOS “D” scenarios. Therefore, only one set of improvement needs is presented for these scenarios. The improvement needs for the LOS “E” scenario, however, do differ.

**Table 26** provides the transportation system improvements needed to maintain the roadway LOS at the “C/D” or “D” threshold while **Figure 10** displays the improvement locations. **Table 27** provides the transportation system improvements needed to maintain the roadway LOS at the “E” threshold while **Figure 11** displays the improvement locations.









**Figure 11**

**ARTA Year 2030 Improvements LOS "E"**

- Signalized Intersection
- State Highways
- Lassen County Road A-21
- Plumas County Road A-13
- - - County Line



## Build-out System Performance – With Improvements

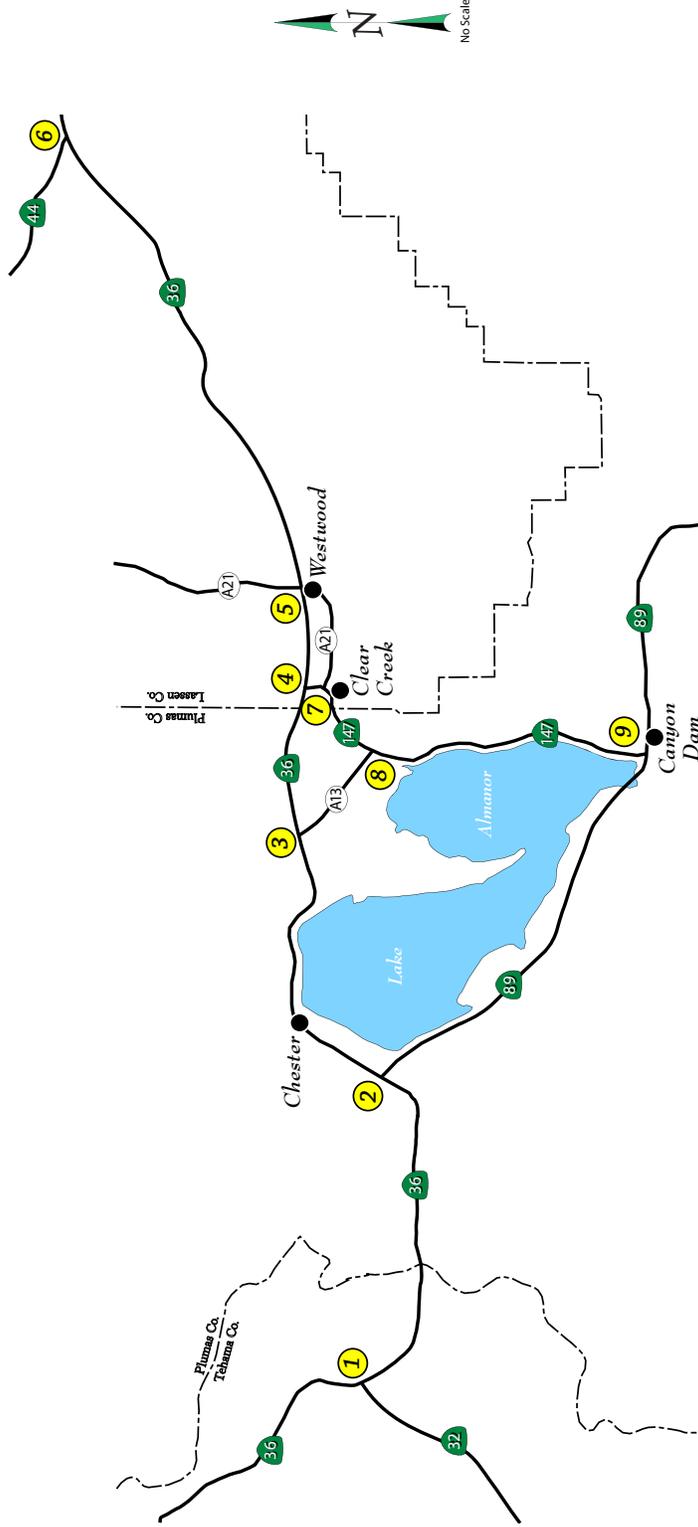
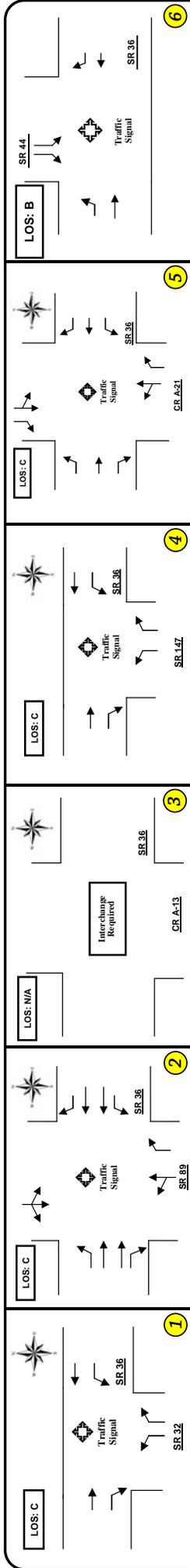
Table 28 shows that the build-out improvements required for the LOS “C/D” and LOS “D” standards will significantly improve the roadway LOS and relieve congestion.

