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MEMORANDUM

DATE: November 23, 2009

TO: Becky Bucar, PE, Town of Truckee

FROM: Gordon Shaw, PE, LSC Transportation Consultants, Inc.

SUBJECT: Truckee 2009 Summer Count Program

Per your request, LSC Transportation Consultants, Inc. has conducted a comprehensive traffic count program over the course of the summer of 2009 for the Town of Truckee. The purpose of these counts is to provide a comprehensive set of traffic volumes, adjusted for the Town's traffic analysis design period, that can be used for future traffic studies including updates to the Town's TransCAD traffic model.

The last traffic count program was conducted during the summer of 2003. This memo presents both the 2009 counts as well as a comparison with the 2003 counts. The counts consist of two major efforts: roadway counts and intersection counts. All data count files are provided on the attached CD.

Intersection Counts

A total of 29 intersections were selected by the Town of Truckee for the intersection counts. The intersection counts focus on capturing the PM peak hour turning movement volumes. In resort communities the PM peak hour is sometimes centered around noon, as opposed to non-resort communities where the PM peak hours is usually centered around the commute period. Because of this inconsistent peak hour, the peak hour was determined from data collected by the roadway counts, prior to conducting intersection turning movement counts. Table 1 and Figure 1 present a summary

of the intersection turning movement data. These volumes have been adjusted to the Town's design day, which has been established to represent the summer weekday with the 10th-highest peak hour volumes. The PM peak hour for each intersection is noted in this table as well.

Several of the intersections counted were roundabouts. Roundabouts are difficult to count due to the fact that a vehicle entering the roundabout does not immediately perform its desired turning maneuver. The vehicle must be observed from when it first enters the roundabout to when it finally exits, to determine what turning movement it is ultimately making. For this reason, each roundabout intersection counted had at least two traffic counters present during the count duration.

Roadway Counts

Roadway daily traffic counts were conducted at 24 roadway locations. These counts recorded total 2-way volumes in 15-minute increments. Counts were conducted at each location for one week.

The roadway counts included a permanent count station, to be used as a control point, located on Donner Pass Road between State Route (SR) 89 south and Meadow Way Drive. This control point allows development of a design day and adjustment factors relative to this design day for each day of the summer. Table 2 and Figure 2 present a summary of counts over the summer at this location. As shown, total daily volumes reached a high around the 4th of July holiday period (with a peak volume of 22,228 on the 3rd of July), dropped in late July, and then returned to slightly lower peak volumes in early to mid August. PM peak hour volumes generally followed the same pattern, with a greatest 2-way peak hour volume (of 1,880) observed on Friday, July 10th. In general, Friday was observed to be the busiest day of the week and Sunday the least busiest.

PM peak hour volumes for the various study intersections, as well as daily volumes from this summer's counts, are summarized in Table 3. This table includes volumes directly from the count data, as well as volumes adjusted to represent the Town's design day. Figure 3 also provides these peak hour and daily design volumes. As shown, the roadway segment with the greatest total daily volume was found to be Donner Pass Road between SR 89 South and Meadow Way (the control point), with a daily volume of 19,131, followed by SR 267 between I-80 and Brockway Road (15,230). Other roadway count locations with total daily volumes exceeding 15,000 consist of Brockway Road between South River Street and Rue Hilltop (15,065) and Donner Pass Road between Levone Avenue and the central I-80 interchange (15,020). Regarding the PM peak hour, the greatest volume was found on Donner Pass Road between Spring Street and McIver Crossing (1,774) followed by SR 89 South between Deerfield Drive and West River Street (1,769) and the control point location on Donner Pass Road west of 89 South (1,669).

Discussion of Trends

Comparing count data conducted in 2003 with the data collected in 2009 allows an evaluation of changes in traffic volumes over the last six years. This comparison can be done for the 23 intersections counted in both years. It should be noted that individual intersection counts can vary substantially day-to-day. In addition, the assumption that all of Truckee's traffic volumes vary over

the course of the summer consistent with the observed variation at the "control point" along Donner Pass Road west of SR 89 south introduces some error into the adjusted figures. It is valid, however, to draw the following overall conclusions:

- Perhaps surprisingly, the total overall peak hour volumes entering these 23 key intersections around the Town dropped by 2 percent between 2003 and 2009. Given the substantial development that has occurred in the region over this period, this drop is undoubtedly a reflection in large part of the current recession.[1]

- To evaluate trends in more detail, the counts were considered for a total of five sub-areas, as also shown in Table 4. This data indicates the following:

  - Traffic volumes grew by 35 percent in the Donner Lake area. This, however, is based on counts at only two intersections (Donner Pass Road/South Shore Drive and Donner Pass Road/I-80 Eastbound Ramps Western Interchange). A review of individual turning movements, moreover, indicates that this growth is largely the result of growth in westbound traffic heading up to Donner Summit; diversion of traffic avoiding construction on I-80 may have added to these volumes in 2009.

  - Traffic volumes were essentially flat in the downtown/central Truckee area, varying by less than 0.5 percent.

  - Traffic volumes declined 3 percent in the Gateway area and 6 percent in the SR 267 corridor area.

  - The greatest decline was found in the northeast portion of Truckee along SR 89 and Donner Pass Road north of I-80, where overall volumes at four intersections dropped by 14 percent. A review of individual turning movement volumes indicates that much of this is a result of a decline in through volumes along SR 89 north of I-80, which in turn may be an indication of the economy's impact on tourist traffic to and from Plumas and Sierra Counties.

  In addition, a review of the total traffic volumes on Glenshire Drive just east of Donner Pass Road indicates that traffic in the Glenshire area grew by 5 percent over the six year period (assuming the Hirschdale Road access to Glenshire varied in a similar fashion). Similarly, a review of volumes on Northwoods Road north of Donner Pass Road indicates that the Tahoe Donner area also grew by 5 percent (assuming that Alder Creek Road access to Tahoe Donner varied in a similar fashion).

Attachments:

Figures 1 – 3
Tables 1 – 4
CD with all count files

[1] It is worth noting, however, that this reduction is consistent with recent reductions in total vehicle-miles of travel both for California as a whole as well as for the entire nation.