6.8 Transportation Safety & Security

This chapter addresses transportation safety and security as required under SAFETEA-LU and California's Strategic Highway Safety Plan.

Transportation safety and security is a critical component of the RTP; it encompasses multiple elements of the plan and addresses all modes, facilities and services. This chapter's focus is on increasing the safety of the transportation system for all users; and on increasing the ability of the transportation system to support homeland security and to safeguard the personal security for all users.

PCTPA ROLE

Over the past decade, Placer County has experienced tremendous growth and transformation from a rural landscape to a more urban one. Where once local roads were used mainly to transport goods to market or to move farm machinery from location to location, these same roads must now accommodate commute and recreational trips that may conflict with older, rural transportation patterns. The influx of growth presents new safety and security concerns for all transportation system users.

PCTPA's role in transportation safety and security is limited to essentially four roles:

- Provide a policy forum to help develop a coordinated, countywide consensus on transportation safety and security issues;
- Serve as a resource of information on transportation system conditions and the types of responses that might be useful in an emergency;
- Assist in the planning and programming of transportation infrastructure improvements; and
- Find opportunities to leverage resources, projects and planning functions that can enhance or provide benefit to transportation safety and security efforts.

Freeway Service Patrol

An example of a mitigation effort currently being implemented by PCTPA is the Freeway Service Patrol (FSP) Program, which specifically addresses traffic accidents and other incidents on area freeways in Placer County. FSP patrols the region's most congested freeway segments during the busiest times of the day, quickly clearing accidents and other incidents. FSP also assists motorists in trouble, removes dangerous road debris, and otherwise helps to make the County's freeways safer and less congested by reducing the chance of further accidents and bottlenecks caused by impatient drivers and gawkers.

TRANSPORTATION SAFETY

Historically, transportation safety has not been included as part of the transportation planning process. Rather, safety considerations have been viewed as a reactionary consideration.

Traffic Accident Trends

To adequately address safety in the planning process requires active monitoring of the transportation system for safety problems. This involves monitoring the number of crashes, injuries and fatalities associated with the operation of different transportation modes.

The National Highway Traffic Safety Administration (NHTSA) began tracking highway accident statistics in 1966. According to the NHTSA, traffic accidents, including fatalities and injuries, peaked in 1972 and have been slowly declining since. The lowest rate on record was experienced in 2008, an almost ten percent drop since 1966. Advancements in vehicle safety technology that prevents rollovers; an increase in seatbelt usage; new transportation safety educational programs, including drunk driving awareness campaigns; safer transportation facilities; in addition to fewer drivers on the road with more people choosing to use alternate modes of transportation due to higher fuel prices; have all cumulatively contributed to this decline. The NHTSA anticipates this downward trend to continue for the foreseeable future.

California has had a positive record in terms of traffic safety. The fatality rate per 100 million vehicle miles traveled (VMT) between 1995 to 2004 was 1.25, compared to the national rate at 1.46 for the same period. In 2008 the national fatality rate per 100 million VMT was 1.28, compared to California's rate at 1.04.

California Strategic Highway Safety Plan

Under SAFETEA-LU, States are required to develop Strategic Highway Safety Plans (SHSP). Each State must have a SHSP in place by October 1, 2007 to receive its full share of federal-aid transportation funds. Federal regulations require that metropolitan transportation planning agencies summarize the SHSP within their RTPs. Under the California Transportation Commission's (CTC) 2010 RTP Guidelines, RTPAs are held to the same requirement to address safety and security in the development of the RTP.

The California SHSP sets broad goals for safety; lays out a set of emphasis areas for action; and for each emphasis area recommends strategies; followed with a detailed implementation plan, which identifies specific actions and the agencies that will carry them out. The California Strategic Highway Safety Plan (SHSP) was completed in September 2006.

The California SHSP highlights challenges to roadway user safety; proposes strategies to reduce accidents, fatalities and injuries; serves as a guide for implementation of specific projects and activities through 2010. The SHSP goal for California is less than one roadway fatality per 100 million VMT. The rate in 2008 was 1.04 per 100 million VMT.

All safety emphasis areas from the SHSP are tied to elements of the 2035 RTP, as it relates to the State highway system, local streets and roads, as well as other transportation modes such as passenger rail, aviation, and the non-motorized system. Safety considerations are addressed in these respective chapters. The TSM and ITS chapters also briefly address the issue of safety.