Table 28 - Roadway LOS for Build-out, With Improvements for LOS “C/D” or LOS “D”						
Segment	County	Route	Road From	Road to	Build-out LOS No Improvement	Build-out LOS With Improvement
<b>State Route 36</b>						
1	THE/PLU	36	Jct. SR 32	Jct. SR 89	E	A
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	E	B
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	F	B
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	F	B
5	PLU	36	Melissa Avenue	Begin Passing Lane	F	C
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	E	C
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	F	C
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	F	B
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	E	B
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	E	A
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	E	A
<b>State Route 89</b>						
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	D	C
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	E	C
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	D	C
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	E	C
<b>State Route 147</b>						
1	PLU	147	Jct. SR 89	County Road A-13	E	D
2	PLU / LAS	147	County Road A-13	Begin 35 mph	E	C
3	LAS	147	Begin 35 mph	County Road A-21	F	B
4	PLU	147	County Road A-21	Jct. SR 36	E	B

**Table 29** shows the roadway LOS that will result with the improvements required for the LOS “E” standard. While highway operation is substantially better in locations where improvements are required, many locations will operate poorly (LOS E) because no improvements are required (only segments falling to LOS “F” are improved under the LOS “E” standard).

<b>Table 29 - Roadway LOS for Build-out, With Improvements for LOS “E”</b>						
Segment	County	Route	Road From	Road to	Build-out LOS No Improvement	Build-out With LOS E Improvement
<b>State Route 36</b>						
1	TEH/PLU	36	Jct. SR 32	Jct. SR 89	E	E
2	PLU	36	Jct. SR 89	Collins Drive (Begin 4-lane)	E	D
3	PLU	36	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)	F	B
4	PLU	36	North Fork Feather River Bridge	Melissa Avenue	F	B
5	PLU	36	Melissa Avenue	Begin Passing Lane	F	E
6-EB	PLU	36	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)	E	C
6-WB	PLU	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane	F	C
7	PLU/ LAS	36	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147	F	B
8	LAS	36	Jct. SR 147	Delwood Street (Begin 50 mph)	E	E
9	LAS	36	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)	E	E
10	LAS	36	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)	E	E
<b>State Route 89</b>						
1-NB	PLU	89	Forest Service Road 27N80	Jct. SR 147	D	D
1-SB	PLU	89	Jct. SR 147	Forest Service Road 27N80	E	E
2-NB	PLU	89	Jct. SR 147	Jct. SR 36	D	D
2-SB	PLU	89	Jct. SR 36	Jct. SR 147	E	E
<b>State Route 147</b>						
1	PLU	147	Jct. SR 89	County Road A-13	E	E
2	PLU / LAS	147	County Road A-13	Begin 35 mph	E	E
3	LAS	147	Begin 35 mph	County Road A-21	F	B
4	PLU	147	County Road A-21	Jct. SR 36	E	E

**Figure 12** identifies the intersection improvements required at build-out as well as the resulting LOS. As directed by the project Steering Committee, the intersection LOS standard was held at C/D in each of the three alternative roadway LOS scenarios. In almost all instances the different roadway LOS standards (“C/D”, “D”, “E”) had no impact on the improvements required at intersections in order to meet the intersection LOS standard of “C/D”. However, under the “E” roadway LOS standard, a “smaller” interchange at CR A-13/SR 36 was able to meet the LOS C/D intersection standard (this difference is reflected in the lower cost for the third section of SR 36 listed in Table 27).

