

**FIX FIVE PARTNERSHIP
TEHAMA COUNTY
IMPACT FEE NEXUS STUDY**

MAY 4, 2009



WWW.FIXFIVE.ORG

Acknowledgements:

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EXECUTIVE SUMMARY

This report presents an analysis of the need for additional capacity on Interstate 5 to support future development within Tehama County. This chapter provides a summary of the study's results and explains the background and purpose for the study.

PURPOSE OF THIS REPORT

Cities and Counties have the authority to impose impact fees by virtue of their police power, Article 11, Section 7 of the California Constitution. The exercise of that power is guided by the *Mitigation Fee Act*.¹ The purpose of this report is to provide a single nexus analysis that all local agencies in Tehama County can use to adopt an impact fee and ensure that development within their jurisdictions provides legally adequate mitigation of its impacts on mainline Interstate 5 within the County. The nexus analysis presents the legally defensible development impact fee amounts allowed under the *Mitigation Fee Act* in Chapter 4. This report also contains an analysis in Chapter 3 of lower impact fee amounts that rely on funding contributions from state and federal sources and are recommended for adoption.

The Fix Five Partnership (Partnership) is an inter-regional joint venture of public agencies with stakeholder participation in Tehama and Shasta Counties brought together by a common need to study and address the impending deterioration of traffic conditions on I-5. Although this report is focused on the improvement needs to accommodate growth in Tehama County, a parallel effort is also underway in Shasta County. The Shasta County programmed will be summarized in a separate report.

The Partnership intends to provide a comprehensive and proactive approach to addressing congestion on I-5. For the first time, congestion on I-5 is within a 30-year planning horizon and as a result local agencies are being responsive by developing a funding mechanism for a third lane on I-5. The development impact fee presented in this report is merely one piece of that approach and is not intended to provide the entirety, or even the majority, of the funding that will be needed for the planned improvements.

BENEFITS OF THE FIX FIVE PARTNERSHIP

The Partnership provides a vehicle for state and local agencies to fund a comprehensive program that mitigates the impacts of growth by adding capacity to mainline I-5. The stated goals of the Partnership are as follows:

1. Maintain an “acceptable and manageable” level-of-service standard;
2. Enhance local, regional, and interregional economic opportunity by promoting access, mobility, and goods movement;
3. Reduce vehicle collisions and improve safety;

¹ California Government Code, §§66000-66025.

4. Maximize leveraging of state and federal funds by showing a strong local consensus that I-5 is the backbone of our region, and a local commitment to I-5 improvements;
5. Engage the public regarding improvement needs;
6. Establish a fair-share funding strategy considering local, regional, state and federal resources;
7. Establish a framework for ongoing regional decision-making that actively involves transportation stakeholders, particularly the traveling public, development community, and civic leaders;
8. Streamline and coordinate CEQA reviews regarding I-5 development impacts; and
9. Provide traffic data, design details, and funding information for use in several local efforts including general plans, transportation plans, redevelopment plans, the regional traffic model, CEQA studies, capital programs, blueprint studies, and performance indicators.

PUBLIC PARTICIPATION

From the beginning, the Partnership has had an open and transparent outreach process. All of the agencies have reached out to stakeholders and the public during this study. The outreach process has and will continue to involve public open houses, creation of a Fix 5 website, presentations to elected officials during council and board meetings, presentations and regular updates during regional transportation planning agency meetings, presentations to various service clubs and organizations, a future transportation leadership summit, and Executive Committee and Technical Advisory Committee meetings. Public participation has also included local meetings with chambers of commerce members, realtors, and developers.

See Appendix 1 for further detail on the Fix Five outreach process.

STUDY RESULTS

This study involved the following major components:

1. A review of planned residential and nonresidential development in Tehama County through 2040; that found average annual growth rates of 1% to 2% depending on the development type and location;
2. An analysis of the impacts of new development on traffic levels of service² on I-5 revealing that almost every segment of I-5 is projected to reach failing levels of service by 2030 if no capacity enhancements are made;

² This report relies primarily on level of service (LOS) standards to establish a nexus between projected new development in Tehama County and the need for additional capacity in the form of a new lane on I-5. LOS is calculated based on the volume of traffic on a roadway or at an intersection compared to the capacity of the roadway or intersection. LOS “A,” “B,” and “C” suggest that delays are insignificant to acceptable. LOS “D” suggests tolerable delays though traffic is high and some short-term back-ups occur. LOS “E” and “F” suggest restricted speeds and significant delays as traffic volumes meet or exceed the capacity of the facility. Minimum acceptable LOS standards vary by agency within the Partnership but are generally within the C-D range.

3. Generation of an estimate of the costs of adding a third lane of travel in each direction along I-5, estimated at \$314 million for the 36-mile project span;
4. A review of the sources available to fund the needed I-5 improvements and the share of total costs that would remain to be funded by development impact fees;
5. A nexus study used to determine the fair share allocation of costs that could defensibly be charged through an impact fee in compliance with the *Mitigation Fee Act*.

The recommended fee amounts that are detailed in this report are based on the results of step four above and are well below the maximum defensible fee amounts. The Partnership intends to implement the lowest fees possible and is therefore recommending fees that are only high enough to fill the funding gap that remains after a consideration of all other available sources. This approach differs from that of most regional traffic impact fees, which seek recoup the entire share of project costs attributable to new development through impact fees.

Based on the results of step two, the Partnership has determined that traffic conditions will fail to meet acceptable levels of service within the next 20 years if no improvements are made to I-5. Projected levels of service (assuming no improvements made to I-5) are shown in **Table E.1**.

Table E.1: 2005 and 2030 Level of Service and Traffic Volumes

Section	Section Location for Third Lane	Postmiles ¹	Peak Hour Level of Service ²		
			2005	2030 Un-improved	2030 Improved
<i>Tehama County</i>					
1A	Liberal Avenue Overcrossing to Corning Road Overcrossing	5.8 to 9.0	B	E	C
1B	Corning Road Overcrossing to Thomes Creek Bridge	9.0 to 12.1	B	F	C
2	Thomes Creek Bridge to Elder Creek Bridge	12.1 to 16.9	B	E	C
3	Elder Creek Bridge to Coyote Creek Bridge	16.9 to 22.5	B	E	C
	Coyote Creek Bridge to South Red Bluff ³	22.5 to 24.5	A	C	C
4	South Red Bluff to North Red Bluff	24.5 to 28.4	C	F	D
5	North Red Bluff to Jelly's Ferry Overcrossing	28.4 to 32.2	C	F	C
6A	Jelly's Ferry Overcrossing to Nine Mile Hill Overcrossing	32.2 to 36.4	B	F	D
6B	Nine Mile Hill Overcrossing to Snively Road Overcrossing	36.4 to 38.7	C	E	C
6C	Snively Road Overcrossing to Bowman Road Overcrossing	38.7 to 41.5	C	E	C
7(T)	Bowman Road Overcrossing to Tehama County Border	41.5 to 42.0	C	E	C

¹ Postmile 0.0 is the south border of the county.

² "2030 Unimproved" LOS assumes no improvements made to I-5. "2030 Improved" assumes the addition of the third lane in each direction.

³ Section already improved to six lanes.

Source: Caltrans District 2, Office of System Planning.

The Partnership's recommended impact fees are shown below in **Table E.2**. The proposed fees are broken down by major land use category. The three categories of commercial fees represent variations in the impacts on I-5 generated by different types of development. Additional information on the land use categories is contained in Chapter 3.

Table E.2: Fix Five Impact Fee Schedule

Land Use	Cost per		EDU Factor	Fee ¹	Fee / Sq. Ft.
	EDU				
Tehama County and Incorporated Cities					
<i>Residential</i>					
Single Family	\$	1,894	1.00	\$ 1,894	N/A
Multi-family		1,894	0.80	1,515	N/A
<i>Nonresidential</i>					
Neighborhood Commercial	\$	1,894	1.05	\$ 1,990	\$ 1.99
Regional Commercial		1,894	2.51	4,758	4.76
High-Generation Commercial		1,894	4.34	8,222	8.22
Office		1,894	2.20	4,164	4.16
Industrial		1,894	0.81	1,529	1.53

¹ Fee per dwelling unit for residential or per 1,000 building square feet for nonresidential.

Sources: Tables 5 and 8, Willdan Financial Services.

As noted, the fees represent only the amounts needed to achieve a fully funded improvement program, given all other available sources, and are lower than the maximum defensible fees that were established in the nexus analysis in Chapter 4. The nexus analysis of the cost shares attributable to new development yielded justifiable costs per equivalent dwelling unit (EDU) of \$4,935 for Tehama County. Although the nexus analysis determined the maximum defensible fees under the *Mitigation Fee Act*, the table above shows the proposed Fix Five fees, which are lower.

IMPLEMENTATION OF THE FIX FIVE IMPACT FEES

Implementation of the Fix Five fee will be governed by an operating agreement agreed to by all agencies in the County. In this document, Caltrans will note that the payment of Fix Five mitigation fees by new development is deemed an acceptable mitigation of cumulative impacts on I-5 by new development. This finding will eliminate the need for developers to perform costly project-by-project traffic studies of their cumulative impacts on I-5. Fix Five funding is only for the implementation of a third lane on I-5 in each direction. Interchange improvements are not included in the program. Thus, the Fix Five program does not alleviate the need for new development to study or contribute for impacts related to local streets, roads, interchanges, or other facilities.

Fix Five fees will be collected locally by each jurisdiction and deposited in locally-controlled fund for I-5 mainline improvements and cannot be diverted by the State or local agencies for other purposes. The Partnership will make recommendations for the phasing of projects and the expenditure of fee revenues, but expenditures must be authorized by the local legislative body.

1 . INTRODUCTION AND SUMMARY

This report summarizes an analysis of the need for additional capacity on a 36-mile stretch of Interstate 5 to support future development within Tehama County. This chapter provides an overview of the project, background on the Fix Five Partnership, and a review of the methodology used to complete the nexus study.

PROJECT OVERVIEW

Purpose of this Study

The Fix Five Partnership (Partnership) has undertaken a comprehensive study of Interstate 5 (I-5) in Shasta and Tehama Counties with the intent of assessing and alleviating congestion before the problem reaches serious levels. The Partnership, comprised of a diverse assortment of agencies, has reached consensus on a series of key point related to I-5.

The Partnership finds as follows:

- ◆ **I-5 Importance:** I-5 is vital to the local economy, mobility and goods movement. All Partnership jurisdictions have a vested interest in the Partnership effort. Congestion on I-5, if left unchecked, could have grave impacts on the local economy.
- ◆ **Congestion:** A variety of indicators and data sources show significant congestion on I-5 within 30 years. For the first time in the region, substantial congestion is expected in the foreseeable future.
- ◆ **Funding:** State and federal resources are not adequate to fund needed improvements. Although state and federal grants will fund a majority of the planned I-5 improvements, additional capacity on I-5 will not be feasible without local contributions.
- ◆ **Accountability:** I-5 is a state and federal problem as well as a local problem. A key component of growing congestion is local development. By recognizing this local share of responsibility, local jurisdictions can successfully team with state and federal entities to fully fund needed improvements.
- ◆ **Leveraging:** Projected improvement needs are substantial and can only be completed through a local/state/federal partnership since all parties are seeking to leverage funds from one another. Local, state, and federal agencies are most willing to devote resources when they have confidence that those resources will be leveraged by other funding sources. Consequently, a comprehensive partnership is the most effective mechanism for assuring success of a regional infrastructure project of this nature.
- ◆ **Building Industry Participation:** Participation from new development to fund a portion of the improvement need is critical to the success of the Partnership; it should be in the long-term interest of the building industry to avoid California Environmental Quality Act (CEQA) lawsuits, avoid congestion affecting our ability to grow, and to avoid more costly mitigation in the future. Development

- impact fees are the most equitable and least disruptive way for the building industry to pay some portion of its fair share.
- ◆ **Efficiency:** The improvements to I-5 proposed by the Partnership are a cost-effective use of funds. Adequate right-of-way already exists, and such freeway improvements can move large volumes of local traffic at high speeds. Furthermore, improvements to I-5 have the highest potential in the region to leverage other funds since this is also a high priority for state and federal agencies.
 - ◆ **Early Action:** Early action to finance I-5 improvements will result in a reduced burden to future development and public agencies in the long-term. Failure to act promptly will create system deficiencies that would severely hamper future efforts to improve I-5. Allowing the creation of deficiencies will impose legal limits on future local funding options requiring consideration of general fund revenues to complete many of the improvements now contemplated.
 - ◆ **Time Value of Money:** Dollars collected today have greater purchasing power. Leveraging funds and early action demonstrates fiscal responsibility and accountability to taxpayers.

Purpose of this Report

Cities and Counties have the authority to impose impact fees by virtue of their police power, Article 11, Section 7 of the California Constitution. The exercise of that power is guided by the *Mitigation Fee Act*.³ The purpose of this report is to provide a single nexus analysis that all local agencies in Tehama County can use to adopt an impact fee and ensure that development within their jurisdictions provides legally adequate mitigation of the impacts on Interstate 5 within the County.

This report documents the required statutory findings under California's *Mitigation Fee Act* (see Chapter 6). The nexus analysis presents the legally defensible development impact fee amounts allowed under the *Mitigation Fee Act*. This report also contains an analysis in Chapter 3 of lower impact fee amounts that could be imposed depending on the amount of outside funding secured from state and federal sources.

The Partnership intends to provide a comprehensive and proactive approach to addressing congestion on I-5. Consequently, this report proposes a fully funded program to add capacity throughout the Fix Five region. The development impact fee presented in this report is merely one piece of that approach and is not intended to provide the entirety, or even a majority, of the funding that will be needed for the planned improvements.

Why a Regional Fee to Expand I-5?

A regional partnership is the appropriate entity for addressing future conditions on I-5. Both the causes and solutions to the problem are regional by nature. Future congestion primarily will be caused by increases in traffic flows associated with new development. Furthermore,

³ California Government Code, §§66000-66025.

while individual jurisdictions are responsible for the construction and expansion of local transportation infrastructure, no one jurisdiction has the resources to fund meaningful improvements on a large stretch freeway common and critical to each jurisdiction.

Given the Partnership's findings and the realities of the current funding climate for highway system improvements, a regional impact fee is a critical component of a successful program to fund the required capacity enhancements to I-5. Though a regional impact fee will ultimately comprise a small piece of the total funding picture, it is necessary because:

- ♦ **I-5 is Not Merely a Federal Problem:** Although interstate highway improvements were once the responsibility of the federal government, it has become necessary in recent years to combine both local and non-local contributions to interstate highway improvements. This is the result of both an increasing scarcity of federal and state funds as well as changes in the way federal and state funding is disbursed. Priority funding is now increasingly directed toward regions that also identify local funding components. A significant portion of the impending congestion will be the result of new development within Tehama County. CEQA requires local development to mitigate cumulative impacts to the highway system for many development projects. As detailed above, the region also stands to benefit greatly from the planned improvements because I-5 is the backbone of the local transportation infrastructure system. Because both the negative impacts of congestion and the benefits of enhanced capacity will be predominantly local, it is reasonable that local agencies bear some responsibility for the costs.
- ♦ **Acting Now is the Most Effective Way to Address Future Congestion Problems:** Other regions in California have commonly waited until congestion begins to significantly impact the local economy before seeking comprehensive solutions. Reasons for these delays include misguided beliefs that state and federal sources will provide a funding bailout as well as reluctance to enact a local funding source. Unfortunately, allowing congestion to develop results in the creation of the transportation system deficiency that is considerably more difficult to address. Regions that have addressed congestion reactively rather than proactively have faced options that are far less appealing than those being considered by the Partnership, such as sales taxes for transportation and impact fees that are many times higher than those proposed in this report. Tehama County has learned from the mistakes of other regions and is now seeking to address congestion before it becomes a crisis.
- ♦ **The Proposed Fix Five Impact Fee Will Not Be a Deterrent to New Development:** Because the Partnership has chosen to address impending congestion proactively, the fees proposed in this report are unlikely to have substantial impacts on regional growth in the future. The proposed fees are lower than most regional traffic impact fees in the state and will allow the region to remain competitive in attracting new development. If the Partnership were to wait several years before attempting to address needed I-5 improvements, the impact fees would likely be considerably higher than those proposed in this report. Moreover, the negative impacts of the fees will be relatively insignificant compared to the potential impacts of congestion if I-5 were left unimproved. A fee burden analysis prepared by the Partnership found that, in general, the

addition of the Fix Five fees would not substantially increase the amount of one-time fees already paid by new development.⁴ Expanded capacity on I-5 will contribute to providing the transportation infrastructure necessary to support new development.