Some emphasis areas also lend themselves for focus at the regional scale, and would be addressed in SACOG's 2035 MTP, while others are more local or site-specific, and addressed at the jurisdiction level. The California SHSP notes that regional and local agencies have the greatest ability to affect change are in education, engineering, and development of physical improvements to the transportation system, and this RTP places strong emphasis in both the Policy and Action Elements to address the issue of safety of the transportation system.

Causes & Types of Traffic Accidents

Having national data can help begin discussions about transportation safety; however, more detailed data is necessary to find safety solutions at the regional and local level. This section highlights safety statistics compiled by the California Highway Patrol (CHP) using the Statewide Integrated Traffic Records System (SWITRS) for Placer County and its jurisdictions, where available. Use of the SWITRS data will make Placer County jurisdiction safety projects competitive in pursuing federal and State safety funding such as the High Risk Rural Roads (HR3) program.

Major contributors to traffic accidents in Placer County include impaired driving, aggressive driving, which includes speeding and tailgating, failure to yield the right of way, running red lights and stop signs, inattentive driving, and unfamiliarity with traffic rules.

As can be seen in Table 6.8-1 below, fatal and injury collisions in Placer County have varied greatly over the past ten years, although generally mirroring the decline identified in national statistics. Fatal collisions peaked in 2002, with 2008 having the fewest fatal collisions; while injury collisions peaked in 2005, with fewest injury collisions occurring in 2008.

Table 6.8-1
Summary of Fatal & Injury Collisions for Placer County 1998 - 2008

Category	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fatal Collisions	34	23	30	40	36	31	39	35	25	22
Persons Killed	41	24	32	48	41	34	47	39	28	24
Injury Collisions	1,501	1,583	1,605	1,628	1,678	1,603	1,693	1,521	1,524	1,418
Persons Injured	2,286	2,498	2,574	2,458	2,534	2,381	2,433	2,255	2,188	1,950

Notes: This data may be under reported for Non-CHP agencies due to a traffic collision report form revision.
Source: Statewide Integrated Traffic Records System, California CHP, March 2010.

The CHP has found that collisions typically result from a combination of three factors: the vehicle, the driver, and the road. In fatal or severe injury collisions, the collision is most likely to occur with a fixed object, rather than with another motor vehicle. The majority of fatal collisions are caused by driving or bicycling under the influence. In "all other collisions," motor vehicle collisions are most common, accounting for over half of all collisions; however, in rural areas of Placer County, animal-vehicle collisions are also commonplace. In all other collisions, unsafe speeds and improper turning account for nearly 50 percent of collisions; rear-end collisions are the second most common; and driving or bicycling under the influence account for less than 10 percent.

In addition to the data shown in Table 6.8-1, SWITRS data also identifies three locations in Placer County where truck collisions have consistently occurred between 2002 to 2006:

- SR193 and Sierra College Boulevard: 7 – 8 collisions
- Baseline and Fiddyment Roads: 7 – 8 collisions
- Auburn-Folsom Road and Douglas Boulevard: 2 collisions

It should be noted that the collision locations identified above do not necessarily reflect the inherent safety of the road facilities, and should not be considered a substitute for an approved safety analysis.

Shown in Table 6.8-2 is data on fatal collisions for select State highways within Placer County, for the period 2003 through 2007.

Table 6.8-2
Fatal Collisions on Placer County Highways & Intersections

State Route	2003	2004	2005	2006	2007	Total
I-80	6	7	8	5	3	**29**
SR 65	4	0	5	2	1	**12**
SR 49	2	1	2	2	0	**7**
SR 28	1	0	2	3	0	**6**
All State Highways	20	10	20	13	5	**68**
Non-State Highways	7	9	10	16	6	**48**
Intersection	3	2	2	3	0	**10**

Source: Placer County Individualized Traffic Safety Report and Accident Summaries, SACOG, October 2009.

State Highway System

Caltrans monitors safety statistics and motorist complaints to determine State highway locations that are functioning below acceptable safety standards. Once a safety problem is identified, its resolution becomes a first priority to receive funding.

Caltrans performs safety screens of State highways to identify traffic safety, enforcement activities, or future improvements to eliminate or reduce the number and / or severity of traffic accidents at locations:

- Fatal and injury accident rate;
- Roadway width on two or three lane conventional highways where shoulder widths are less than standard;
- Pedestrian and bicyclist needs; and
- Other vehicular safety issues.