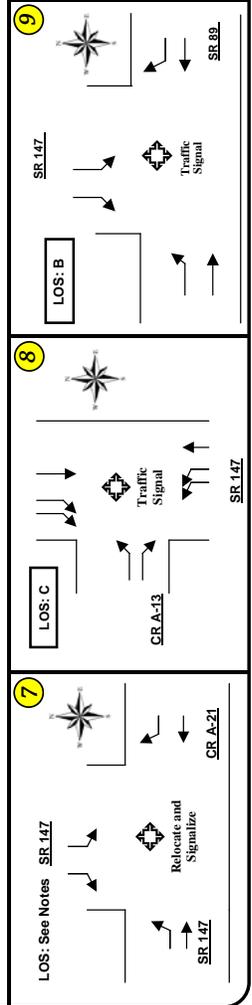


**Figure 12**  
**ARTA**  
**Build-Out**  
**Intersections**  
**Improvements**  
**and LOS**



**Notes:**

1. The LOS represents the overall intersection LOS.
2. Four traffic signals in Chester. Signal locations will be determined by future development levels and project locations.
3. The LOS and lane configuration for the SR 147/CR A-21 intersection are undefined as the intersection will need to be relocated prior to being signalized.
4. The required lane configuration is shown for each location.
5. The CR A-13/SR 36 intersection will require an interchange under build-out conditions.
6. Under LOS "E", a modified (smaller) version of the interchange at CR A-13/SR 36 is required.



## Analysis Summary – Build-out

The land use forecasts for the ARTA show that build-out of the Almanor Basin will include 11,000 new residential units, 7 million square feet of new commercial development, and full development of the Dyer Mountain Resort Project. The build-out traffic volumes will be 3-6 times higher than the current traffic volumes.

- For both the LOS “C/D” or “D” threshold, the necessary improvements are the same and estimated at approximately \$300 million (2007 dollars). The estimate represents total need (includes the year 2030 improvements) and is based on roadway improvements for nearly all roadway segments, including 10 traffic signals and one interchange.
- For the LOS “E” threshold, the necessary improvements are estimated at approximately \$165 million (2007 dollars). The estimate represents total need (includes the year 2030 improvements), with improvements to eight roadway segments, 10 traffic signals and one “minor” interchange.

**- CONCLUSION -**

## ARTA Conclusion

The ARTA has provided the forecasted land use, traffic, and improvement information needed for the future planning of the transportation system in the Almanor Basin. Key findings from the assessment are listed below:

- The Almanor Basin has experienced an increase in growth and development over the last ten years. Due to the popularity of the area, this growth is anticipated to continue.
- The Almanor Basin is anticipated to gain approximately 2,500 new residential units, 1.7 million square feet of commercial development, and Phase-1 of the Dyer Mountain Resort Project by the year 2030.
- The traffic volumes are estimated to almost double by the year 2030, resulting in a declining LOS and heavily congested traffic conditions.
- Congestion at the year 2030 will create the need for transportation system improvements, estimated to cost between \$54 million and \$126 million (2007 cost) depending on which roadway LOS threshold is selected for the Almanor Basin (“C/D”, “D”, or “E”).
- Build-out of the Almanor Basin will include approximately 11,000 new residential units, 7 million square feet of commercial, and full development of the Dyer Mountain Resort.
- The continued growth will adversely impact the transportation system and there will be substantial operational failures by build-out if significant transportation improvements are not implemented.
- Congestion at build-out will create the need for transportation system improvements, estimated to cost between \$165 million and \$300 million (2007 cost) depending on which roadway LOS threshold is selected for the Almanor Basin (“C/D” and “D” the former cost, LOS “E” the latter).

The ARTA received concurrence from the Lassen County Transportation Commission, Lassen County Board of Supervisors, Plumas County Transportation Commission, and Plumas County Board of Supervisors in 2008 (Resolutions of Concurrence are in **Appendix F**). The information in this report may now be considered during preparation and administration of General Plans, Regional Transportation Plans, Regional Transportation Improvement Programs and other local transportation funding programs.

The ARTA participants contracted with an independent consultant for additional research into existing and potential new transportation funding sources. This second report, the “ARTA Financial Analysis”, provides information regarding existing transportation funding, future transportation funding options, and potential funding strategies for the ARTA. The ARTA Financial Analysis was also completed in 2008.

**- APPENDICES -**

## Appendix A - Dyer Mountain Resort

Dyer Mountain Associates, LLC is developing a four-season resort in Lassen County, California. The resort will be located off of C.R. A-21 (Mooney Road), near the community of Westwood, California.