Importance of I-5 to the Region

I-5 is commonly described as the backbone of the Shasta/Tehama region. Residents rely on I-5 for access to jobs, commerce, and recreation. According to a recent survey conducted in Shasta and Tehama Counties, 83 percent of voter households use Interstate 5 on a weekly basis. Close to half of voter households use the highway on a daily basis.⁵ Businesses rely on I-5 for access to goods and customers. Accordingly, gridlock on I-5 can have negative impacts on both quality of life and the local economy.

According to the 2000 United States Census, in 1999, 2,026 residents of Shasta County were employed in Tehama County. Conversely, 2,464 residents of Tehama County were employed in Shasta County.⁶ This data suggests that roughly 9,000 intra-regional trips crossed the county line daily. That figure has likely increased since 1999 and is certain to increase substantially in the future. Although the Census does not provide journey-to-work data by city, many additional commute trips rely on I-5 within one of the two counties. With few efficient parallel routes available, I-5 is the primary means of north-south access throughout much of the region.

A 2006 study by TRIP found that, by reducing travel times, the Interstate system saves each California resident 74 hours of travel time annually. Those time savings translate into millions of dollars saved through increased productivity, fuel efficiency, and traffic safety.⁷ All of these benefits will be reduced in Shasta and Tehama Counties if level of services degrades on I-5. Failure to act, then, creates the risk of introducing increased inefficiencies to the local economy.

Although development impact fees are never desirable when they can be avoided, the deterioration of traffic conditions on I-5 would ultimately result in a far greater disincentive to new development. The viability of residential developments will be threatened if potential residents know that they will face major congestion when attempting to reach jobs and services. Likewise, businesses will be less likely to locate in areas where they will have difficulty efficiently reaching goods and customers.

Streamlining of the CEQA Review Process

Among the most important benefits of the Fix Five study is its ability to streamline the CEQA review process for new development. The Fix Five analysis and fees can be used as a strategy to address cumulative impacts. This will promote equity amongst developers; simplify the review process, and increase efficiency and predictability for developers.

⁴ Fix Five Partnership. "A Comparative Survey of Fees Charged to New Development." September 28, 2007.

⁵ Godbe Research, August 2007.

⁶ United States Census, 2000. "Resident County to Workplace County Flows for California."

⁷ TRIP. "The Interstate Highway System in California." June 29, 2006.

Because Caltrans has been an active member of the Partnership and has taken part in the analysis contained in this report, Caltrans has pledged to accept the fees contained herein as an acceptable mitigation of development’s cumulative impacts on I-5. Therefore, if these fees are adopted, new development will be able to avoid an expensive and time-consuming process of assessing and mitigating impacts on a project-by-project basis. These changes can make the Fix Five region a more attractive place to develop.

If the Fix Five impact fees are not adopted, Caltrans will continue its current practice of requiring project-specific impact analyses and developments may not be able to rely on the assumptions and calculations contained in this report to determine appropriate levels of mitigation. The assumptions used in this study are appropriate when the fee is assessed on all development rather than a limited subset of projects such as major projects for which an environmental impact report is required under CEQA.

The following table summarizes the benefits to the CEQA review process that would result from full implementation of the Fix Five impact fees.

CEQA Review Process

Developer Benefits	Current Process Without Fix Five Fees	Proposed Process With Adoption of Fix Five Fees
EFFICIENCY	Developers conduct extensive (and expensive) traffic studies to assess cumulative impacts to I-5.	Developers can use this study (if adopted) to determine impacts to I-5 eliminating the need to spend time and this type of traffic study.
COST SAVINGS	Mitigation payments based on proportional impact analysis.	Fees are based only on the recommended fee amounts, which are lower than the full impact amounts. Reduced need for costly traffic studies.
PREDICT-ABILITY	The amount of mitigation payments is unknown until the traffic study is completed.	The impact fees provide predictability, allowing developers greater cost-certainty and equitable treatment throughout the participating agencies.
RISK OF LITIGATION	High risk of litigation through the EIR and CEQA review.	Minimal threat of litigation because Caltrans will accept payment of impact fees to mitigate cumulative impacts.
FAIRNESS	Mitigation requirements vary based on development type and applicable environmental regulations.	All new development will pay only its fair share based on this analysis.

Sources: Caltrans; Willdan Financial Services.

BACKGROUND ON THE FIX FIVE PARTNERSHIP

The Partnership is an inter-regional joint venture of public agencies in Tehama and Shasta Counties brought together by a common need to study and address the impending deterioration of traffic conditions on I-5.

The partnership is proposed to be comprised of the following agencies:

- ◆ Shasta County Regional Transportation Planning Agency (RTPA)
- ◆ Tehama County Transportation Commission (TCTC)
- ◆ Caltrans District 2
- ◆ Federal Highway Administration (FHWA)
- ◆ Shasta County
- ◆ Tehama County
- ◆ City of Anderson
- ◆ City of Corning
- ◆ City of Red Bluff
- ◆ City of Redding
- ◆ City of Shasta Lake

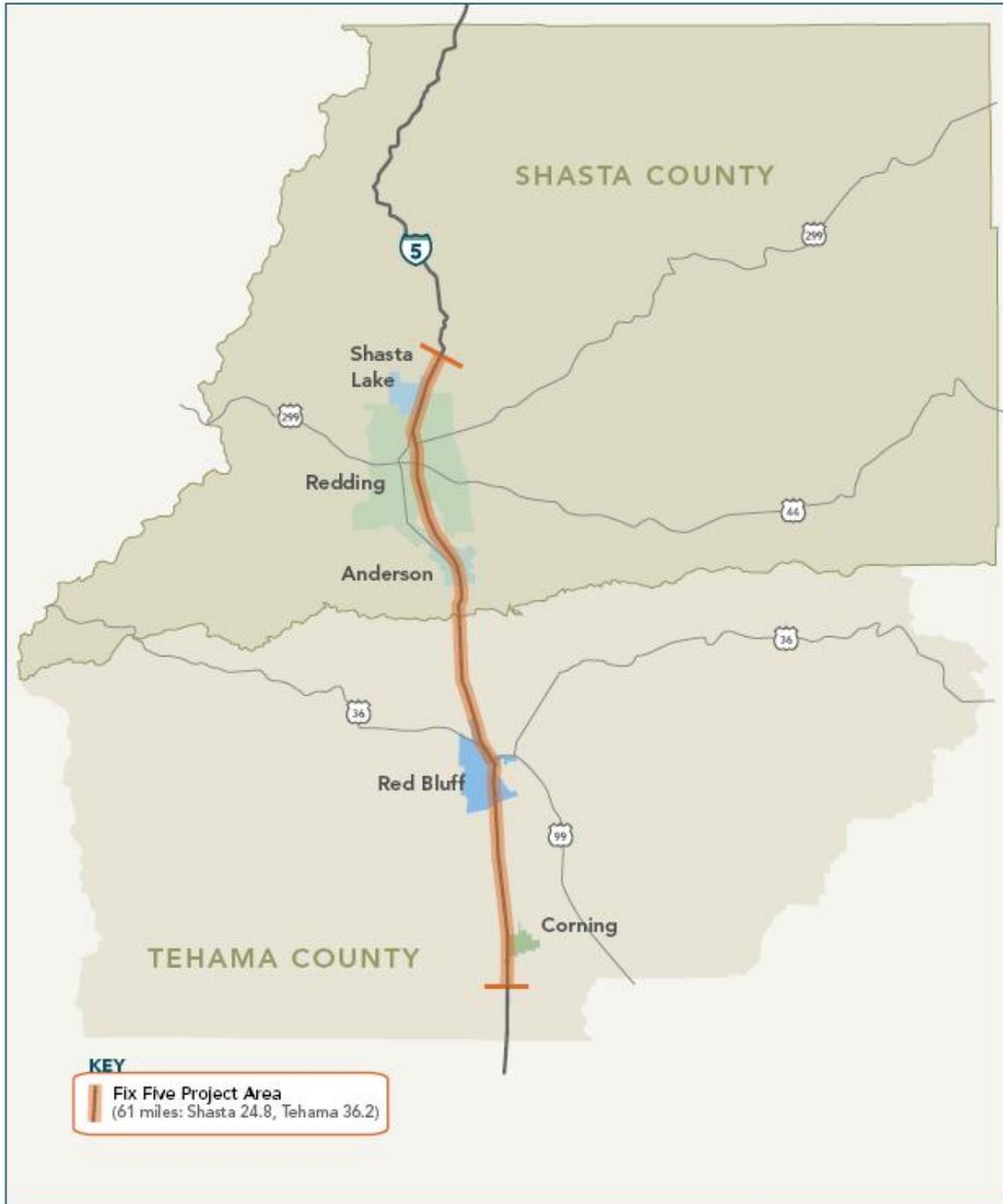
This study is funded by a grant from the State Planning and Research Program.

FIX FIVE PROJECT AREA

The study area for the Partnership is a 61-mile stretch of I-5 that runs from just south of the City of Corning in Tehama County to just north of the City of Shasta Lake in Shasta County. The Liberal Avenue interchange is the southern boundary of the project area and the northern boundary is the Mountain Gate interchange. A map of the project area is shown in **Figure 1**.

Of the project area, 36.2 miles are in Tehama County, and 24.8 miles are in Shasta County. Project costs are accordingly higher in Tehama County, because of the additional 11.4 miles of I-5 and the need for several expensive bridge structures needed to support the widening of I-5 (Sacramento River bridges in Red Bluff). In addition there is a lower level of projected growth in Tehama County to spread the cost of improvements over. Please see Table 5 later in this report, as well as Appendix 2, for more detail on project costs. This report focuses on the 36-mile stretch of the Interstate 5 within Tehama County.

Figure 1: Fix 5 Partnership Project Area



The primary capacity-enhancing objective of the Partnership is the construction of a third lane of travel in each direction along the project span. Funding for the entire 61-mile stretch, however, will not be required. Some segments have already been expanded to six lanes (three in each direction) through prior projects. One segment, the Cottonwood Truck Climbing Lanes in Shasta County, is slated for future construction but has already been fully funded

due to Partnership efforts. Please see Appendix 3 for a letter from the Director of Caltrans detailing the funding for the Cottonwood Truck Climbing Lanes and its relationship to the Fix Five efforts.

This report considers only the cost of mainline expansion of the 36.2-mile project span of I-5 within Tehama County. Interchange and parallel route improvements are not included in this analysis. More detail on the planned improvements and project costs is presented in the next chapter.

APPROACH

Impact fees are calculated to help fund the cost of facilities required to accommodate growth. The *Mitigation Fee Act* requires that any agency adopting impact fees establish a reasonable nexus between the projected amount of new development, the public improvements needed to serve that development, and the amount of the fees. The six steps followed in this development impact fee study and described in detail in the sections that follow include:

1. Prepare growth projections;
2. Identify facility standards;
3. Identify alternative funding available from non-local sources;
4. Determine the minimum impact fee amounts required to create a fully funded program in light of the estimated contributions from non-local sources;
5. Determine the amount and cost of facilities required to accommodate new development based on facility standards and growth projections to ensure that recommended fees are defensible under the *Mitigation Fee Act*; and
6. Calculate the public facilities fee by allocating the remaining unfunded cost per unit of development.

This report relies primarily on level of service (LOS) standards to establish a nexus between projected new development in Shasta and Tehama Counties and the need for additional capacity in the form of a new lane on I-5. LOS is calculated based on the volume of traffic on a roadway or at an intersection compared to the capacity of the roadway or intersection. LOS “A,” “B,” and “C” suggest that delays are insignificant to acceptable. LOS “D” suggests tolerable delays though traffic is high and some short-term back-ups occur. LOS “E” and “F” suggest restricted speeds and significant delays as traffic volumes meet or exceed the capacity of the facility. Minimum acceptable LOS standards vary by agency within the Partnership but are generally with the C-D range.

In general, the project span is presently meeting the adopted LOS standards of the partner agencies. Given the projected impacts of new development, however, I-5 is forecast to fail to meet local and Caltrans LOS standards by approximately 2030.

Determination of Impact Fee Zones

The Partnership does not anticipate implementing countywide impact fee that would be charged to all new development throughout the County. Rather, the Partnership proposes to

limit the Fix Five fee to new development in those portions of Tehama County that are most dependent on I-5 and that will generate essentially all regional growth. The result of this approach is a fee zone that incorporates the development projects that cause the traffic impacts to the transportation system and create the need for expanded capacity.

Typically, impact fee zone boundaries are designed to achieve the following objectives:

1. Encompass the vast majority of projected development that will generate the need for the traffic improvements outlined in this report;
2. Avoid arbitrary boundary effects that would cause adjacent and presumably similar developments to pay fees at vastly different rates; and
3. When reasonable, conform to existing local planning area boundaries to simplify fee analysis and implementation.

Willdan Financial Services established the boundaries of the Fix Five fee zones to capture the maximum share of trips from new development along the project span consistent with the above objectives.

Tehama County's current General Plan update has led to the creation of five planning areas. Of those areas, three comprise the north, central and south sections of what is called the "I-5 corridor." The two remaining areas cover the eastern and western areas of the County that are likely to see very little new development. Consequently, the three I-5 corridor planning areas, when combined into one zone, form a fee zone that conforms to the objectives outlined above. The Tehama County fee zone is estimated to capture roughly 95% of new development in the County based on estimates from County staff.