Caltrans also inspects every bridge under State jurisdiction at least once every two years for potential safety issues, and inspects a majority of locally owned bridges that are not part of the State highway system.

Placer County

Placer County has developed the Traffic Accident Analysis System (TAAS) to monitor traffic safety on the County roadway network. TAAS allows for an annual review of the CHP traffic accident reports. Categories reviewed include intersections (with broadside collisions or with right of way violations), roadway segments, run off the road, wet pavement, snow or ice, motorcycle, bicycle, and pedestrian. High incidence locations are subsequently identified and reviewed to determine whether changes or improvements should be undertaken, for example changes to traffic control, signage or striping at the location or if the development of a safety project is needed.

TRANSPORTATION SECURITY

Security issues within the context of the transportation system refers to potential personal and homeland security threats. Placer County is vulnerable to many types of potentially catastrophic incidents. Incidents could include significant transportation accidents, natural disasters (earthquake, floods, and wild fires), sabotage, civil unrest, hazardous materials spills, environmental hazards, criminal activity, or acts of terrorism.

Transportation can play multifaceted roles in responding to such incidents and emergencies. Every day, jurisdictions and agencies handle incidents such as accidents on the transportation system. Other examples of support functions that the transportation system can play in an incident or emergency response include:

- Allowing traffic signals to extend the red or green cycle time to allow large numbers of vehicles or pedestrians to proceed in one direction;
- Deploying traffic personnel to problem intersections to manually direct traffic;
- Deploying various methods to direct traffic, such as portable signs, cones or barrels;
- Installing permanent or portable changeable message signs along major routes that could be used to provide the public up-to-date information;
- Using road shoulders to increase vehicle capacity of evacuation routes;
- Using contra flow lanes to move large numbers of vehicles in one direction;
- Using public transit to assist in the evacuation of the public, if necessary; and

- Using transportation facilities, such as rail stations or major transit centers as potential staging areas for medical and food supplies.

Placer County Office of Emergency Services

Organizational response to a security incident and disaster is the responsibility of the Placer County Office of Emergency Services (OES). Under the California Emergency Services Act, the Placer County OES directs the County's overall emergency response to natural disasters, man-made incidents, or acts of terrorism, in cooperation with local jurisdictions and agencies; and also coordinates on-going preparedness, including emergency drills and simulations with agencies, including those that provide transportation services. The coordination role OES serves allows law enforcement and emergency response to occur in an expeditious manner. At the same time, the role OES provides allows the transportation system to continue to function and to handle the possibly overwhelming public response to a major incident or emergency.

CAL FIRE

The primary goal of fire protection in California is to safeguard a wide range of assets that include: life and safety, structures, range, recreation, hydroelectric power, fire-flood watersheds, soil erosion, water storage, water supply, scenic, timber, air quality, historic buildings, non-game wildlife, game wildlife and infrastructure.

Placer County is covered under the Nevada-Yuba-Placer Fire Management Plan prepared by CALFIRE in 2006. For areas within California, including Placer County, CALFIRE has identified “fire hazard severity zones.” Areas of highest priority are where risk to damage to infrastructure for delivery of emergency and other critical services is considered greatest, threatening both people and their assets. This would include water supply, electrical transmission, and transportation facilities. Since 2001, Placer County has experienced four major fires. Placer County is rated by CALFIRE as an area with moderate to a high level fire hazard risk.

TRANSPORTATION SAFETY & SECURITY ACTION PLAN

Short and Long Range

1. Reduce accident rates to below the statewide average or better through implementation of safety improvements and measures. *(PCTPA, jurisdictions, transit operators, Caltrans)*

2. Encourage jurisdictions to develop a systematic approach to identify and review existing or potential high incident accident locations, including rural areas to prevent animal-vehicle collisions. *(Jurisdictions, transit operators, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

3. Prioritize projects that implement preventative and routine maintenance and address safety standards. *(Jurisdictions, transit operators, CCJPA, Caltrans, PCTPA and SACOG)*

4. Prioritize infrastructure in need of replacement, relocation or upgrade to meet current safety and design standards, including implementation of safety measures, enforcement, and educational activities. *(Jurisdictions ,transit operators, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

5. Continue to participate in the SHSP planning process and various interagency coordination efforts to exchange information on ongoing safety activities and best practices, as well as identify training opportunities, and exercise capabilities. *(Jurisdictions, transit operators, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

6. Encourage a regional approach to maximize public outreach and education and related enforcement initiatives that target high risk behavior issues and that improve safe driving practices. *(Jurisdictions, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