The potential start up phase for this project may include:

- 62,500 square feet of commercial, retail, and support facilities
- 435 residential units (including 30 lodging units)
- One 18-hole golf course
- A downhill skiing capacity of 5,000

The projected build-out of the Dyer Mountain Resort project may include:

- 607,900 square feet of commercial, retail, and support facilities
- 4,104 residential units
- Three 18-hole golf courses
- A downhill skiing capacity of 9,500

The trip generation for the Dyer Mountain Resort has been taken directly from the Dyer Mountain Resort Traffic Impact Analysis, January 2005, the Dyer Mountain Resort Re-circulated Draft Environmental Impact Report, July 2006, and the Dyer Mountain Resort Final Environmental Impact Report, June 2007. The trips have been applied directly to the road network, and were not included in the residential and commercial trip generation calculations for the ARTA. As requested by Lassen County, the trips have been applied as follows:

- The trips for Phase 1 of the development (485 external trips – summer PM Peak Hour) have been applied to the year 2030 traffic volumes.
- The trips for full project development (2,220 external trips – summer PM Peak Hour) have been applied to the build-out traffic volumes.

## Appendix B – Postmile Locations

Every location along a state highway has a unique identifier called a postmile. Postmiles do not have XY coordinates, but do have a real world location including a county, route, and postmile location. The postmile is a numeric value based upon the mileage measured from the county boundary, or from the beginning of a route. The postmile, when used in combination with the district, county, and route make each location of the state highway unique.

The following table displays the postmile locations for the roadways segments included in the ARTA.

Postmile Locations for the ARTA Roadway Segments						
Segment	County	Route	Postmile Back	Postmile Ahead	Segment Begin	Segment End
<b>State Route 36</b>						
1	TEH/PLU	36	99.93	6.28	Jct. SR 32	Jct. SR 89
2	PLU	36	6.28	8.15	Jct. SR 89	Collins Drive (Begin 4-lane)
3	PLU	36	8.15	8.84	Collins Drive (Begin 4-lane)	North Fork Feather River Bridge (End 4-lane)
4	PLU	36	8.84	9.18	North Fork Feather River Bridge	Melissa Avenue
5	PLU	36	9.18	12.35	Melissa Avenue	Begin Passing Lane
6-EB	PLU	36	12.35	13.93	Begin Passing Lane	Jct. Cnty Rd. A-13 (Big Springs Road)
6-WB	PLU	36	13.93	12.35	Jct. Cnty Rd. A-13 (Big Springs Road)	Begin Passing Lane
7	PLU/ LAS	36	13.93	0.76	Jct. Cnty Rd. A-13 (Big Springs Road)	Jct. SR 147
8	LAS	36	0.76	3.10	Jct. SR 147	Delwood Street (Begin 50 mph)
9	LAS	36	3.10	3.70	Delwood Street (begin 50 mph)	Jct. County Road A-21 (Pittville Road)
10	LAS	36	3.70	7.27	Jct. County Road A-21 (Pittville Road)	Goodrich Creek Bridge (#7-48)
<b>State Route 89</b>						
1-NB	PLU	89	21.32	29.59	Forest Service Road 27N80	Jct. SR 147
1-SB	PLU	89	29.59	21.32	Jct. SR 147	Forest Service Road 27N80
2-NB	PLU	89	29.59	R42.18	Jct. SR 147	Jct. SR 36
2-SB	PLU	89	R42.18	29.59	Jct. SR 36	Jct. SR 147
<b>State Route 147</b>						
1	PLU	147	0.00	7.37	Jct. SR 89	County Road A-13
2	PLU/LAS	147	7.37	0.56	County Road A-13	Begin 35 mph
3	LAS	147	0.56	1.14	Begin 35 mph	County Road A-21
4	PLU	147	1.14	1.79	County Road A-21	Jct. SR 36

## Appendix C – Information and Alternatives Considered

The following information and alternatives were considered during the preparation of the ARTA.