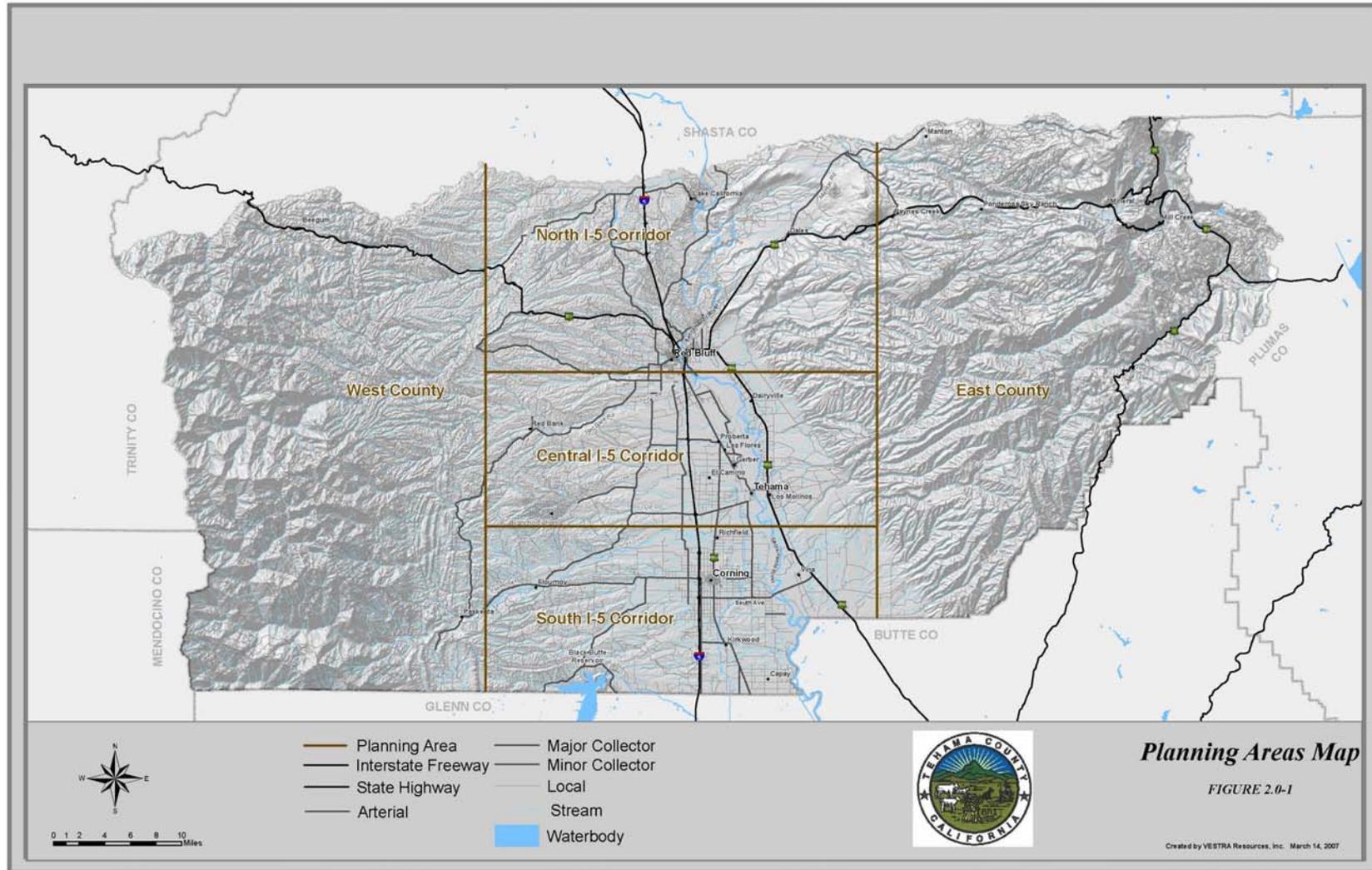
The Tehama County fee zone's purpose is to capture the vast majority of projected new development and to eliminate the need to implement and collect a fee in outlying areas that have an insignificant impact on I-5. The I-5 corridor zone in Tehama County covers about a third of the County's land area.

A map of the impact fee zones in Tehama County is shown in **Figure 2**. **Figure 3** shows a more detailed depiction of the fee zones consistent with the five planning areas defined in the Tehama County General Plan.

Figure 2: Fix Five Impact Fee Zone



Figure 3: Tehama County Planning Areas (fee zone is the three I-5 Corridor Planning Areas)



2. GROWTH PROJECTIONS AND NEED FOR TRANSPORTATION IMPROVEMENTS

This chapter describes the forecast for population and employment, and estimates of land use in terms of dwelling units and nonresidential building square feet. Land use forecasts are converted to vehicle trips to provide a measure of travel demand.

POPULATION, EMPLOYMENT, AND LAND USE

The planning horizon for this analysis is 2040. The nexus analysis uses forecasts of dwelling units and employment to estimate new development's demand for transportation improvements. Estimates of existing development are based on data from the California Department of Finance and the California Employment Development Department. Existing and future demographics cover only the Tehama County I-5 Corridor, which constitute the Fix Five impact fee zones, rather than the entire county.

Tehama County is presently in the process of updating its General Plan. Given the unavailability of current General Plan demographic projections and the lack of a traffic demand model for the County, growth projections through 2040 for Tehama County are based on an estimated annual growth rate of 1.75 percent. This represents an approximate midpoint between the historical rate of growth (roughly 1.5 percent from 2000 to 2007) and the current pipeline of proposed developments that suggests that actual growth could exceed 2.0 percent if all potential development were to occur by 2040.

This report estimates that 95 percent of current and future development in Tehama County lies within the fee zone. That proportion was determined using input from County staff and may be revised pending finalization of the General Plan update.

The employment estimates and projections used in this study are converted to building square footage shown in Table 2 using occupant densities factors shown in **Table 1**. These factors are derived from a study of employment, building square feet, and land use conducted by the Natelson Company. The density factors were derived from a random sample of 2,721 parcels drawn from across five California counties. Although the survey was conducted in southern California, employment density factors do not tend to vary significantly by geography. The Natelson study's density factors are based on the largest sample of properties that we are aware of, and are used in development impact fee studies throughout the State.

The density factors shown below are used to generate estimates of building square footage but do not impact the derivation of equivalent dwelling unit (EDU) factors that are used later in this report to allocate improvement costs by land use category.

Table 1: Occupancy Density Assumptions

Retail	2.00	Employees per 1,000 sq. ft.
Office	1.52	Employees per 1,000 sq. ft.
Industrial	0.90	Employees per 1,000 sq. ft.

Source: The Natelson Company, Inc., Employment Density Study Summary Report, prepared for the Southern California Association of Governments, October 31, 2001; Willdan Financial Services.

Table 2 lists the 2007 and 2040 land use assumptions used in the nexus analysis. Table 2 also shows compound annual growth rates by development type.

This study does not assume that all proposed projects will necessarily come to fruition prior to the study’s planning horizon. Nevertheless, the proposed projects are indicative of the development types and locations likely to typify future growth in the region.

Table 2: Development Projections

	<u>Dwelling Units</u>		<u>Number of Jobs</u>			<u>Building Square Feet (thousands)</u>		
	Single Family	Multi-Family ¹	Commercial	Office ²	Industrial	Commercial	Office ²	Industrial
<i>Tehama County I-5 Corridor</i>								
Current Development (2007) ³	15,500	9,900	5,500	4,800	7,700	2,700	3,100	8,500
Total Projected Development (2040) ^{3,4}	27,500	17,500	9,700	8,500	13,600	4,800	5,500	15,100
Projected Growth (2007-2040)	<u>12,000</u>	<u>7,600</u>	<u>4,200</u>	<u>3,700</u>	<u>5,900</u>	<u>2,100</u>	<u>2,400</u>	<u>6,600</u>
Compound Annual Growth Rate	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%

¹ Single family attached dwelling units included in DOF figures are classified as multi-family in this analysis for consistency with RTPA projections.

² Excludes local government employment.

³ Assumes that 5% of countywide development is outside of the I-5 Corridor and excluded from the Tehama County Fix 5 fee zone.

⁴ Based on an assumed countywide growth rate of 1.75% annually. Actual projected rates vary slightly due to rounding. Projection will be revisited in the Phase Two fee analysis.

Sources: Table 1; State of California Department of Finance (DOF); State of California Employment Development Division (EDD), Labor Information Division; Tehama County Department of Planning; Willdan Financial Services.

PROJECTED IMPACT OF NEW DEVELOPMENT ON I-5

As noted in the Introduction, the impetus for the formation of the Partnership is the growing understanding that peak hour gridlock traffic conditions are now foreseeable in the near future for Tehama County. Without any additional capacity on I-5, several segments along the project span will experience failing levels of service within the next decade as new development strains the highway's capacity. By 2030, nearly all of the Fix 5 project span would experience failing conditions without capacity-enhancing improvements. **Figure 4** shows current and future LOS on I-5 assuming no change in the existing capacity, based on data from Caltrans. LOS was calculated for each section based on existing or projected traffic volumes relative to capacity. By 2030, all 4-lane segments are expected to exceed capacity and LOS will fail to meet local standards.⁸

Table 3 shows peak-hour LOS, annual average daily trip volumes, and peak-hour trip volumes for both counties. Although both peak-hour and daily trips volumes are reasonable representations of traffic conditions, the need for transportation improvements is typically determined based on a peak-hour analysis. For LOS, the table shows 2005 conditions, projected 2030 conditions assuming no improvements to I-5, and the projected 2030 LOS with the addition of a third lane in each direction. Although several sections will be at LOS D after the capacity improvements, the improvements nevertheless meet the Partnership's stated goal to "prevent I-5 gridlock through 2030." Gridlock is typically associated with LOS F, a condition that would be common on I-5 in 2030 without the improvements.

LOS is presently acceptable on I-5 but is projected to almost uniformly fail to meet acceptable levels by 2030 without capacity enhancement. The deterioration of LOS results from the addition of higher trip volumes to the road system generated by the new development shown in Table 2. While traffic modeling was conducted based on development projections for 2030, the planning horizon for the impact fee has been extended by ten years to 2040 because the improvements will support growth until that time and because it will help to keep fee levels lower by spreading improvement costs over a larger increment of development. The data in Table 3 suggest that the project span in Tehama County is free from deficiencies at this time and that the degradation of LOS will be the result of additional trips added to the roadways by new development.

⁸ Caltrans derived 2030 LOS estimates for Tehama County using development projections based on the existing pipeline of proposed development. This projection differs from the more conservative estimate of 1.75% annual growth used in this report. LOS analysis based on the 1.75% growth rate would show a slower deterioration of LOS over time.

Figure 4: I-5 LOS for 2005 and 2030 (with no capacity improvements)

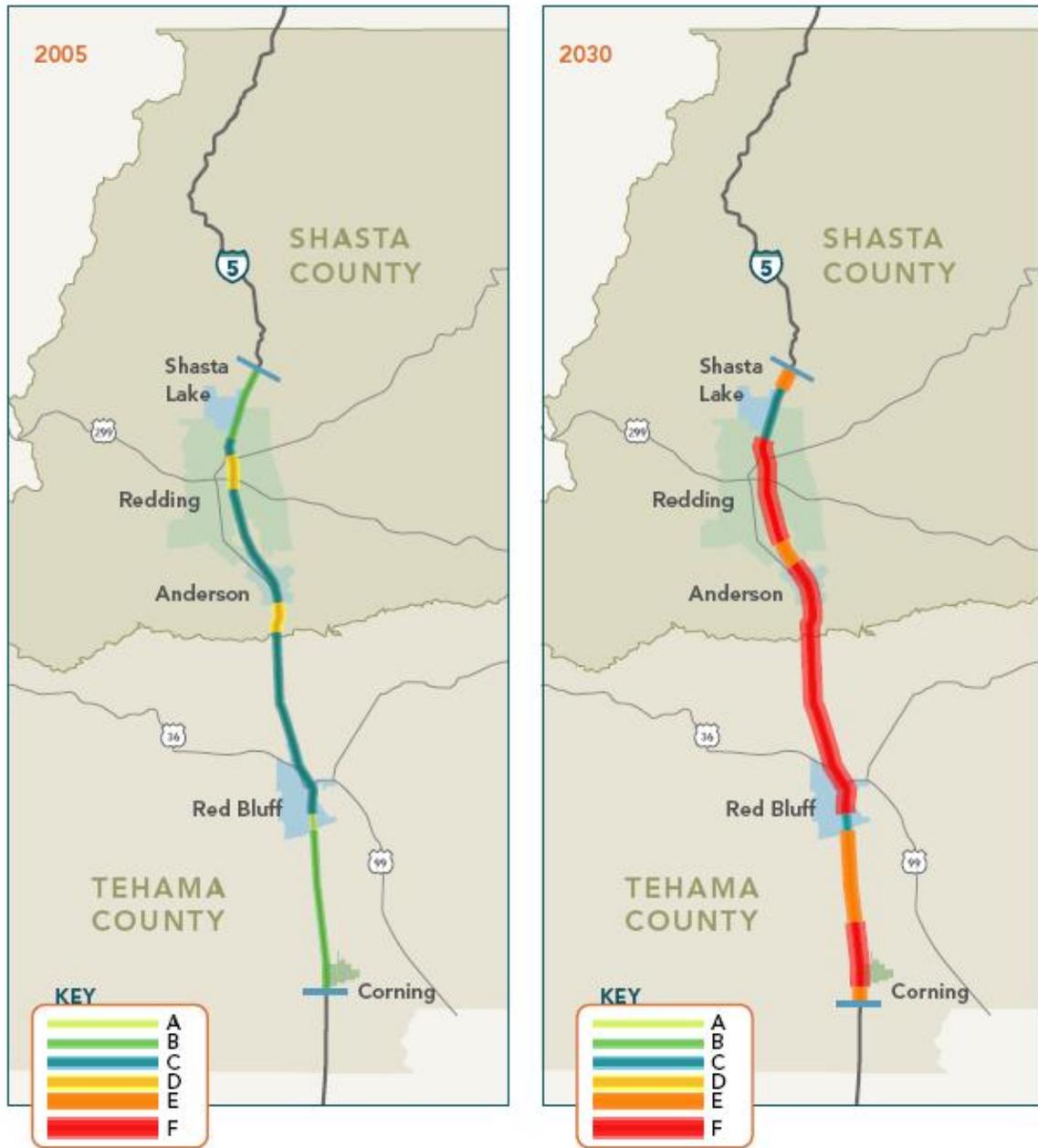


Table 3: 2005 and 2030 Level of Service and Traffic Volumes

Section	Section Location for Third Lane	Postmiles ¹	Peak Hour Level of Service ²			Average Daily Volumes		Peak-hour Volumes	
			2005	2030 Un-improved	2030 Improved	2005	2030	2005	2030
<i>Tehama County</i>									
1A	Liberal Avenue Overcrossing to Corning Road Overcrossing	5.8 to 9.0	B	E	C	28,500	57,000	4,000	5,400
1B	Corning Road Overcrossing to Thomes Creek Bridge	9.0 to 12.1	B	F	C	30,000	62,000	4,000	5,600
2	Thomes Creek Bridge to Elder Creek Bridge	12.1 to 16.9	B	E	C	28,500	61,000	3,900	5,600
3	Elder Creek Bridge to Coyote Creek Bridge	16.9 to 22.5	B	E	C	29,000	61,000	3,900	5,600
	Coyote Creek Bridge to South Red Bluff ³	22.5 to 24.5	A	C	C	41,000	61,000	3,900	5,600
4	South Red Bluff to North Red Bluff	24.5 to 28.4	C	F	D	41,000	78,000	4,600	6,300
5	North Red Bluff to Jelly's Ferry Overcrossing	28.4 to 32.2	C	F	C	41,000	78,000	4,800	6,300
6A	Jelly's Ferry Overcrossing to Nine Mile Hill Overcrossing	32.2 to 36.4	B	F	D	41,000	78,000	4,700	6,300
6B	Nine Mile Hill Overcrossing to Snively Road Overcrossing	36.4 to 38.7	C	E	C	41,000	80,000	4,700	6,400
6C	Snively Road Overcrossing to Bowman Road Overcrossing	38.7 to 41.5	C	E	C	42,000	82,000	4,700	6,500
7(T)	Bowman Road Overcrossing to Tehama County Border	41.5 to 42.0	C	E	C	42,000	84,000	5,300	6,700

¹ Postmile 0.0 is the south border of the county.

² "2030 Unimproved" LOS assumes no improvements made to I-5. "2030 Improved" assumes the addition of the third lane in each direction.

³ Section already improved to six lanes.

Source: Caltrans District 2, Office of System Planning.

3. PLANNED IMPROVEMENTS AND RECOMMENDED IMPACT FEES

This chapter provides detail on the planned improvement projects that add a lane of capacity in each direction on I-5 in the project area. This chapter also presents a review of available sources to fund these improvements as well as the impact fee amounts required to create a fully funded program.

FACILITY COSTS

As noted in the introduction, the primary objective of the Fix Five Partnership is to alleviate future congestion on I-5 by adding two additional lanes (one northbound, one southbound) to a 61-mile span in Tehama and Shasta Counties. This report is limited to 36.2-mile span in Tehama County. Over the years, numerous plans and studies have stated the need for I-5 to become a six-lane facility. The improvements planned do not cover the entirety of the project span because some segments have already been expanded to six lanes. This section provides greater detail on the planned improvements and a summary of estimated project costs.