7. Encourage jurisdictions and transportation agencies to continue to coordinate with the Placer County OES and CAL FIRE on emergency preparedness activities. *(Jurisdictions, transit operators, Caltrans, CHP, Placer County OES,CAL FIRE, PCTPA)*

8. Encourage the preparation of transportation security assessments, and emergency preparedness plans, including continuity of operations, business resumption and recovery. *(Jurisdictions, transit operators, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

9. Improve the security preparedness of transportation facilities. *(Jurisdictions, transit operators, CCJPA, Caltrans, CHP, PCTPA and SACOG)*

TRANSPORTATION SAFETY & SECURITY PROJECTS

The 2035 RTP continues the commitment to improve transportation safety and security for the region. The scope of the RTP goes beyond specific funding for safety and security projects. It emphasizes collaboration amongst many stakeholders, Caltrans, SACOG, local jurisdictions, public transit operators, law enforcement, and emergency responders, including Placer County OES. The result of this collaboration is consistent with the goals of the California SHSP.

There are a few projects specifically designated as transportation safety projects in the RTP. These are identified in Table 6.8-3. There are also many other projects that are consistent with the Transportation Safety & Security Action Plan, which are included in the action plans for regional roads, passenger rail, public transit, non-motorized system, TSM and ITS. See sections of the Action Element for applicable project lists. Examples of these projects include improvements to pedestrian and bicycle facilities; traffic calming measures, elimination of roadside hazards, and improved intersection controls, among others. In addition, safety and security standards are considered as part of every transportation project design. Activities within this can range from construction of

median barriers, guardrails, crash cushions, red-light cameras, skid-resistant pavements, signage and markings to erosion control to prevent landslides.

Table 6.8-3
Transportation Safety & Security Projects List

Lead Agency	SACOG Project ID	SACOG MTP	SACOG MTIP	Project Title	Project Description	Year Complete	Status	Current Year (2010) $	Expenditure Year $
Caltrans Division of Rail	CAL18768	'07-00	11-00	Dinky Way Grade Crossing	In the City of Colfax, at the intersection of Dinky Way & UPRR: Eliminate hazardous at railroad grade crossing. (US DOT RR crossing # 753152B)	2010	Programmed	$550,000	$550,000
Caltrans District 3	CAL20394	07-00	11-00	ED/Pla/But Guardrail	In El Dorado, Placer, and Butte counties at various locations install metal beam guardrail & end treatments. Placer locations: Pla-193-7.96/8.00, 2 miles west of I-80 near Summer Star Lane	2011	Programmed	$1,026,000	$1,067,040
Caltrans District 3	CAL20405	07-00	11-00	Rumble Strips	In Placer County install rumble strips per SHOPP - Collision Reduction - on Pla-80 from Applegate Road overcrossing to SR174 junction (part of a larger group of District 3 projects).	2012	Programmed	$200,000	$216,320
Placer County Dept of Public Works	PLA25433	07-00	11-00	Foresthill Road Safety	On Foresthill Road 3.2 miles east of its intersection with I-80, improve horizontal geometry of three curves; repave and apply a micro-surface friction course; increase sight distance and add acceleration lane. HSIP3-03-030.	2013	Programmed	$1,000,000	$1,124,864
Placer County Dept of Public Works	PLA25432	07-00	11-00	Rollins Lake Road Shoulder Widening and Guardrail Improvements	Rollins Lake Road for two miles north of its intersection with SR174, including its intersection with Norton Grade Road. Construct segments of shoulder widening and guardrail; realign roadway intersection; install speed limit and curve warning signage. HSIP3-03-032.	2013	Programmed	$1,110,200	$1,248,824
Placer County Dept of Public Works	PLA25384	'07-00	11-00	Foresthill Road Safety Improvements	Foresthill Road from Lower Lake Clementine Road to Old Auburn Road: Increase sight distance; construct acceleration lane.	2013	Programmed	$1,082,000	$1,217,103
Caltrans District 3	CAL17380	'07-00	11-00	SACOG Region Emergency Repair Program	Lump Sum - Emergency Repair (excluding Federal Emergency Relief Program funds) for non-capacity increasing projects only.	2015	Programmed	$400,000	$486,661
							2010-2015	$5,368,200	$5,910,812
							2016-2024	$0	$0
							2025-2035	$0	$0
							Total	$5,368,200	$5,910,812