- While exploring improvement options for the year 2030 and build-out analysis periods, the participants were asked to identify a potential relief route for SR 36 through the community of Chester. Due to the proximity of Lake Almanor and the associated environmental constraints, feasible options were limited. One potential alternative is conversion of the Almanor Railroad into a roadway. This would provide an optional east/west throughway, but would require acquisition of the railroad from Collins Pine, extensive environmental mitigation, support from the business community, and support from the residents. This alternative was not further pursued as the ARTA analysis revealed that with improvement SR 36 would be able to accommodate the forecasted traffic volumes.
- The ARTA LOS “C/D” and “D” build-out analysis identifies the need for SR 36 to be upgraded from a 2-lane facility to a 4-lane facility from the junction of SR 32/SR 36 in Tehama County, to the junction of SR36/CR A-21 in Lassen County (approximately 25 miles). As further studies are conducted, and as the improvements are needed, the design options for both divided and undivided expressways should be evaluated.
- As reflected in the Year 2030 roadway analysis, even without improvement, SR 147 will operate at or above the level of service (LOS) threshold and does not meet the nexus criteria required for the collection of impact fees. Despite funding barriers, a separate planning level review was conducted to identify improvement alternatives that could be considered if a new funding source became available. Those alternatives include the addition of passing lanes and a partial realignment for the southern portion of SR 147, and a relief route for the community of Clear Creek. For more information please see the SR 147 Transportation Concept Report.

## Appendix D – Stakeholder Involvement

Stakeholder involvement requires effectively informing and educating the community, decision makers, and the media so that meaningful dialogue can ensue based on an accurate and thorough understanding of the issues. A public that is well informed regarding the transportation decision-making process will be a more effective partner in shaping the future for their community.

To maximize the benefit of public involvement, stakeholders should be involved throughout the planning process. A stakeholder is anyone who may be affected by a planning study or project. A stakeholder can be a property owner, a public agency, a community based organization, or an interested party. Including stakeholders throughout the planning process will:

1. Enhance decision-making
2. Encourage community members to share their views regarding transportation issues
3. Lead to the development of better products and services
4. Create projects that better reflect the interest and needs of the affected communities

The following list includes the ARTA working group and committee meetings as well as public workshops and public hearings.

Date	Location	Meeting Type	Date	Location	Meeting Type
10/18/04	Chester	Working Group	06/16/06	Susanville	Executive Steering Committee
11/08/04	Chester	Working Group	08/17/06	Chester	Working Group
12/20/04	Chester	Working Group	08/24/06	Chester	Public Workshop
02/28/05	Chester	Executive Steering Committee	09/27/06	Chester	Working Group
03/11/05	Chester	Working Group	10/18/06	Chester	Working Group
04/06/05	Chico	Butte County Association of Governments	10/31/06	Chester	Executive Steering Committee
05/02/05	Chester	Working Group	12/13/06	Susanville	Executive Steering Committee
05/12/05	Susanville	Executive Steering Committee	12/20/06	Teleconference	Working Group
08/03/05	Chester	Public Workshop	01/30/07	Chester	Working Group
08/19/05	Chester	Working Group	02/14/07	Chester	Executive Steering Committee
08/31/05	Chester	Executive Steering Committee	10/24/07	Chester	Working Group
09/26/05	Chester	Working Group	11/26/07	Susanville	Executive Steering Committee
10/19/05	Chester	Working Group	12/11/07	Susanville	Lassen County Board of Supervisors/ Transportation Commission joint Study Session
11/29/05	Chester	Working Group	12/17/07	Quincy	Plumas County Transportation Commission Workshop
01/25/06	Chester	Working Group	12/18/07	Quincy	Plumas County Board of Supervisors Workshop
01/31/06	Susanville	Executive Steering Committee	02/08/08	Susanville	Executive Steering Committee
02/23/06	Chester	Working Group	07/14/08	Susanville	Lassen County Transportation Commission
03/24/06	Chester	Working Group	08/12/08	Susanville	Lassen County Board of Supervisors
04/13/06	Chester	Working Group	08/18/08	Quincy	Plumas County Transportation Commission
04/19/06	Chester	Executive Steering Committee	11/04/08	Quincy	Plumas County Board of Supervisors
05/17/06	Chester	Working Group	12/16/08	Quincy	Plumas County Board of Supervisors
06/08/06	Chester	Working Group			

These meetings provided an opportunity for all interested parties to become informed, be involved, and collaborate. In addition to the individuals that participated in the public workshops, the following groups, agencies, and organizations were represented in this effort as well.

<b>Represented Groups, Agencies, and Organizations</b>	
Susanville Indian Rancheria	Lassen County Local Transportation Commission
Chester Progressive News	Lassen County Department of Public Works
Lake Almanor Associates	Lassen County Community Development Department
Feather River Resource Conservation District	Plumas County Planning Commission
Almanor Basin Watershed Advisory Committee	Plumas County Board of Supervisors
Dyer Mountain Associates, LLC.	Plumas County Local Transportation Commission
Mountain Meadows Conservancy	Plumas County Department of Public Works
Chester Elementary School	Plumas County Planning and Building Services
Feather River Rock	Caltrans, District 2
Lassen County Board of Supervisors	

In order to reach a variety of stakeholders, multiple methods of outreach were used including newspaper advertisements, radio announcements, and television announcements. Mailings were sent to community-based organizations, Native American Tribes, chamber business members, and community members who had attended prior transportation related workshops.