As noted in the introduction, the fees proposed in this report, when combined with anticipated state and federal contributions, will fully fund the planned improvements.

Unit Cost Estimates and Total Facility Costs

Table 4 shows total projected costs for the impact fee program. The cost estimates of \$314 million were prepared by Caltrans and reviewed by Willdan Engineering. Planned improvements include increasing I-5 capacity by adding a third lane in each direction. These improvement costs are identified as roadway improvements. Structure improvements include items such as bridge replacements that are required to support the additional lanes being added. The cost estimates, broken down by sections along the project area, include both construction and support costs for roadways and structures. Support costs include project design and engineering, environmental review and clearance, and project administration and management. Interchange improvements are not included in Table 4 and are not incorporated into the Fix Five fee program. The cost estimates include only the minimum improvements required to add the additional northbound and southbound lanes.

Three sections are not shown with full costs. In southern Tehama County (#1B, 2, and 3, post-mile 9.0 to 22.5) the only cost component shown is an initial Project Study Report (PSR). Given current forecasts of future traffic generation and LOS, those sections have a less imminent need for a capacity enhancement. While a third travel lane will eventually be needed in those locations, only the initial project planning has been included in this version of the fee study in an effort to minimize the cost burden on new development in Tehama County. The inclusion of the PSRs ensures that the widening of these sections will remain a component of the regional planning process, and the full cost of those improvements will be considered in the next required update of the Fix Five fee program.

As shown in Table 4, the total cost of adding a lane of capacity in each direction on I-5 in the Tehama County project area is approximately \$314 million. This total represents the

entirety of project costs. The share that will be recovered through development impact fees will be substantially lower and is addressed in the next chapter.

A more detailed breakdown of project cost estimates is shown in Appendix 2.

Table 4: Fix 5 Phase One Project Costs (2007\$)

Sect.	Section Location for Third Lane	Postmiles ¹	Miles	Roadway		Structures (Bridges)		Total
				Construction	Support (27%) ²	Construction	Support (27%) ²	
<i>Tehama County</i>								
1A	Liberal Avenue Overcrossing to Corning Road Overcrossing	5.8 to 9.0	3.2	\$ 20,000,000	\$ 5,400,000	\$ 10,000,000	\$ 2,700,000	\$ 38,100,000
1B	Corning Road Overcrossing to Thomes Creek Bridge	9.0 to 12.1	3.1	Project Study Report and Environmental Clearance Only				270,000
2	Thomes Creek Bridge to Elder Creek Bridge	12.1 to 16.9	4.8	Project Study Report and Environmental Clearance Only				530,000
3	Elder Creek Bridge to Coyote Creek Bridge	16.9 to 22.5	5.6	Project Study Report and Environmental Clearance Only				700,000
	Coyote Creek Bridge to South Red Bluff	22.5 to 24.5	2.0	I-5 Already Six Lanes -- Additional Capacity Not Needed				
4	South Red Bluff to North Red Bluff	24.5 to 28.4	3.9	25,000,000	6,750,000	94,000,000	25,380,000	151,130,000
5	North Red Bluff to Jelly's Ferry Overcrossing	28.4 to 32.2	3.8	25,000,000	6,750,000	3,000,000	810,000	35,560,000
6A	Jelly's Ferry Overcrossing to Nine Mile Hill Overcrossing	32.2 to 36.4	4.2	24,000,000	6,480,000	-	-	30,480,000
6B	Nine Mile Hill Overcrossing to Snively Road Overcrossing	36.4 to 38.7	2.3	14,000,000	3,780,000	-	-	17,780,000
6C	Snively Road Overcrossing to Bowman Road Overcrossing	38.7 to 41.5	2.8	16,000,000	4,320,000	-	-	20,320,000
7(T)	Bowman Road Overcrossing to Tehama County Border	41.5 to 42.0	0.5	4,000,000	1,080,000	11,500,000	3,105,000	19,685,000
Total			36.2	\$ 128,000,000	\$ 34,560,000	\$ 118,500,000	\$ 31,995,000	\$ 314,555,000

Notes:

* Add a third lane northbound and southbound (most locations).

* All lanes will be added in the median unless otherwise noted.

* Outside widening for Segments 1, 2, 3, and 13, which have a narrow median, would cost about the same as median widening, plus right of way costs.

* Includes full replacements of the Sacramento River bridges at South Red Bluff (\$50 million) and North Red Bluff (\$40 million) and at Deschutes UC (\$15 million) interchange.

* Estimates do not include any capacity-increasing work at the interchanges.

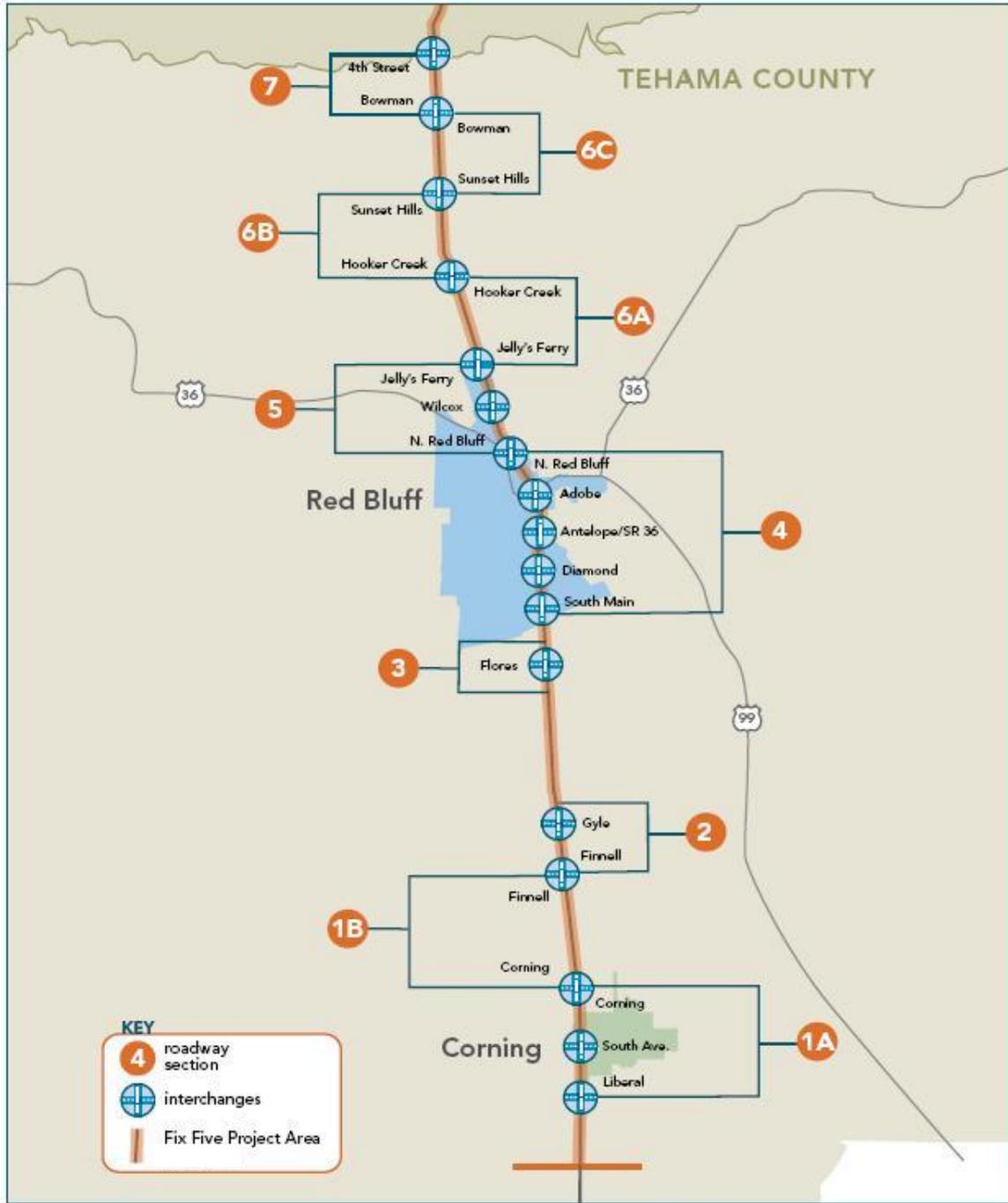
* Does not include rehabilitation needs for any structures or regular mainline I-5.

¹ Postmile 0 is the south border the county.

² Support costs estimated at 27% of construction costs. Support costs include project design and engineering, environmental review and clearance, and project administration and management.

Sources: Caltrans, Willdan; Willdan Financial Services.

Figure 5: Tehama County I-5 Sections for Cost Estimation



**Figure 6: Fix 5 Project Costs for Additional Lanes on I-5
(1 Northbound and 1 Southbound Lane)**



TRIP GENERATION AND EQUIVALENT DWELLING UNITS

This study uses average weekday vehicle trips on I-5 to allocate costs by land use category. Daily vehicle trips provide a reasonable system-wide measure of the impact of new development on congestion and mobility. Vehicle trips are directly related to LOS and the need for capacity enhancements. As new development generates increased vehicle trips on I-5, capacity will be increasingly strained prompting the need for the improvements described in this report. Allocation of cost by land use incorporates rates of trip generation, relative shares of primary and pass-by trips, and average trip length, by major land use category. Commercial trip generation is further refined into three sub-categories in the next section.

Another reasonable facility standard is peak-hour vehicle trips. The need for transportation improvements is typically based on a peak-hour analysis because peak hour travel times create the greatest need for infrastructure capacity. This study relies on daily trip volumes to allocate costs by land use because that indicator better captures the system-wide impacts of

inter-regional traffic. Local traffic makes up a higher percentage of overall traffic during peak hours. The approach used in this report, therefore, is favorable to local jurisdictions because it is best able to identify capacity needs resulting from non-local traffic. The share of planned improvements required to accommodate non-local trips cannot be funded by impact fees. Funding for non-local trip shares is further discussed in the next chapter.

Trip generation rates are applied to development projections to allocate improvement costs by land use type. The trip generation rates used for this analysis are based on a study that provides data by five major land use categories. The trip generation rates are comparable to the national trip generation rates published by the Institute of Transportation Engineers. This data is solely used to allocate costs between land uses and not to determine the scope or cost of needed improvements.

The following two adjustments are made to vehicle trip generation rates to better estimate travel demand by type of land use:

- ◆ Pass-by trips are deducted from the trip generation rate. Pass-by trips are defined as intermediate stops between an origin and a final destination that require no diversion from the route, such as stopping to get gas on the way to work.
- ◆ The trip generation rate is weighted by the average length of trips for a specific land use category compared to the average length of all trips.

These factors vary by land use category. To estimate total demand for new traffic facilities across all land use types, this report uses an “equivalent dwelling unit (EDU)” factor that sets the demand from a single-family dwelling unit at 1.00 EDU. EDU factors for all other land uses are calculated relative to the demand for a single-family unit. For example, 1,000 building square feet of industrial generates 81 percent of the trip demand generated by one single family dwelling unit. The EDU factor for industrial development, therefore, is 0.81.

Table 5 shows trip generation rates and EDU factors by major land use category. The EDU factors incorporate daily trip generation rates, relative shares of pass-by and diverted trips, and average trip length by land use. The EDU factors are used solely to allocate costs between land use categories and not to determine the share of costs that can be recovered with impact fees.

Table 5: Equivalent Dwelling Unit Factors

	Trip Rate Adjustment Factor				Adjust- ment Factor ³	Average Daily Trips ⁴	Trip Demand Factor ⁵	Equivalent Dwelling Units (EDUs)
	Primary Trips ¹	Diverted Trips ¹	Total Excluding Pass-by ¹	Average Trip Length ²				
<i>Residential (per dwelling unit)⁶</i>								
Single Family	86%	11%	97%	7.9	1.11	10	11.10	1.00
Multi-family	86%	11%	97%	7.9	1.11	8	8.88	0.80
<i>Nonresidential (per 1,000 building square feet)⁷</i>								
Commercial	47%	31%	78%	3.6	0.41	68	27.88	2.51
Office	77%	19%	96%	8.8	1.22	20	24.40	2.20
Industrial	79%	19%	98%	9.0	1.28	7	8.96	0.81

¹ Percent of total trips. Primary trips are trips with no midway stops, or "links". Diverted trips are linked trips whose distance adds at least one mile to the primary trip. Pass-by trips are links that do not add more than one mile to the total trip.

² In miles.

³ The trip adjustment factor equals the percent of non-pass-by trips multiplied by the average trip length and divided by the systemwide average trip

⁴ Trips per dwelling unit or per 1,000 building square feet.

⁵ The trip demand factor is the product of the trip adjustment factor and the average daily trips.

⁶ Trip percentages, average trip lengths, and average daily trips based on "residential" category.

⁷ Trip percentages, average trip lengths, and average daily trips for commercial based on "community shopping center" category, for office based on "standard commercial office" category, and for industrial based on "industrial park (no commercial)" category.

Source: Institute of Transportation Engineers; San Diego Association of Governments; Willdan Financial Services.

COMMERCIAL EDU FACTORS

The commercial EDU factor derived in Table 5 represents an average for all commercial development. In practice, different types of commercial development may have significantly different impacts on I-5. Although it is not practical to implement a fee program that uses individual EDU factors for all potential types of commercial development, it is reasonable to segment commercial development into a few relatively broad categories to ensure that fee amounts are roughly proportionate to the impacts of a given development.

Three categories of commercial establishments emerged from our assessment of the varying impacts of commercial development on I-5. These categories have been determined, not on overall trip generation rates, but on the relative share of vehicle miles traveled (VMT) on I-5. The commercial EDU calculations are based on a technical memorandum, "Adjusted Allocation Factors for Commercial Development," prepared by MuniFinancial for the Partnership. The categories are as follows:

Neighborhood/Convenience Commercial – Convenience goods are those that are purchased frequently, generally inexpensive, and not distinguished by style. Given these characteristics, it is reasonable to assume that consumers will not travel long distances to convenience commercial establishments. Consequently, a convenience commercial establishment is less likely to impact traffic on I-5 than an establishment selling comparison goods.

According to the Urban Land Institute, typical convenience and neighborhood establishments include dollar stores, small restaurants, hair salons, dry cleaners, and banks. The average gross leasable area for these establishments is about 1,000-6,000 square feet.

Neighborhood and convenience retail stores will typically not exceed 10,000 square feet with the exception of supermarkets and drug stores.

Regional/Comparison Commercial – Regional and comparison goods are those for which consumers are likely to do some amount of comparison-shopping. These goods tend to be more expensive than convenience goods and purchased less frequently. Examples of regional/comparison retail include department stores, building and lumber stores, electronics superstores, and furniture stores. “Big box” retail will generally fall into the comparison commercial category. Regional commercial businesses tend to be larger than convenience commercial and will generally range from about 20,000 to over 100,000 square feet. Regional commercial businesses also tend to locate near freeways to be conveniently accessible throughout the region.

Given these traits, it is reasonable to assume that consumers will travel greater distances to reach comparison establishments and that they are therefore more likely to use highways to get there. Thus, this study assumes that, per vehicle mile traveled, comparison establishments have a greater impact on I-5.

High-Generation Commercial – High-generation commercial establishments are generally similar to convenience establishments. This study recommends creating a separate high-generation commercial category for the Fix Five analysis because these types of retail establishments have trip generation rates that vastly exceed most other types of convenience retail. High-generation establishments include convenience markets, gas stations, drive-through banks, and fast-food restaurants.

