## **STATE HIGHWAY 93 CRASH STUDY**

In 1998 a feasibility study was funded to look at the northwest quadrant of the Denver metro area for transportation improvements. State Highway 93 (SH-93) has been the focus over many years as the northwest link of a circumferential beltway for the Denver metro area. The purpose of this report is to provide accident data as supplement analysis for the Northwest Metro Quadrant Feasibility Study.

Summary accident information was compiled for both Jefferson County and Boulder County segments of SH-93. Detailed accident information was compiled for the Jefferson County portion of the highway. State Highway 93 is an important connection for the Denver region, and functions as a key connection between Boulder and Golden. The highway continues to operate at the same capacity despite phenomenal growth in both Jefferson and Boulder Counties. Traffic volumes in the Jefferson County portion increased approximately 46 percent. In the Jefferson County section, there were 69 accidents in 1990 and 99 accidents in 1996, representing a 43 percent increase in accidents. Overall, there were 295 accidents in 1990 and 365 accidents in 1996, representing a 24 percent increase.

Approximately 11 miles of SH-93 are in Jefferson County and about 8 miles are in Boulder County. About 25 percent of the total number of accidents on SH-93 take place in Jefferson County with 75 percent occurring in Boulder County. Over the study period, the average accident rate for SH-93 on the Boulder County portion was nearly three times higher than on Jefferson County portion.

On the Jefferson County portion of SH-93, 24.2 percent of the drivers involved in accidents reside in the City of Boulder, 18.0 percent live in Golden and 11.1 percent are from Lakewood. Focusing on age categories, SH-93 has about one-third more injuries to occupants 24 years and under than the national average. Approximately 38.8 percent of the injuries during the study period for SH-93 were to people under 24 years old. The economic loss due to accidents from 1990 to 1996 in the Jefferson County section is estimated at approximately \$18,145,000 (in 1998 dollars). Overall economic loss in the corridor was approximately \$52,286,000 during the study period.

For most of its length in Jefferson County, SH-93 is a two-lane road with one set of passing lanes in each direction. From Leyden Road north to the county line, the road narrows with little shoulder area. The steep, winding section of SH-93 from Leyden Road to SH-72 is one of the most dangerous sections of the highway. North of the county line, the road intersects SH-128 and drops into the Boulder Valley as a three-lane facility. At the intersection with SH-170 (Eldorado Springs Drive) the highway widens to four lanes becoming Broadway at the Boulder city limits.

Safety concerns for SH-93 will need to be addressed in the short-term future while the Northwest Metro Quadrant Feasibility Study determines longer-term solutions. The Colorado Department of Transportation has implemented safety improvement projects on high accident portions of the roadway. The improvements address the major physical safety concerns in the corridor, but safety improvements relating to a significant increases in traffic congestion are needed.