A website was also created and maintained for public use. The website included study information, maps, study documents, solicitation for comment, and contact information. The ARTA web address was made available at the public workshops, included on the mailings, and provided in the newspaper articles.

## Appendix E - Coordination with Other Plans

The participating agencies are responsible for the planning, construction, operation, and maintenance of local and State transportation facilities. These activities, however, are not performed in isolation. All roadways pass through lands that are under the jurisdiction of other governmental entities. The range of possibilities is wide and can include communities, cities, counties, redevelopment agencies, regional planning organizations, fire districts, air quality districts, Tribal governments, Federal resource agencies, and numerous additional State agencies. It is important to consider the plans, programs, and policies of these other agencies when developing a plan for the future of the transportation system.

The following planning documents were reviewed during the preparation of the ARTA.

- Lassen County Regional Transportation Plan
- Plumas County Regional Transportation Plan
- Tehama County Regional Transportation Plan
- Lassen County General Plan
- Plumas County General Plan
- Tehama County General Plan
- Plumas County Zoning Ordinance
- Lassen County Zoning Ordinance
- Lassen County Bikeway Master Plan
- Plumas County Draft Bicycle Transportation Plan
- Westwood / Clear Creek Area Plan (Lassen County)
- Project 2105 Relicensing Settlement Agreement – Upper North Fork Feather River Project (FERC Project No. 2105)
- Dyer Mountain Resort Traffic Impact Analysis, January 2005
- Dyer Mountain Resort Re-circulated Draft Environmental Impact Report, July 2006
- Project Scoping and Development Summary for Old Red Bluff Road (CA PFH 169-1-1), prepared for the Lassen National Forest by the Central Federal Lands Highway Division, September 2005
- Project Scoping and Development Summary for Mooney Road (CA PFH 117-1-5), prepared for the Lassen National Forest by the Washington Group International, August 2005
- State Route 89 Transportation Concept Report, California Department of Transportation – District 2, January 2002

## **Appendix F – Resolutions of Concurrence**

The ARTA received concurrence from the Lassen County Transportation Commission, Lassen County Board of Supervisors, Plumas County Transportation Commission, and Plumas County Board of Supervisors in 2008. The Resolutions of Concurrence follow.

LASSEN COUNTY TRANSPORTATION COMMISSION  
Resolution 08-13

Resolution of the Lassen County Transportation Commission (LCTC) concurring with the Almanor Regional Transportation Assessment

WHEREAS, the LCTC is the Regional Transportation Planning Agency for Lassen County and is responsible for regional transportation planning, which includes the functional relationship between the local road system and State highway system; and

WHEREAS, the California Department of Transportation, District 2 (District 2) is responsible for the planning, construction and operation of the State Highway system, which includes the functional relationship between the State highway system and local road system; and

WHEREAS, District 2 in cooperation with Lassen County and Plumas County has prepared the Almanor Regional Transportation Assessment (ARTA) which evaluates future development potential within the study area based on the existing General Plan for each County; and

WHEREAS, the ARTA evaluates the traffic volumes and transportation impacts likely to occur as a result of future development and identifies improvements to the transportation system at Year 2030 and Build-out that will be necessary to address those impacts; and

WHEREAS, District 2 and the Lassen County Transportation Commission agree that the ARTA is a reasonable and comprehensive evaluation of future conditions within the study area; and

WHEREAS, The LCTC hereby rescinds Resolution 08-05, replacing it with Resolution 08-13.

NOW, THEREFORE, BE IT RESOLVED by the Lassen County Transportation Commission that the ARTA presents a balanced and logical concept for the development and operation of the transportation system within the study area over the next twenty years.

BE IT FURTHER RESOLVED by the Lassen County Transportation Commission that the ARTA should be considered during preparation of the Regional Transportation Plan, Regional Transportation Improvement Program and Interregional Transportation Improvement Program.

BE IT FURTHER RESOLVED by the Lassen County Transportation Commission that the Executive Secretary is hereby authorized to sign the "Concurrence" block on the signature sheet for the ARTA.

