

STAKEHOLDER WEBINAR #1 – OCTOBER 19, 2012

Question Log

The following questions were asked during Stakeholder Webinar #1 held on October 19, 2012. Responses are shown following the question.

How will you measure travel time reliability?

Travel time reliability is the distribution of travel time of trips using a facility such as US 97 over an extended period of time. This distribution arises from the interaction of a number of factors that influence travel times, including recurring variations in demand; severe weather; incidents; work zones; and special events.

There are two widely held ways that travel time reliability can be defined. Each is valid and leads to a set of reliability performance measures that capture the nature of travel time variability. Reliability can be defined as (1) the *variability* in travel times that occur on a facility or trip over the course of time and expressed through metrics such as the 50th, 80th, or 95th percentile travel time; or (2) the number of trips that *fail or succeed* in accordance with a pre-determined performance standard through metrics such as on-time performance or percent failure based on a target minimum speed or travel time.

There are several possible performance measures for quantifying different aspects of the travel time reliability distribution. The following performance measures are among the more useful measures for evaluating alternatives to improve reliability:

- Typical (average) conditions
 - Travel time (minutes)
 - 50th percentile travel time index (unitless), which is the ratio of the 50th percentile travel time on a facility to the theoretical travel time if traveling at free-flow speed
 - Annual delay (vehicle-hours and/or person-hours)
- Unreliable conditions
 - Planning time index (unitless), which is the ration of the 95th percentile highest travel time to the theoretical free-flow travel time.
 - 80th percentile travel time index (unitless)
 - Failure/on-time measures (percentage)
 - Semi-standard deviation (unitless)
 - Standard deviation (unitless)
 - Misery index (unitless, rural only)

The TRIP97 partnership and consultant team intend to explore each of these measures in more detail and within the context of US 97 applications before settling upon a single measure. In the meantime, we welcome any observations, insights, and suggestions that other interested parties may have.

How far off of US 97 (east or west) is the study area for TRIP97? Specifically, will railroads be considered?

The study area for TRIP97 stretches from La Pine to Madras along the US 97 corridor. Within urban areas where there are parallel and intersecting surface streets, the corridor is assumed to extend in an east/west direction far enough to evaluate projects with potentially significant impacts to the highway. This means that no specific east/west width has been pre-established for the corridor. The intent of the project is to look at the corridor from a multimodal perspective, which includes the north/south rail service that currently exists.

Expected annual average crash frequency is harder to calculate and track versus fatal and serious injury crashes. What was the thought process for including it instead of raw crash data?

Expected annual crash frequency was selected as a metric because Highway Safety Manual (HSM) procedures are capable of forecasting this metric based on differing roadway conditions, such as traffic demand and geometric configurations. This aspect of the metric will allow for the evaluation of future conditions or the impacts of planned modifications. At the same time, the severity of crashes is also an important attribute that we intend to incorporate into this metric.