The per-trip impact of high-generation commercial on I-5 will be largely similar to that of convenience commercial in that consumers are unlikely to travel great distances to reach these establishments. Although high-generation commercial establishments can often be developed as highway-serving developments catering to travelers, trips to these locations will be overwhelmingly either pass-by or diverted trips as parts of trips initiated for some other purpose. The key difference between high-generation commercial and convenience commercial, therefore, is that high-generation commercial developments generate substantially higher numbers of trips per square foot of building space.

Although the categories presented above provide a logical basis for charging impact fees that vary to reflect differential impacts on I-5, it is not practical to require city and county building officials to determine the economic nature of each proposed development. To facilitate manageable program implementation, the commercial categories can be defined as follows:

Neighborhood/Convenience Commercial:

- Stand-alone commercial establishments up to 10,000 building square feet
- Stand-alone supermarkets and drug stores
- Shopping centers up to 100,000 combined building square feet, with three or more stores⁹

⁹ This definition is consistent with the definitions of convenience and neighborhood centers contained in *Dollars and Cents of Shopping Centers*, published in 2006 by the Urban Land Institute. Page 5.

Regional/Comparison Commercial:

- Stand-alone commercial establishments exceeding 10,000 building square feet
- Shopping centers up to 100,000 combined building square feet with fewer than three stores and shopping centers that exceed 100,000 building square feet¹⁰

High-Generation Commercial:

- 24-hour Convenience Markets
- Gas Stations
- Fast-food, with and Without Drive-throughs
- Banks with Drive-throughs

Equivalent Dwelling Unit Factors

We are not aware of any studies that quantify the differing impacts of commercial use types on regional highway systems. Consequently, we have estimated this effect through the use of an “I-5 VMT Factor” in the table below. The reasoning for the I-5 VMT factors is as follows:

- Neighborhood commercial will have substantially less impact on I-5 given the shorter trips generated by this use. Neighborhood commercial will still have some impact because some neighborhood commercial stores will have a larger draw due to availability of certain specialty goods. Further, due to the location of some residential development, some consumers will need to use I-5 for virtually all trips to commercial locations.
- For high-generation commercial, the I-5 VMT Factor is estimated at half of the factor for neighborhood commercial because these uses are not likely to draw consumers from non-local locations. Like neighborhood commercial, though, a limited number of consumers may use I-5 for all of their commercial trips. Trips to high-generation commercial developments that do use I-5 are typically pass-by or diverted trips. Due to the sheer volume of trips generated, however, the EDU factor will remain significantly higher than the other categories

Table 6 below presents the EDU factors for the three commercial classifications. Convenience and high-generation commercial are calculated relative to the 2.51 EDU factor for regional commercial derived in Table 5.

¹⁰ Shopping centers meeting these criteria should be charged such that the entirety of the development is comparison commercial, even if some internal uses are convenience commercial, because the comparison establishments will be the primary cause of trips to the center.

Table 6: Commercial Equivalent Dwelling Unit Factors

	A	B	C=A x B	D	E=C x D	
	Primary Trips ¹	I-5 VMT Factor ²	Adjustment Factor	Average Daily Trips ³	Trip Demand Factor	Equivalent Dwelling Units (EDUs) ⁴
Neighborhood Commercial	45%	0.30	0.14	63.92	8.63	1.05
Regional Commercial	54%	1.00	0.54	38.21	20.63	2.51
High-Generation Commercial	45%	0.15	0.07	528.23	35.66	4.34

¹ Share of total trips generated that are neither diverted or pass-by.

² Estimate of the impact of vehicle miles traveled (VMT) for each land use on Interstate 5, relative to regional, or comparison, commercial establishments. Neighborhood commercial establishments are assumed to have a higher share of local trips and therefore a lower impact, per trip, on the highway system. For high-generation commercial establishments, the I-5 VMT factor is based on the assumption that the overwhelming majority of I-5 trips will be diverted or pass-by trips.

³ Per thousand square feet of building space. Neighborhood Commercial is based on ITE categories 850, 854, 880, 881, 814, 815, 816, 820, 843, 848, and 911. Regional Commercial is based on ITE categories 812, 813, 817, 823, 841, 849, 861, 862, 863, 890, 931, 720. High-generation Commercial is based on 851, 853, 912, 932, 933, 934.

⁴ EDUs per thousand building square feet. EDU factors are calculated relative to the regional commercial factor of 2.51 (see Table 5).

Source: Table 5. Institute of Transportation Engineers; San Diego Association of Governments; Willdan Financial Services.

GROWTH IN EDUs THROUGH 2040

Based on the EDU factors shown in Table 5, **Table 7** shows the projected EDU growth in the Tehama fee zones from 2007 through 2040 for Tehama County. These EDU totals are calculated by multiplying the EDU factors by the development projections from Table 2.

Projections of future commercial development are not available by the commercial use classifications shown in Table 6. This study therefore assumes that future commercial development will have average impacts equal to the general commercial category.

Table 7: Growth in EDUs

	EDUs	Tehama County I-5 Corridor	
		Net Growth 2007-2040	EDU Growth
<i>Dwelling Units</i>			
Single Family	1.00	12,000	12,000
Multi-family	0.80	7,600	6,100
<i>Building Square Feet (000s)</i>			
Commercial ¹	2.51	2,100	5,300
Office	2.20	2,400	5,300
Industrial/Other	0.81	6,600	5,300
Total EDU Growth			34,000

¹ Precise allocation of commercial development by type (high-generation, regional, or neighborhood) not available. To calculate EDU growth for commercial development, this study assumes that the impacts of commercial development will be, on average, equal to the general commercial rate.

Sources: Tables 2 and 5, Willdan Financial Services.

AVAILABLE NON-FEE FUNDING SOURCES

The next chapter describes the maximum defensible fees that could be charged to new development to fund I-5 mainline improvements under the *Mitigation Fee Act*. The *Mitigation Fee Act* requires that any agency adopting impact fees establish a reasonable nexus between the projected amount of new development, the public improvements needed to serve that development, and the amount of the fees. The agencies that make up the Fix Five Partnership desire to work with the development community to arrive at the lowest fee possible while still providing full funding for the needed improvements. This chapter, therefore, shows the Partnership's estimate of available funding from state and federal sources and the resulting impact fee amounts that would be necessary. These recommended fees are lower than the maximum justified amounts shown in the next chapter.

Historically, improvements to the state highway system have been funded by state and federal, rather than local, sources. Although the Partnership was formed largely in response to an increasing scarcity of state and federal funding to finance highway system projects, it is still reasonable to expect a significant amount of non-impact fee revenues for the I-5 widening project.

The following is a survey of funding sources that may be available to contribute to the Partnership, categorized by the agency with discretion over spending:

Tehama County Transportation Commission

- ◆ The **Regional Improvement Fund (RIP)** provides funding for regional improvements and consists of money from the State Transportation Improvement Program (STIP) that is allocated to regional transportation planning agencies. The regional agencies have discretion over expenditure of these funds based on locally determined priorities.

California Transportation Commission (CTC)

- ◆ The share of the STIP not allocated to the RIP funds the **Interregional Improvement Program (IIP)**. This funding source is controlled by the CTC and is dedicated to interregional improvements such as the I-5 capacity expansion. Given its focus on interregional improvements, the IIP is an appropriate funding option for the share of I-5 improvement costs associated with non-local travel. The CTC regularly has project needs that exceed the availability of funds. To maximize the effectiveness of IIP grants, therefore, the CTC increasingly dedicates funds to regions that have also identified local funding sources.
- ◆ The CTC also controls the **State Highway Operation and Protection Plan (SHOPP)**. The SHOPP funds the maintenance of the state highway system through rehabilitations (roadways and bridges), capital maintenance, safety, storm damage, and other maintenance programs. The SHOPP is a likely funding source for several of the bridge structures that are included in the Fix Five project list.

State Legislature

- ◆ The Highway Safety, Traffic Reduction, Air Quality, and Port Security Fund of 2006 (**Proposition 1B**) provided about \$20 billion from bond sales, much of which was devoted to transportation projects. Proposition 1B funded one segment along the Fix Five project span, but additional funds are largely committed at this time. Additional bond offerings remain a potential revenue source for the future, but cannot be relied upon.
- ◆ The state legislature may also provide future funding opportunities through earmarks for specific projects.

Federal Funding

- ◆ Federal Grant Funding is available to fund selected transportation improvements. An example of a federal grant program is the Corridors of the Future Program (CFP), which provides funding for corridor improvements for the purposes of reducing congestion.
 - A subset of federal grant funding is \$1.5 billion in discretionary funding for highway projects made available of part of the American Recovery and Reinvestment Act of 2009. As with other funding opportunities, the region's ability to capture some of this funding will be enhanced by development of a local contribution.

- ◆ Like the state legislature, the U.S. Congress may also provide future funding opportunities through earmarks for specific projects as part of independent legislation.

Two local funding sources that are not being considered at this time are self-help county sales tax measures and toll roads. Voters in nineteen California counties have passed sales tax measures to fund transportation improvements. Some regions in southern California have elected to implement toll roads to fund capacity enhancements. Neither of these options is being considered in Tehama County because the Partnership intends to implement a fully funded program using the sources described in this report.

Please see Appendix 4 for additional data on state and federal funding sources.

FUNDING SCENARIOS AND FEE CONTRIBUTIONS

Given the ability of a regional fee program to leverage additional funding from state and federal sources, the Partnership is optimistic that a majority of project costs will ultimately be funded by non-local sources. While the maximum justified costs per EDU shown in the next chapter would be defensible under the *Mitigation Fee Act*, the Partnership expects to be able to charge lower fees and still maintain a fully funded program given sufficient revenues from other sources.

Table 8 shows the costs per EDU that result from preliminary assumptions on outside funding contributions.

Several project components in Tehama County are particularly well suited to SHOPP funding. The SHOPP funds major maintenance projects of the state highway system. In Tehama County, for example, the Partnership believes that the entirety of project costs for four bridge structures in Section 4 (see Table 4 for detail) may ultimately come from SHOPP funds. The capacity need in this area may significantly precede the need to replace these bridges. SHOPP funding for this projected would be provided based on the structural adequacy of the bridges and not the need for additional capacity. Funding for these cost components is shown separately from additional estimates of outside funding shown in Table 8. These cost shares represent study assumptions and not funding commitments. That expected difference, which amounts to 67 percent outside funding for Tehama County, is reasonable a significant share of total traffic in is Tehama is non-local (see next chapter for more detail).

Only the cost share that is left unfunded after accounting for state and federal grants is applied to new development. The costs per EDU in Table 8 result in lower costs per EDU than the maximum justified costs shown in the next chapter. The proposed fee per EDU of \$1,894 for Tehama County is far below the maximum costs attributed to new development. The Partnership is recommending the lowest possible fee necessary to ensure a fully funded program.

Table 8: Cost per EDU

	<u>Tehama County</u>	
Cost	\$	314,555,000
SHOPP Funding for Bridges (construction) ¹		94,000,000
SHOPP Funding for Bridges (support) ¹		<u>25,380,000</u>
Net Fix Five Costs After SHOPP Funding	\$	195,175,000
% Outside Funding		<u>67.0%</u>
Outside Funding	\$	130,767,250
Impact Fees Revenue Required	\$	64,407,750
New Development EDUs		<u>34,000</u>
Fee Per EDU	<u>\$</u>	<u>1,894</u>

Note: Potential non-fee funding sources include state and federal grants. Contributions shown represent hypothetical funding scenarios. Actual funding has not yet been secured.

¹ Anticipated funding for construction of bridges in Section 4 near Red Bluff. Assumes bridges completely funded by SHOPP. See Table 4 for more detail on these cost components.

Sources: Tables 4 and 7; Willdan Financial Services.

Based on the fees per EDU shown in Table 8, **Table 9** shows the recommended Fix Five Impact Fees by land use categories. It would be reasonable for individual jurisdictions to use slightly different EDU factors or relative fees by land use for fee implementation so long as the cost per EDU is below the maximum defensible level documented in the next chapter.

Table 9: Fix Five Impact Fee Schedule

Land Use	Cost per EDU	EDU Factor	Fee ¹	Fee / Sq. Ft.
Tehama County and Incorporated Cities				
<i>Residential</i>				
Single Family	\$ 1,894	1.00	\$ 1,894	N/A
Multi-family	1,894	0.80	1,515	N/A
<i>Nonresidential</i>				
Neighborhood Commercial	\$ 1,894	1.05	\$ 1,990	\$ 1.99
Regional Commercial	1,894	2.51	4,758	4.76
High-Generation Commercial	1,894	4.34	8,222	8.22
Office	1,894	2.20	4,164	4.16
Industrial	1,894	0.81	1,529	1.53

¹ Fee per dwelling unit for residential or per 1,000 building square feet for nonresidential.

Sources: Tables 5 and 8, Willdan Financial Services.

Figure 8: Percentage of Outside Funding



4. MAXIMUM COST SHARES ATTRIBUTABLE TO NEW DEVELOPMENT

This chapter documents a reasonable relationship between increased travel demand from new development within the project area, the cost of I-5 improvements needed to accommodate that growth, and an impact fee to fund those investments. It also documents that the impact fee amounts proposed in the previous chapter are well below the legally defensible maximum fee amounts.

EXTERNAL TRIP ADJUSTMENTS

To ensure compliance with the *Mitigation Fee Act*, the nexus established in this report between new development and the facilities required to serve new development includes an accounting of external trips that both begin and end outside of the region. These trips cannot be attributed to local development, and therefore the cost basis associated with these external trips is excluded from the share of project costs eligible for funding with the Fix Five fee.

To determine the share of total trips that will be classified as external, this report relies on an Origin and Destination Traffic Study (O&D Study) covering Shasta and Tehama Counties prepared by Kimley Horn and Associates, Inc. for Caltrans in May 2007.

The 2007 O&D Study surveyed vehicular traffic in the region over a three-day period from October 3-5, 2006 by employing license plate recognition technology at six gateway locations. The results of the study were compiled to determine the share of trips that passed through one or more of the gateways during a twelve-hour period on what was determined to be a “typical day.”

The O&D was intended to measure current conditions on I-5. Modeling future external trips in any study is necessarily imprecise because it requires generation estimates of new development and travel characteristics for all areas outside of the study area. This challenge is exacerbated on a regional facility like I-5 because it draws trips from a particularly wide geographic area. This study assumes that the share of external trips on I-5 will not vary substantially from current conditions. This assumption is reasonable because the rate of new development in Tehama County is not projected to be substantially different from the overall growth rate in California. Therefore, assuming no drastic changes in overall travel patterns, the share of external trips will not vary significantly. As with project costs and growth projections, external trip shares will be reviewed in future updates to the program.

Once processed, the study enabled the categorization of all trips into one of three categories:

- ♦ **Inter-regional trips:** trips found to have passed through two gateways to both enter and exit the study area;
- ♦ **Intra-regional trips:** trips found to begin or end their trip within the study area, passing through only one gateway, or trips that pass twice through the same gateway; and

- ♦ **Local trips:** trips that both begin and end within the study area. Because these trips did not pass through any gateways, counts of local trips were based on Caltrans permanent vehicle count stations that were employed on the same days as the study.

Though defined in various ways, these three trip types are common to most traffic surveys and require careful allocation in all traffic impact fee studies. None of the data sources employed revealed any significant inconsistencies in their results.

The handling of inter-regional and local trips is fairly straightforward in a nexus study. Local trips that lie entirely within the project area are tied to local responsibility and are not excluded from the study. An example of a local trip would be a trip from a residence in Red Bluff to a retail development also in Red Bluff. It is worth noting that longer trips could also be classified as local in this study. For example, a trip from Red Bluff to Shasta Lake would both begin and end in the study area even though it may not meet a more conventional definition of a local trip, given its length.

Inter-regional trips represent a share of the traffic in the region that has neither an origin nor destination within the study area. These trips include truck and recreational travelers that travel from north of Shasta County to south of Tehama County, or vice versa. Because inter-regional trips are not related in any way to new development within the project areas, it is not reasonable to impose a fee in the two counties for the share of project costs associated with inter-regional trips.