LASSEN COUNTY TRANSPORTATION COMMISSION  
Resolution 08-13

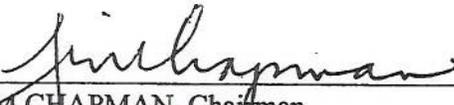
The foregoing resolution was passed and adopted at the July 14, 2008 meeting of the Lassen County Transportation commission by the following vote:

AYES            HANSON, FRANCO, CHAPMAN, KEEFER, BONHAM

NOES            NONE

ABSTAINED NONE

ABSENT        DAHLE, SAYERS

  
\_\_\_\_\_  
JIM CHAPMAN, Chairman  
Lassen County Transportation Commission

RESOLUTION OF THE LASSEN COUNTY BOARD OF SUPERVISORS  
CONCURRING WITH THE ALMANOR REGIONAL TRANSPORTATION  
ASSESSMENT

WHEREAS, the Lassen County Board of Supervisors is responsible for development and implementation of the General Plan for Lassen County, which includes Land Use and Circulation elements that address the relationship between land use and local and State transportation system; and

WHEREAS, the California Department of Transportation, District 2 (District 2) is responsible for the planning, construction and operation of the State Highway system, which includes the functional relationship between the State highway system and local road system; and

WHEREAS, District 2 in cooperation with Lassen County and Plumas County has prepared the Almanor Regional Transportation Assessment (ARTA) which evaluates future development potential within the study area based on the existing General Plan for each County; and

WHEREAS, the ARTA evaluates the traffic volumes and transportation impacts likely to occur as a result of future development and identifies improvements to the transportation system at Year 2030 and Build-out that will be necessary to address those impacts; and

WHEREAS, District 2 and the Lassen County Board of Supervisors agree that the ARTA is a reasonable and comprehensive evaluation of future conditions within the study area.

NOW, THEREFORE, BE IT RESOLVED by the Lassen County Board of Supervisors that the ARTA presents a balanced and logical concept for the development and operation of the transportation system within the study area over the next twenty years.

BE IT FURTHER RESOLVED by the Lassen County Board of Supervisors that the ARTA should be considered during preparation and administration of the General Plan for Lassen County.

BE IT FURTHER RESOLVED by the Lassen County Board of Supervisors that the Lassen County Transportation Commission Executive Director is hereby authorized to sign the "Concurrence" block on the signature sheet for the ARTA.

The foregoing resolution was adopted at a regular meeting of the Lassen County Board of Supervisors of the County of Lassen, State of California, held on the 12<sup>th</sup> day of August, 2008, by the following vote:

AYES: Supervisors Hanson, Pyle, Chapman, Keefer and Dahle  
NOES: None  
ABSTAIN: None  
ABSENT: None

Jack Hanson  
Chairman of the Board of Supervisors  
County of Lassen, State of California

ATTEST:  
JULIE BUSTAMANTE  
Clerk of the Board

BY Susan Osgood  
SUSAN OSGOOD, Deputy Clerk of the Board

I, SUSAN OSGOOD, Deputy Clerk of the Board of the Board of Supervisors, County of Lassen, do hereby certify that the foregoing resolution was adopted by the said Board of Supervisors at a regular meeting thereof held on the 12th day of August, 2008.

Susan Osgood  
Deputy Clerk of the County of Lassen Board of Supervisors

# PLUMAS COUNTY TRANSPORTATION COMMISSION

1834 EAST MAIN STREET, QUINCY, CA 95971

(916) 283-6268 § (916) 283-6323

## SUMMARY MINUTES

August 25, 2008

Meeting of the Plumas County Transportation Commission (PCTC) opens with roll call at 1:30 p.m. in the Conference Room of Plumas County Public Works Department. All Commissioners are in attendance: John Larrieu, Ole Olsen, Susan Scarlett, Sharon Thrall, Vice-Chairman Chuck Spencer and Chairman Robert Meacher. Also in attendance are: Traci Holt, Alisa Marble and Jimmy LaPlante – Alliance for Workforce Development (Operators of Plumas Transit Systems); Six staff members of Caltrans District 2, including: Michelle Millett, Chief – Community Planning; Brenda Schimpf – Acting Director; Lisa Little – Regional Planning Representative to Plumas County (replaces Linda Garner); Scott White, Chief – System Planning; Eric Orr - Project Manager and Kathy Coots – Maintenance Supervisor; Nanci Lutes of the East Quincy Merchants Association is also in attendance. Martin Byrne, Executive Director and John Mannle, Transportation Planner for the Commission are also present

.....