There is a range of reasonable approaches to the handling of intra-regional trips in a nexus study. Intra-regional trips are those that pass through only one gateway and can therefore be equated with trips that have either an origin or destination in the fee zone, but not both.¹¹ An example of an intra-regional trip would be a commute from a residence in Corning to an employment site in Red Bluff.

This study considers three possible approaches to accounting for intra-regional trips:

1. **Minimum External Trip Adjustment:** All intra-regional trips are treated as local trips. This approach assigns the responsibility for all intra-regional trips to the fee zones. This methodology discounts the external trip ends for intra-regional travel and is commonly used in traffic fee studies. For this approach to be justified, one must determine that intra-regional trips predominantly result from development inside the fee zones rather than development outside of the zones. In the case of the Tehama Fix Five fee zone, this approach could be justified because the fee zones comprise the bulk of urbanized land in the region and most trip attractors, such as employment and retail centers, are likely to be within the zones.
2. **Moderate External Trip Adjustment:** Fifty percent of intra-regional trips are treated as local trips. This is the most intuitive option for handling intra-regional

¹¹ Because the O&D Study surveyed traffic at gateways but did not provide data on precise origins and destinations, it is not possible to conclude that all intra-regional trips have exactly one trip end within the fee zones. Nevertheless, the gateways equate closely enough with the fee zone boundaries that it is reasonable to assume that the total number of intra-regional trips roughly correlates to the number of trips with one end in the zones.

trips because, for a trip with one end in the fee zones and one end outside, the responsibility is essentially split evenly between the local and external regions.

3. **Maximum External Trip Adjustment:** All intra-regional trips are treated as external trips. In effect, this approach implies that local partners will not be held responsible for any share of a trip that either originates or ends outside of the fee zones. This approach is the most favorable to local jurisdictions because it assigns the largest cost burden to external funding sources, but presents significant challenges in justifying that any new trip with an end outside of the zone is not the responsibility of local development.

After reviewing the three options for external trip adjustments, the Partnership's Technical Advisory Committee and Executive Committee determine that external trip factors between scenarios two and three represents the most acceptable assessment from a local perspective of external trip responsibility in the project area. This finding was based on the determination that the methodology described in scenario two is most appropriate, but that it is also appropriate to use slightly higher external trip factors for the following reasons:

- ◆ The studies employed to determine external trip rates did not weight truck trips higher than passenger car trips even though trucks have a greater impact on causing congestion.
- ◆ Limitations of the studies may have led to the classification of some inter-regional trips as intra-regional trips because they entered or existed the zones during nighttime when the survey could not record vehicles.
- ◆ The gateways used in the O&D Study were arranged such that some long trips, traditionally considered inter- or intra-regional were classified as local.

Table 10 shows the allocation of project costs between internal and external responsibility for the external trip scenario established by the Partnership committees. Those shares of local trips by section represent the midpoints between scenarios two and three described above.

Because the traffic studies listed above did not provide a breakdown of local, intra-regional, and inter-regional trips for each section of the project area, each section has been categorized, for the purposes of this study, in one of three categories of external trip shares. The studies do, however, suggest approximate rates by region. From that analysis, the three categories emerged relative to the share of trips that are intra or inter-regional.

In general, the least developed areas of the Fix Five region generate the lowest numbers of local trips and have the highest percentages of external trips. Those areas are estimated in Table 10 to have average local trip factors of 37.5%. The more densely developed parts of the region, spanning from Red Bluff to the City of Shasta Lake, generate more local trips whereas non-local trips remain roughly constant. Consequently, these areas have a higher percentage of local trips, estimated at 67.5%, based on available data. Lastly, three sections in Tehama County have an estimated local trip share of 50%, representing a "ramping up" of the percentage of local trips suggested by some data sources.

For each approach, Table 10 shows external trip adjustments by section, as well as the component of Tehama's \$314 million total project cost that can be assigned to development

within the fee zones. The remaining share of the cost cannot justifiably be charged to new development within the zones.

Table 10: External Trip Adjustment

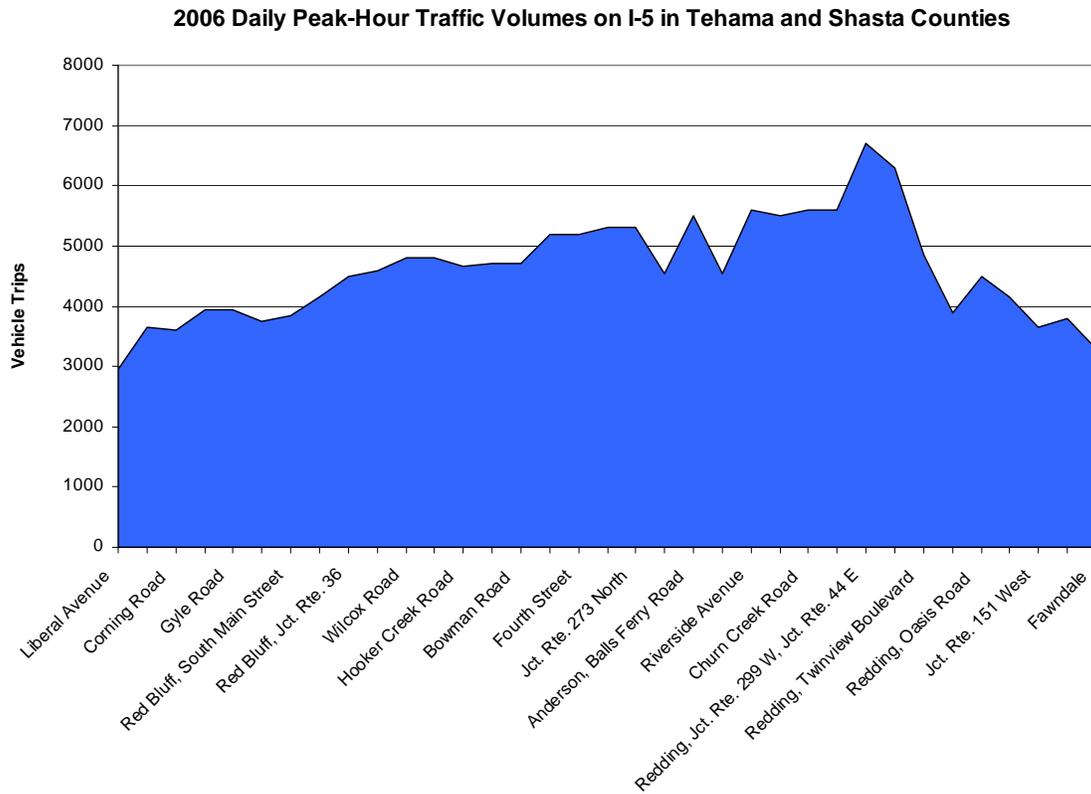
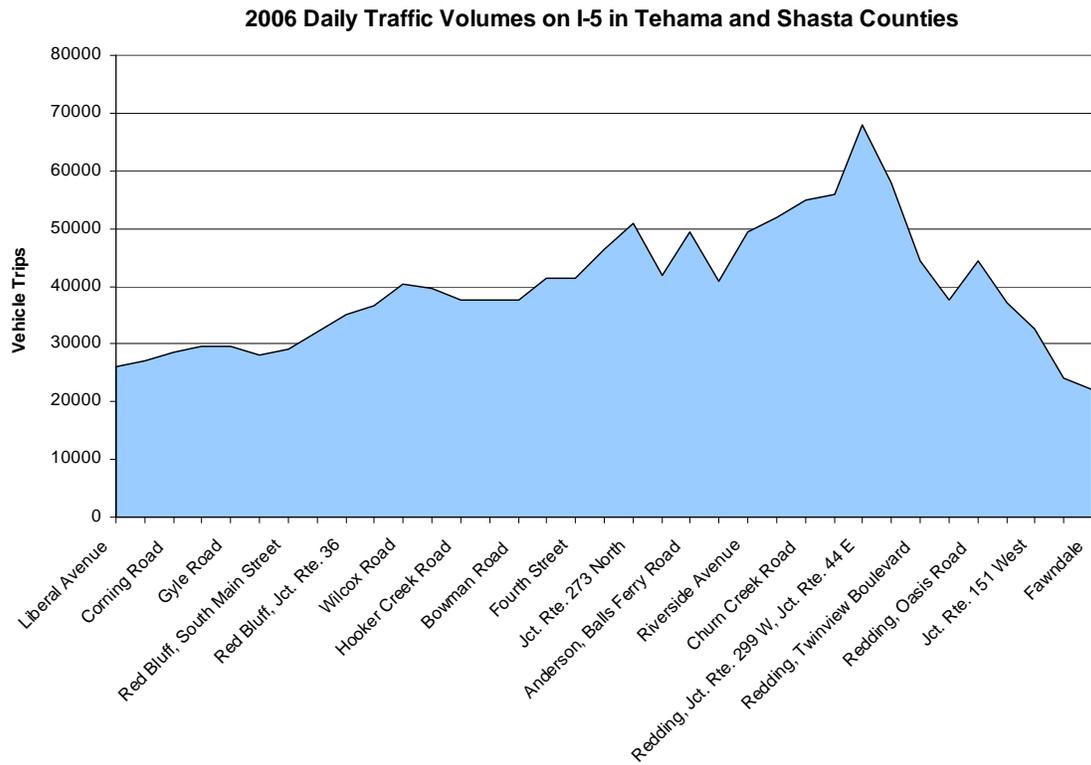
Section	Postmiles	Total	Section Location for Third Lane	External Trip Adjustment	
				Local Trips	Fee Area Cost Share
<i>Tehama County</i>					
1A	5.8 to 9.0	\$ 38,100,000	Liberal Avenue Overcrossing to Corning Road Overcrossing	37.5%	\$ 14,287,500
1B	9.0 to 12.1	270,000	Corning Road Overcrossing to Thomes Creek Bridge	37.5%	101,250
2	12.1 to 16.9	530,000	Thomes Creek Bridge to Elder Creek Bridge	37.5%	198,750
3	16.9 to 22.5	700,000	Elder Creek Bridge to Coyote Creek Bridge	37.5%	262,500
	22.5 to 24.5	-	Coyote Creek Bridge to South Red Bluff	50.0%	-
4	24.5 to 28.4	151,130,000	South Red Bluff to North Red Bluff	50.0%	75,565,000
5	28.4 to 32.2	35,560,000	North Red Bluff to Jelly's Ferry Overcrossing	50.0%	17,780,000
6A	32.2 to 36.4	30,480,000	Jelly's Ferry Overcrossing to Nine Mile Hill Overcrossing	67.5%	20,574,000
6B	36.4 to 38.7	17,780,000	Nine Mile Hill Overcrossing to Snively Road Overcrossing	67.5%	12,001,500
6C	38.7 to 41.5	20,320,000	Snively Road Overcrossing to Bowman Road Overcrossing	67.5%	13,716,000
7(T)	41.5 to 42.0	<u>19,685,000</u>	Bowman Road Overcrossing to Tehama County Border	<u>67.5%</u>	<u>13,287,375</u>
Total ¹		\$ 314,555,000		53.34%	\$ 167,773,875

¹ Figure in Local Trips column shows total share of project cost that could be allocated to local trips for each county based on available origin and destination data.

Sources: Table 4; *Origination & Destination Traffic Study Final Study Results*, Caltrans; Willdan Financial Services.

Figure 10 below shows average daily and peak-hour trip volumes by road section. If the majority of non-local trips are assumed to pass through the region from end to end, the spikes in trip volumes around the more urbanized areas suggest the increased local traffic described above.

Figure 10: Average Daily and Peak-Hour Trips on I-5



COST ALLOCATION

This section details the justified costs per EDU of new development resulting from the external trip scenario described above. These factors do not influence the proposed fee schedules shown in the next chapter, but rather are used to determine the maximum costs that can be attributed to new development for the purposes of this nexus analysis.

The EDU factors described in the *Trip Generation and Equivalent Dwelling Units* section provide a means to allocate a proportionate share of total Fix Five improvement costs to each new development project. EDUs are a reasonable measure of each development project's demand on the regional transportation system. New development's share of total improvements is divided by total EDUs generated by new development to calculate a cost per EDU. The cost per EDU multiplied by the EDUs generated by a particular development project determines that project's fair share of total planned improvements.

Table 11 below shows the calculation of cost per EDU for the external trip adjustment scenario described in the previous section.

This table shows maximum costs attributable to new development but is **not a proposed fee schedule**. The Partnership and its core committees intend to recommend the lowest possible fee. Those calculations are contained in the preceding chapter.

Table 11: Maximum Defensible Costs per EDU

	Tehama
Fee area share of planned improvement costs	\$ 167,773,875
EDU growth	<u>34,000</u>
Cost per EDU	\$ 4,935

Sources: Tables 7 and 10, Willdan Financial Services.

The cost per EDU shown in the proposed fee amounts in the previous chapter of \$1,894 is less than the one shown in Table 11 and, therefore, is defensible under the *Mitigation Fee Act*.

5. IMPLEMENTATION

This chapter provides guidance on use of this nexus study by local agencies to implement the Fix Five Partnership development impact fee. “Local agencies” includes the cities of Corning, Red Bluff, and the County of Tehama. Additional implementation guidelines will be contained in a Fix Five Partnership memorandum of understanding.

The guidance provided in this study is not a substitute for legal advice and all local agencies should consult with their legal counsel regarding compliance with the *Mitigation Fee Act (Act)*.

IMPACT FEE PROGRAM ADOPTION PROCESS

Impact fee program adoption procedures are found in the *California Government Code* section 66016. Adoption of an impact fee program requires the city councils and board of supervisors to follow certain procedures, including ensuring availability of support documents and a public hearing.

FEE COLLECTION AND EXPENDITURE

To ensure a reasonable relationship between each fee and the type of development paying the fee, growth projections distinguish between different land use types. The land use types used in this analysis are:

- ◆ **Single family:** Detached one-family dwelling units.
- ◆ **Multi-family:** All attached multi-family dwellings such as duplexes and condominiums, plus mobile homes, apartments, and dormitories.
- ◆ **Commercial:** All commercial, retail, and hotel/motel development. Commercial development is further subcategorized as follows:
 - **Neighborhood/Convenience Commercial:**
 - Stand-alone commercial establishments up to 10,000 building square feet;
 - Stand-alone supermarkets and drug stores; and
 - Shopping centers up to 100,000 combined building square feet, with three or more stores
 - **Regional/Comparison Commercial:**
 - Stand-alone commercial establishments exceeding 10,000 building square feet; and
 - Shopping centers up to 100,000 combined building square feet with fewer than three stores and shopping centers that exceed 100,000 building square feet.
 - **High-Generation Commercial:**
 - 24-hour convenience markets;

- Gas Stations;
 - Fast-food, with and without drive-throughs; and
 - Banks with drive-throughs.
- ◆ **Office:** All general, professional, and medical office development.
 - ◆ **Industrial:** All manufacturing and warehouse development.

Some developments may include more than one land use type, such as an industrial warehouse with living quarters (a live-work designation) or a planned unit development with both single and multi-family uses. In these cases the public facilities fee would be calculated separately for each land use type.

The cities and counties should have the discretion to impose the public facilities fee based on the specific aspects of a proposed development regardless of zoning. The guideline to use is the daily trip generation, adjusted for trip length and pass-through rates. The fee imposed should be based on the land use type that most closely represents the trip generation of the development.

Fees will be collected at the time of the issuance of a building permit. All impact fee collection will be conducted by the local governing agencies. Fee revenues will likewise be held and controlled by each agency that collects the fees. Impact fees are local revenues and as such cannot be diverted by the State for other purposes.

Operating Agreement

Implementation of the Fix Five fee will be governed by an operating agreement agreed to by all agencies in the Partnership. In the operating agreement or an accompanying document, Caltrans will note that the payment of Fix Five mitigation fees by new development is deemed an acceptable mitigation of cumulative impacts on mainline I-5 by new development.

This document will also outline regulations governing pooling and expending impact fee revenues. The Partnership may make recommendations on project phasing and expenditure of impact fee revenues, but expenditures of funds collected by a given agency must be approved by the local legislative body.

Variations in Implementation by Agency

Although this report outlines a suggested set of EDU factors by land use category and an accompanying impact fee schedule, individual jurisdictions may desire slightly different implementation formats to maintain consistency with existing fee programs or to achieve specific policy objectives. These adjustments are reasonable and do not threaten the validity of this analysis so long as all adopted fees are below the legal defensible maximums documented in Chapter 4. Each agency should structure the fee program so that total fee revenues are the same as those that would be collected if the implementation details were the same as those documented in this report.

INFLATION ADJUSTMENT

Appropriate inflation indexes should be identified in a fee ordinance including an adjustment to the fee annually. The cost index can be based on the region's recent capital project experience or can be taken from any reputable source, such as the *Engineering News-Record*. To calculate prospective fee increases, each index should be weighed against its share of total planned facility costs represented by land or construction, as appropriate.

While fee updates using inflation indexes are appropriate for periodic updates to ensure that fee revenues keep up with increases in the costs of transportation improvements, the cities and counties will also need to conduct more extensive updates of the fee documentation and calculation when significant new data on growth projections and/or improvement project plans become available.

REPORTING REQUIREMENTS

The cities and counties should comply with the annual and five-year reporting requirements of the *Act*. Because a combination of development impact fees and other revenues will fund the planned improvements, identification of the source and amount of the non-fee revenues is essential. Identification of the timing of receipt of other revenues to fund the facilities is also important.

6. MITIGATION FEE ACT FINDINGS

Development impact fees are one-time fees typically paid when a building permit is issued and imposed on development projects by local agencies responsible for regulating land use (cities and counties). To guide the widespread imposition of public facilities fees, the State Legislature adopted the *Mitigation Fee Act (Act)* with Assembly Bill 1600 in 1987 and subsequent amendments. The *Act*, contained in *California Government Code* Sections 66000 through 66025, establishes requirements on local agencies for the imposition and administration of fee programs. The *Act* requires local agencies to document five findings when adopting a fee.

Sample text that may be used for the five statutory findings required for adoption of the Fix Five Partnership impact fee are presented in this chapter and supported in detail by the *Maximum Cost Shares Attributable to New Development* chapter of this report. All statutory references below are to the *Act*.

PURPOSE OF FEE

For the first finding the local agencies must:

Identify the purpose of the fee. (§66001(a)(1))

The purpose of this fee is to ensure that new development will contribute toward the cost of adding an additional lane of capacity in each direction on Interstate 5 in Tehama County to mitigate expected congestion. The purpose of the Fix Five impact fee is to implement this policy. The fee advances a legitimate public interest by enabling the Partnership to fund improvements to transportation infrastructure required to accommodate new development. The purpose of the fee is consistent with one of the Fix Five Partnership's stated goals: "Establish a fair share funding strategy considering local, regional, state and federal resources."

USE OF FEE REVENUES

For the second finding the local agencies must:

Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specified in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged. (§66001(a)(2))

The Fix Five impact fee will fund expanded capacity along a 36-mile stretch of Interstate 5 in Tehama County.

Costs for planned traffic facilities are preliminarily identified in this report. Costs funded by the Fix Five impact fee may include project administration and management, design and engineering, right-of-way acquisition, and construction. Fee revenues will be used for the sole purpose of expanding capacity on I-5 to accommodate new development. The share of

project costs representing external, inter-regional traffic will be funded with non-fee revenues from other sources. The Fix Five impact fee will not be used for the purpose of correcting existing deficiencies in the roadway system.

BENEFIT RELATIONSHIP

For the third finding the local agencies must:

Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed. (§66001(a)(3))

The local agency will restrict fee revenues to capital projects that expand capacity to serve new development. Improvements funded by the Fix Five impact fee will expand a stretch of Interstate 5 accessible to the additional residents and workers associated with new development. It has been determined that the planned projects identified in this report will expand the capacity of Interstate 5 to accommodate the increased trips generated by new development. Thus, there is a reasonable relationship between the use of fee revenues and the residential and nonresidential types of new development that will pay the fee.

BURDEN RELATIONSHIP

For the fourth finding the local agencies must:

Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed. (§66001(a)(4))

New dwelling units and building square footage are indicators of the demand for transportation improvements needed to accommodate growth. As additional dwelling units and building square footage are created, the occupants of these structures generate additional vehicle trips and place additional burdens on the transportation system.

The need for the Fix Five impact fee is based on projections of growth that show an increase in trip generation and a decrease in level of service primarily as a result of new development. The estimated impacts from new development are based on EDU factors that vary by land use category, providing a reasonable relationship between the type of development and the need for improvements.

PROPORTIONALITY

For the fifth finding the local agencies must:

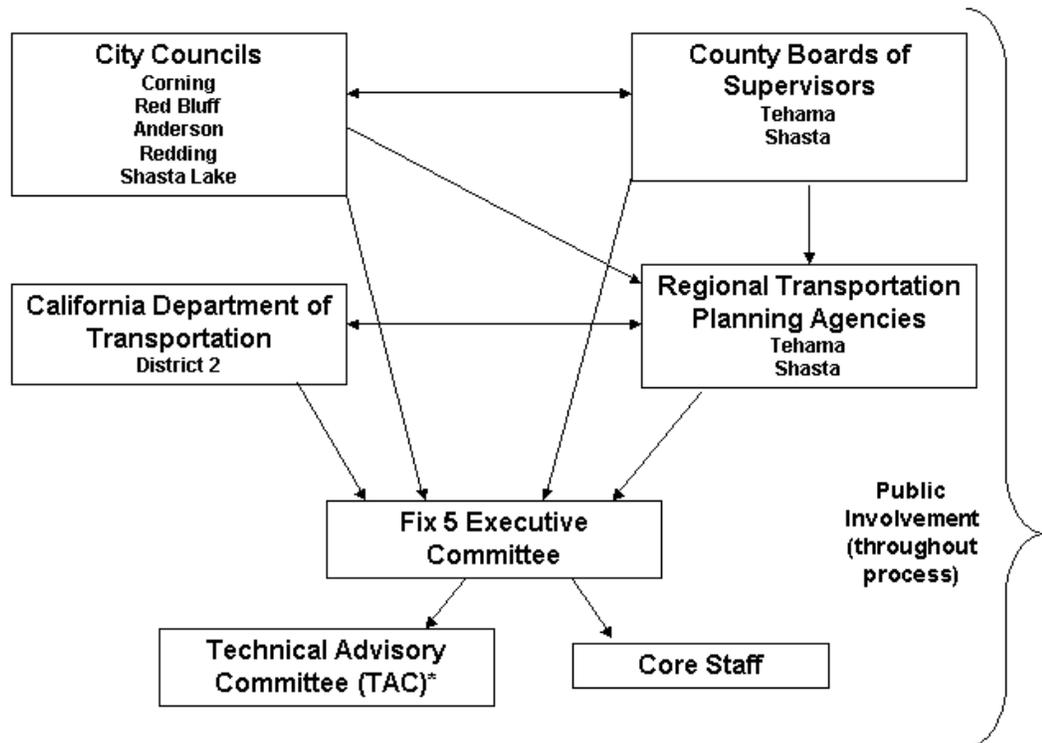
Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed. (§66001(b))

This reasonable relationship between the Fix Five impact fee for a specific development project and the cost of the facilities attributable to that project is based on the estimated vehicle trips the project will add to Interstate 5. The total fee for a specific residential

development is based on the number and type of new dwelling units multiplied the EDU factor, which is based on the trip generation rate for the applicable residential land use category. The fee for a specific nonresidential development is based in a similar manner on the amount of building square footage by land use category. Larger projects generate more vehicle trips and pay a higher fee than smaller projects of the same land use category. Thus, the fee schedule ensures a reasonable relationship between the Fix Five impact fee for a specific development project and the cost of the Interstate 5 improvements attributable to the project.

APPENDIX 1 – FIX FIVE OUTREACH PROCESS

Fix Five Organization Chart



* The TAC is open to all interested stakeholders including community based organizations, tribal governments, business associations, Economic Development Corporations, advocacy agencies, and the general public.

APPENDIX 2 – DETAILED IMPROVEMENT COST ESTIMATES

COST ASSUMPTIONS

Mostly median widening of I-5 in Shasta and Tehama County - Median Option from Corning to Red Bluff

Assumed roadway construction: New structural section of 22-feet added to the median for each direction (12-foot lane plus a 10-foot shoulder)

Assumed bridge construction: Widen bridge in the median by 20-feet each direction (12-foot lane, plus 5-foot wider shoulder, plus 3-feet for new rail and tie in to existing steel)
Where existing median is 60-feet or less, then widened bridge must span the entire median (total of 54-feet of widening)

Assumed bridge widening unit costs: Cast in Place / Post Stressed Box or Slab (CIP/PS) over Creeks \$350 /Sq Ft
Cast in Place / Post Stressed Box (CIP/PS) over River \$400 /Sq Ft
Pre-Cast Concrete Girder (PC/PS I) over active roadway \$450 /Sq Ft

Each roadway segment is rated as a base Level 1 through Level 5 based on expected cost in Sep. 2005 due to terrain, drainage, room to work, location, and traffic volumes.

Level 1	\$2.2 mil / mile	Factors applied to the base values are used to further define the segment. The unit cost per mile is then adjusted based on the other factors.	Factors a add ~15% Estimate adjusted to 2008 b add ~5% Heavy staging or traffic control issues c add ~20% Paved median w/ barrier or retaining walls required d add ~5% Tight working conditions e add ~5% Misc other factors
Level 2	\$2.8 mil / mile		
Level 3	\$3.6 mil / mile		
Level 4	\$4.6 mil / mile		
Level 5	\$5.8 mil / mile		

Segment Number	Begin PM	End PM / Bridge Number	Roadway Length (Miles)	Bridge Length (Ft)	Total Bridge Area (Length x 20' Wide x 2) (Sq Ft)	(\$ per mile or (\$ per Sq Ft)	Cost	Roadway Total (rounded)	Structure Total (rounded)	Support Cost @ 27%
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This segment has an existing median width of 60'.

Adding median lanes here will also require that the median be paved in the same plane as the roadway, it must include a concrete barrier, and all bridges must span the median.

Segment - Level 1		Added factors - a, c, e			Net unit costs - \$3.1 mil / mile					
Roadway								\$20,000,000		\$5,400,000
1A	Northbound	5.8	9.0	3.2		\$3,100,000	\$9,920,000			
	Southbound	5.8	9.0	3.2		\$3,100,000	\$9,920,000			
Structures									\$10,000,000	\$2,700,000
	Hall Creek		08-0119R/L		114	6156	\$350	\$2,154,600		
	Burch Creek		08-0122 R/L		234	12636	\$350	\$4,422,600		
	Jewett Creek		08-0130 R/L		158	8532	\$350	\$2,986,200		
	Thomes Creek Overflow		08-0107 R/L		60	3240	\$350	\$1,134,000		

Segment Number	Begin PM	End PM / Bridge Number	Roadway Length (Miles)	Bridge Length (Ft)	Total Bridge Area (Length x 20' Wide x 2) (Sq Ft)	(\$ per mile or (\$ per Sq Ft)	Cost	Roadway Total (rounded)	Structure Total (rounded)	Support Cost @ 27%
This segment has an existing median width of 60'. Adding median lanes here will also require that the median be paved in the same plane as the roadway, it must include a concrete barrier, and all bridges must span the median.										
Segment - Level 1		Added factors - a, c, e			Net unit costs - \$3.1 mil / mile					
2	Roadway							\$30,000,000		\$8,100,000
	Northbound	12.1	16.9	4.8		\$3,100,000	\$14,880,000			
	Southbound	12.1	16.9	4.8		\$3,100,000	\$14,880,000			
	Structures								\$26,000,000	\$7,020,000
	Thomes Creek	08-0085R/L		1026	55404	\$350	\$19,391,400			
	South Fork McClure Creek	08-0083 R/L		65	3510	\$350	\$1,228,500			
	North Fork McClure Creek	08-0074 R/L		149	8046	\$350	\$2,816,100			
	Truckee Creek	08-0020 R/L		65	3510	\$350	\$1,228,500			

This segment has an existing median width of 60'. Adding median lanes here will also require that the median be paved in the same plane as the roadway, it must include a concrete barrier, and all bridges must span the median.										
Segment - Level 1		Added factors - a, c, e			Net unit costs - \$3.1 mil / mile					
3	Roadway							\$35,000,000		\$9,450,000
	Northbound	16.9	22.5	5.6		\$3,100,000	\$17,360,000			
	Southbound	16.9	22.5	5.6		\$3,100,000	\$17,360,000			
	Structures								\$19,000,000	\$5,130,000
	Elder Creek	08-0084R/L		466	25164	\$350	\$8,807,400			
	Willow Creek	08-0110 R/L		119	6426	\$350	\$2,249,100			
	Oat Creek	08-0117 R/L		162	8748	\$350	\$3,061,800			
	Coyote Creek	08-0111 R/L		169	9126	\$350	\$3,194,100			
	South Fork McClure Creek	08-0083 R/L		65	2600	\$350	\$910,000			
	North Fork McClure Creek	08-0074 R/L		149	5960	\$350	\$2,086,000			
	Truckee Creek	08-0020 R/L		65	2600	\$350	\$910,000			
	Gyle Road OC	08-0116		2	Tie Back Wall	\$500,000	\$1,000,000			
	Tehama Ave OC	08-0099		2	Tie Back Wall	\$500,000	\$1,000,000			

This segment has an existing median width of 60'. Adding median lanes here will also require that the median be paved in the same plane as the roadway, it must include a concrete barrier, and all bridges must span the median.										
Segment - Level 1		Added factors - a, b, c, e			Net unit costs - \$3.2 mil / mile					
4	Roadway							\$25,000,000		\$6,750,000
	Northbound	24.5	28.4	3.9		\$3,200,000	\$12,480,000			
	Southbound	24.5	28.4	3.9		\$3,200,000	\$12,480,000			
	Structures								\$94,000,000	\$25,380,000
	Sacramento River	08-0095 R/L	Replace	937	123684	\$400	\$49,473,600			
	Sacramento River	08-0096 R/L	Replace	700	92400	\$400	\$36,960,000			
	Dibble Creek	08-0028 R/L		191	10314	\$350	\$3,609,900			

Segment Number	Begin PM	End PM / Bridge Number	Roadway Length (Miles)	Bridge Length (Ft)	Total Bridge Area (Length x 20' Wide x 2) (Sq Ft)	(\$ per mile or (\$ per Sq Ft)	Cost	Roadway Total (rounded)	Structure Total (rounded)	Support Cost @ 27%
5	Segment - Level 3		Added factors - a		Net unit costs - \$4.1 mil / mile					
	Roadway							\$25,000,000		\$6,750,000
		Northbound	28.4	32.2	2.0		\$4,100,000	\$8,200,000		
		Less Wilcox PL		-1.8						
		Southbound	28.4	32.2	3.8		\$4,100,000	\$15,580,000		
	Structures								\$3,000,000	\$810,000
		Blue Tent Creek		08-0026 R/L	155	6200	\$350	\$2,170,000		
6A	Segment - Level 2		Added factors - a, e		Net unit costs - \$3.2 mil / mile					
	Roadway							\$24,000,000		\$6,480,000
		Northbound	32.2	36.4	2.9		\$3,200,000	\$9,280,000		
		Less part 9-Mile PL		-1.3						
		Southbound	32.2	36.4	4.2		\$3,200,000	\$13,440,000		
	Structures								\$0	\$0
		None				0	\$0	\$0		
6B	Segment - Level 2		Added factors - a, e		Net unit costs - \$3.3 mil / mile					
	Roadway							\$14,000,000		\$3,780,000
		Northbound	36.4	38.7	1.8		\$3,300,000	\$5,940,000		
		Less part 9-Mile PL		-0.5						
		Southbound	36.4	38.7	2.3		\$3,300,000	\$7,590,000		
	Structures								\$0	\$0
		None				0	\$0	\$0		
6C	Segment - Level 2		Added factors - a, e		Net unit costs - \$3.4 mil / mile					
	Roadway							\$16,000,000		\$4,320,000
		Northbound	38.7	41.5	2.8		\$3,400,000	\$9,520,000		
		Southbound	38.7	41.5	1.8		\$3,400,000	\$6,120,000		
		Less T. Scales PL		-1.0						
	Structures								\$0	\$0
		None				0	\$0	\$0		