4. Request for Concurrence on Almanor Regional Transportation Assessment (ARTA), Presentation by Scott White, Chief – Office of System Planning, Caltrans District 2.

Executive Director Byrne introduces Scott White. Scott presents a power point presentation to all in attendance. The ARTA has been in process for 4-years. It is assessing the growth potential of the area based upon the existing General Plan and the corresponding effects on transportation infrastructure.

The assessment team consisted of a wide selection of leadership and staff from: Caltrans, Plumas County, Lassen County, Tehama County and Lassen National forest. The plan focuses on the year 2030 and the transportation infrastructure which will be required to handle increased traffic for various “levels of service”. Scott describes the levels of service in terms of the traffic conditions experienced by the motorist.

Scott informs that by 2030, according to the guidelines of existing zoning, we could see 2,500 new residential units and 1.7 million square feet of additional commercial development. “Dyer Mountain” development is anticipated within the study – at least through phase one.

The projected growth and various degrees of infrastructure improvements equates to major investments in infrastructure. The assessment forecasts expenditures on transportation infrastructure of between 50 and 80 million dollars. The plan discusses the various sources of funds, including increased taxes, development fees and other bonding measures.

After review and discussion. Scott requests the concurrence of the Transportation Commission on the findings of the study as relates to the growth projections and infrastructure needs. There is no request at this time for concurrence as to the specifics of obtaining or spending funds.

On a motion by Susan Scarlett to concur with the findings of the ARTA, a second by Sharon Thrall and unanimous vote of approval, the Transportation Commission concurs unanimously with the ARTA.

**RESOLUTION NO. 08- 7523**

**RESOLUTION OF THE BOARD OF SUPERVISORS  
OF THE COUNTY OF PLUMAS  
CONCURRING WITH THE  
ALMANOR REGIONAL TRANSPORTATION ASSESSMENT  
(ARTA)**

**WHEREAS**, the Plumas County Board of Supervisors is responsible for development and implementation of the General Plan for Plumas County, which includes Land Use and Circulation elements that address the relationship between land use and local and State transportation system; and

**WHEREAS**, the California Department of Transportation, District 2 (District 2) is responsible for the planning, construction and operation of the State Highway system, which includes the functional relationship between the State highway system and local road system; and

**WHEREAS**, District 2 in cooperation with Plumas County and Plumas County has prepared the Almanor Regional Transportation Assessment (ARTA) which evaluates future development potential within the study area based on the existing General Plan for each County; and

**WHEREAS**, the ARTA evaluates the traffic volumes and transportation impacts likely to occur as a result of future development and identifies improvements to the transportation system at Year 2030 and Build-out that will be necessary to address those impacts; and

**WHEREAS**, District 2 and the Plumas County Board of Supervisors agree that the ARTA is a reasonable and comprehensive evaluation of future conditions within the study area.

**NOW, THEREFORE, BE IT RESOLVED** by the Plumas County Board of Supervisors that the ARTA presents a balanced and logical estimate for the development and operation of the transportation system within the study area over the next twenty years.

**NOW, THEREFORE, BE IT FURTHER RESOLVED** by the Plumas County Board of Supervisors that the ARTA should be considered during preparation and administration of the General Plan for Plumas County.

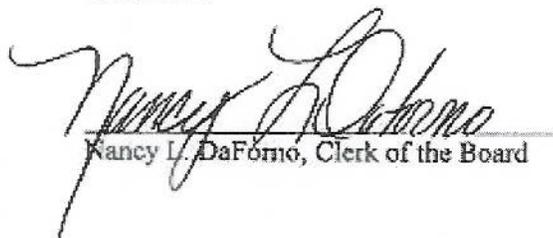
**NOW, THEREFORE, BE IT FURTHER RESOLVED** by the Plumas County Board of Supervisors that both the Director of Public Works and the Director of Planning and Building Services are hereby authorized to sign the "Concurrence" block on the signature sheet for the ARTA.

**DULY PASSED AND ADOPTED** this 16th day of December 2008 by the Plumas County Board of Supervisors by the following vote:

<b>AYES:</b>	Supervisors:	Powers, Thrall, Meacher, Olsen and Comstock
<b>NOES:</b>	Supervisors:	None
<b>ABSENT:</b>	Supervisors:	None

  
\_\_\_\_\_  
Rose Comstock, Chair

**ATTEST:**

  
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Nancy L. DaForno, Clerk of the Board