Segment Number		Begin PM	End PM / Bridge Number	Roadway Length (Miles)	Bridge Length (Ft)	Total Bridge Area (Length x 20' Wide x 2) (Sq Ft)	(\$ per mile) or (\$ per Sq Ft)	Cost	Roadway Total (rounded)	Structure Total (rounded)	Support Cost @ 27% (rounded)
	Segment - Level 3		Added factors - a, b, e			Net unit costs - \$3.3 mil / mile					
7	Roadway	End PM is actually 0.9 in SHA County							\$10,000,000		\$2,700,000
	Northbound	41.5	42.9	1.4			\$3,400,000	\$4,760,000			
	Southbound	41.5	42.9	1.4			\$3,400,000	\$4,760,000			
	Structures									\$23,000,000	\$6,210,000
	Cottonwood Creek		06-0204		1525	61000	\$350	\$21,350,000			
7 - Tehama	Roadway								\$4,000,000		\$1,080,000
	Northbound	41.5	42	0.5			\$3,400,000	\$1,700,000			
	Southbound	41.5	42	0.5			\$3,400,000	\$1,700,000			
	Structures									\$11,500,000	\$3,105,000

Project Study and Environmental Cost Assumptions for Sections 1B, 2 and 3

Section	Begin PM	End PM	Length	Structures			Total Cost	
				Structures Less than \$5 Million	Between \$5m and \$10m	Structures Greater Than \$10 million	Per Segment	Rounded
Section 1 A	9	12.1	3.1	1	0	0	\$273,000	\$270,000
Section 2	12.1	16.9	4.8	3	0	1	\$534,000	\$530,000
Section 3	16.9	22.5	5.6	8	1	0	\$698,000	\$700,000
							\$1,505,000	\$1,500,000

Cost Breakdown

- \$80,000 per mile
- \$25,000 per structure < \$5,000,000
- \$50,000 per structure \$5,000,000 - \$10,000,000
- \$75,000 per structure > \$10,000,000

APPENDIX 3 – FUNDING AWARD FOR COTTONWOOD TRUCK CLIMBING LANES

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

April 3, 2007

Mr. Dan Little, Executive Officer
Shasta County Regional Transportation Agency
1855 Placer Street
Redding, CA 96001

Dear  Dan Little:

I congratulate you on the securing of Corridor Mobility Improvement Account (CMIA) programming for the \$27 million Cottonwood Truck Climbing Lanes Project. Based on the merits of the project, the regional commitment to the Fix Five Partnership and the "Blue Print" planning effort the Shasta County Regional Transportation Agency is undertaking, the California Transportation Commission was in a position to include this work as part of the CMIA program.

As you are well aware, land use and related growth in Northern California is resulting in capacity needs in the I-5 corridor in the Shasta-Tehama region that are much greater than existing State and Federal transportation resources can meet. I believe we have a shared understanding this is a State and local government problem and both need to work together to meet the challenge. The partnership efforts established in Shasta and Tehama Counties to look at land use and alternative transportation funding solutions are outstanding examples of how State and local government can cooperatively work together to better provide transportation facilities that meet regional and interregional needs. I applaud the partnership efforts and am committed to helping make them a success.

Again, congratulations on the CMIA programming of the Cottonwood Hills Truck Climbing Lanes Project. This project should provide a strong foundation for the Fix Five Partnership and "Blue Print" planning efforts, and is representative of the State's commitment to Interstate 5 and the partnership endeavor. I look forward to working more with you in meeting Interstate 5 and other regional mobility challenges.

Sincerely,



WILL KEMPTON
Director

c: Brian Crane, District 2 Director

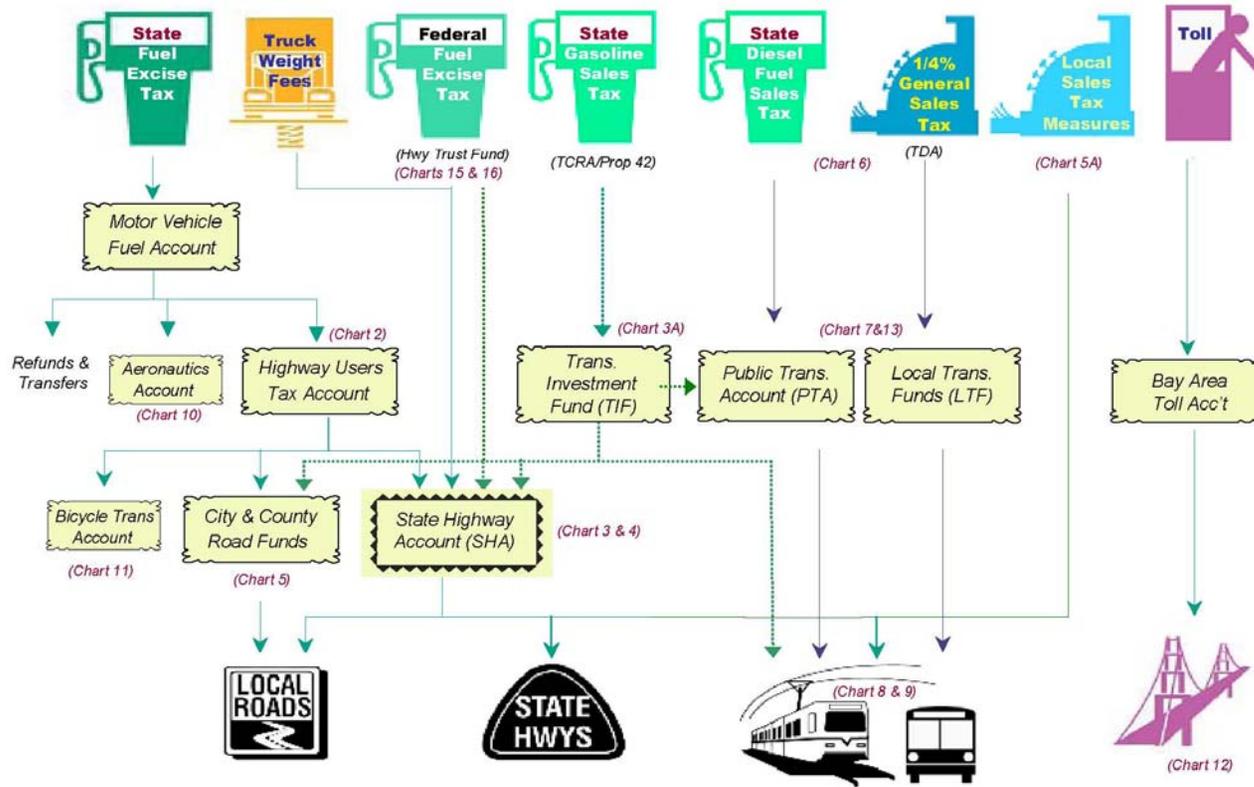
"Caltrans improves mobility across California"

APPENDIX 4 – STATE AND FEDERAL FUNDING SOURCES

California Transportation Funding

Chart 1

OVERVIEW

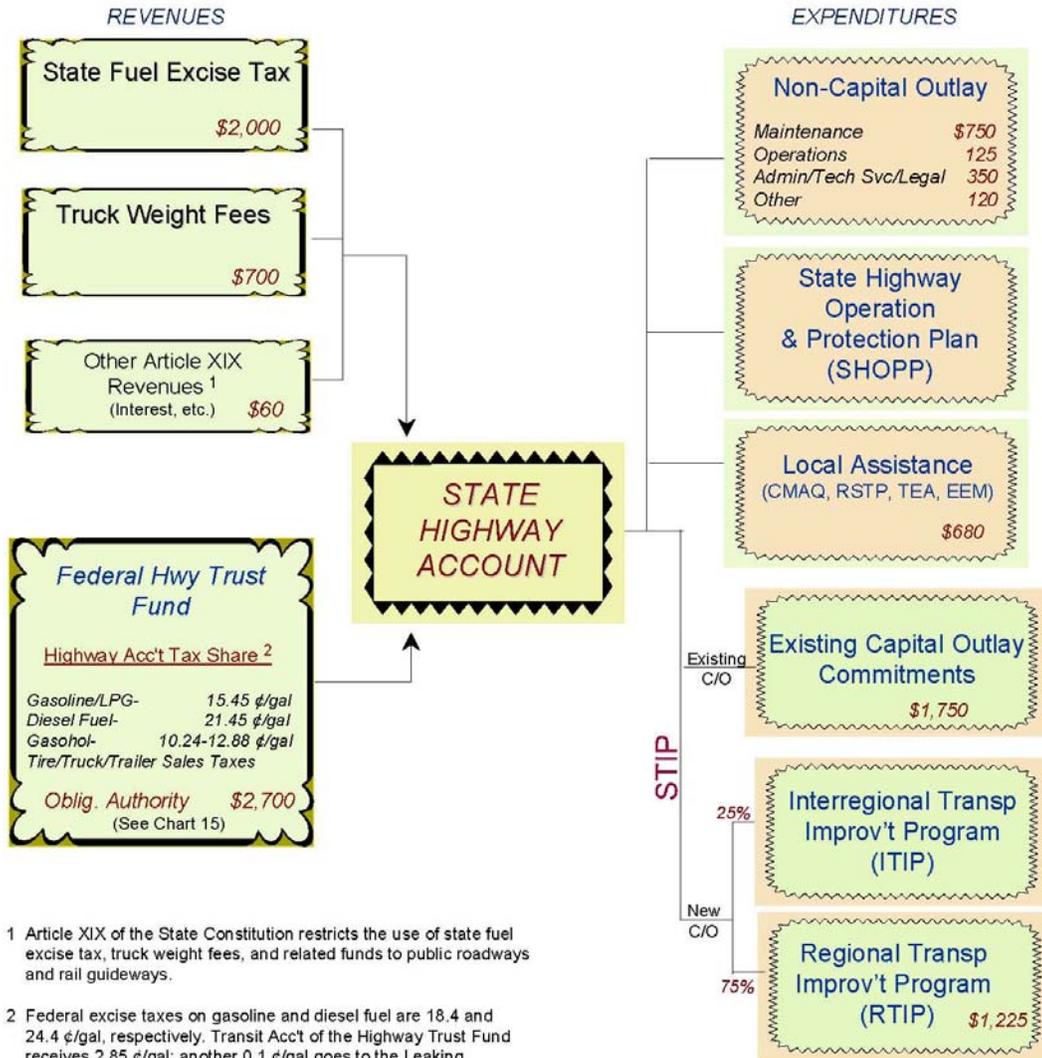


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 Division of Transportation Planning
 CALTRANS 11/2004

Chart 3

FEDERAL & STATE HIGHWAY FUNDING

(Million Dollars, 2001-2002)



1 Article XIX of the State Constitution restricts the use of state fuel excise tax, truck weight fees, and related funds to public roadways and rail guideways.

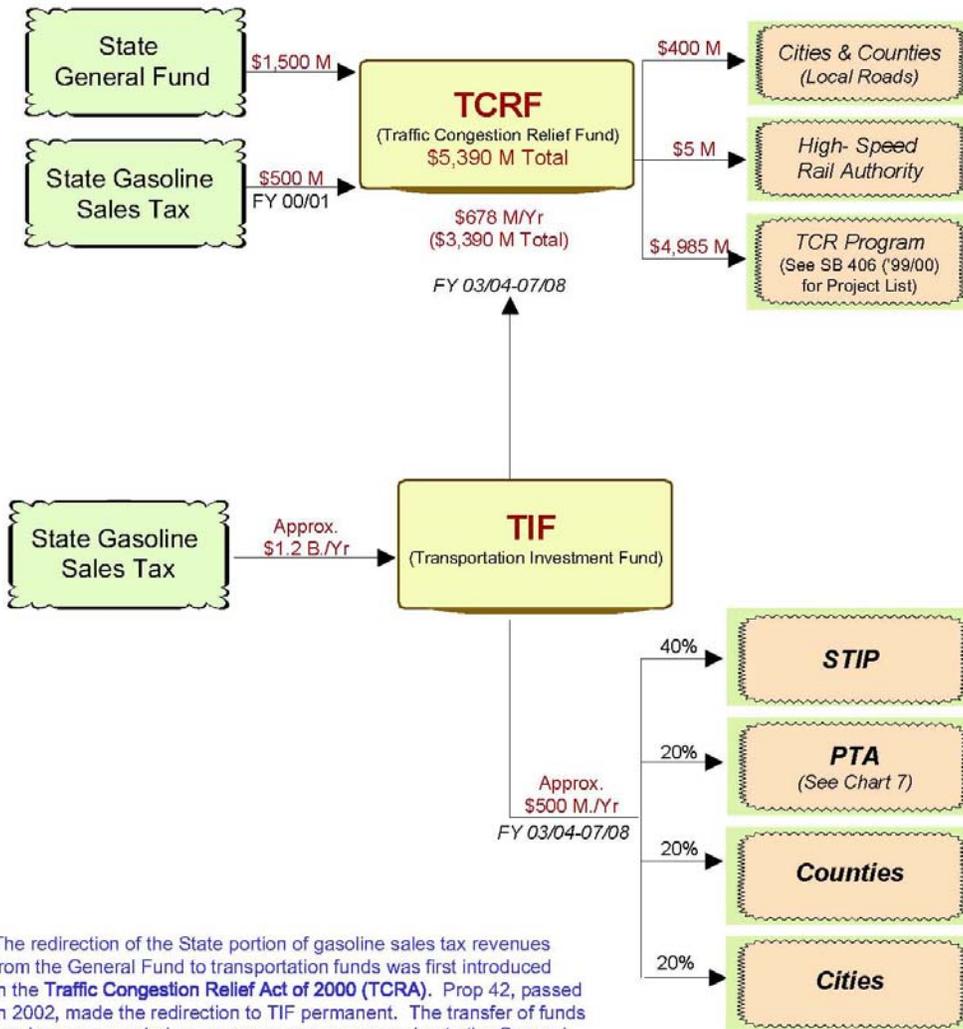
2 Federal excise taxes on gasoline and diesel fuel are 18.4 and 24.4 ¢/gal, respectively. Transit Acc't of the Highway Trust Fund receives 2.85 ¢/gal; another 0.1 ¢/gal goes to the Leaking Underground Storage Tank Trust Fund.

Sources: 2002-03 Governor's Budget
2002 STIP Fund Estimate

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CALTRANS 11/2004

TCRA & PROPOSITION 42 * (State Gasoline Sales Tax)

Chart 3A



* The redirection of the State portion of gasoline sales tax revenues from the General Fund to transportation funds was first introduced in the **Traffic Congestion Relief Act of 2000 (TCRA)**. Prop 42, passed in 2002, made the redirection to TIF permanent. The transfer of funds has been suspended as an emergency measure due to the General Fund shortfalls (California State Constitution, Article XIX B).

Office of Transportation Economics
 Division of Transportation Planning
 Caltrans 11/2004