## Appendix D - Iowa Hill Pumped-storage Development Transportation Route Technical Report

# SACRAMENTO MUNICIPAL UTILITY DISTRICT UPPER AMERICAN RIVER PROJECT 

(FERC PROJECT NO. 2101)

# IOWA HILL PUMPED-STORAGE DEVELOPMENT TRANSPORTATION ROUTE TECHNICAL REPORT 

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### 1.0 INTRODUCTION

The proposed Iowa Hill Pumped-storage Development is a new component of the SMUD's Upper American River Project (UARP). The proposed development will be located in El Dorado County, near the community of Camino. One of the primary issues associated with the Iowa Hill Development is the transportation of construction personnel and materials from U.S. Highway 50 (US 50), which passes through Camino, to the construction site, over approximately ten miles of road.

In response to public concerns over transportation and other issues, the Iowa Hill Joint Advisory Committee (IHJAC) was formed to advise the SMUD Board of Directors regarding potential measures to reduce impacts including those associated with transportation. The IHJAC is comprised of seven members: two from El Dorado County, two from SMUD, and one from each of the following organizations: Apple Hill Growers’ Association, Camino Advisory Committee, and the Iowa Hill Action Committee. The IHJAC identified 111 transportation measures for SMUD to evaluate during its California Environmental Quality Act (CEQA) process.

Camino is a Sierra Nevada foothill community and home of Apple Hill, a community of individual and small ranch marketing enterprises that celebrate annual apple harvest events attracting thousands of visitors to the area beginning in late summer and running into December. Many of the measures focus on issues related to alternative construction transportation routes through the Camino and Apple Hill areas, transportation scheduling, behavior management, and road repair. The IHJAC identified a total of 11 alternative transportation routes starting at different exit points off of US 50 and ending at the two Iowa Hill Development construction sites: 1) the upper site, near Iowa Hill ${ }^{1}$, where the project upper reservoir, switchyard, and transmission line will be constructed, and 2) the lower site, along the shoreline of the existing Slab Creek Reservoir, where the tunnel construction leading to the underground powerhouse will exist.

This report presents an evaluation of each of the alternative routes. The objective of the evaluation is to compare and contrast the attributes of the specific alternatives, with respect to traffic and other social impacts. The report also examines new routes composed of combinations of the IHJAC route road segments that offer even higher benefits.

In addition to the route alignments, the evaluation methodology incorporates other recommended IHJAC measures that pertain to the route alignments. For example, the IHJAC recommended that SMUD evaluate different park-and-ride and/or equipment staging facilities located near US 50. At these facilities workers would board shuttle vans and be driven to the construction sites, and deliveries would be staged for escort to the site at appropriate times. Six potential park-andride/staging facilities are evaluated in this report.

[^0]The evaluation methodology also considers two types of construction traffic: 1) small to medium-size vehicles transporting equipment/materials and workers; and 2) large transport trucks, carrying heavy/large equipment and project components (e.g., regular and oversized semi-trailers). Both types of construction-related traffic could use different access routes, and each may have more than one route.

### 2.0 DESCRIPTION OF ALTERNATIVE TRANSPORTATION ROUTES

All eleven of the routes originate from US 50 at one of five exit points. Three of the exit points are interchanges with underpasses: 1) Point View Drive (Exit 49/49A) interchange; 2) the Cedar Grove (Exit 54) interchange; and 3) the Pollock Pines (Exit 57) interchange. The remaining two exit points are at-grade intersections along the highway: 1) Carson Road at-grade intersection; and 2) Camino at-grade intersection. The lengths of the routes vary between 8.0 and 15.7 miles. Appendix A provides maps depicting the alternative routes, and Table 1 is a summary description of the routes, including their lengths.

| Route \# | Route Name and Description | Length (mi.) ${ }^{1}$ |
| :---: | :---: | :---: |
| Routes to Lower Construction Site |  |  |
| 1 | Carson Road East (original route proposed): north from the Camino atgrade intersection, Carson Road east, left (north) on Larsen Drive, left (west) on North Canyon Road, right (northeast) on Slab Creek Road, terminate at portal. | 11.4 |
| 3 | Carson Road West with Underpass: exit US 50 at a new connection in the vicinity of the existing Carson Road at-grade intersection, Carson Road west, right (north) on North Canyon Road, left (northeast) on Slab Creek Road, terminate at portal. | 10.4 |
| 5 | Barkley Road: north from the Camino at-grade intersection, Carson Road east, left (northeast) on Barkley Road, left (north) on Larsen Road, left (northwest) on North Canyon Road, right (northeast) on Slab Creek Road, terminate at portal. | 9.8 |
| 8 | Carson Road East with Underpass: north from the Carson Road at-grade intersection, Carson Road east, left (north) on Larsen Drive, left (northwest) on North Canyon Road, right (northeast) on Slab Creek Road, terminate at portal. | 11.4 |
| 10 | Jacquier Road: exit US 50 at the Point View Drive (exit 49/49A) interchange, right (east) on a new connector road from Point View Drive to Jacquier Road, north on Jacquier Road, right (east) on Carson Road, left (northeast) on North Canyon Road, left (northeast) on Slab Creek Road, terminate at portal. | 8.0 |
| 11 | Golf Course with Underpass: exit US 50 at a new connection in the vicinity of the existing Carson Road at-grade intersection, new road north through Apple Mountain Golf Resort, right (northeast) on North Canyon Road, left (northeast) on Slab Creek Road, terminate at portal. | 9.0 |
| Routes to Upper Construction Site |  |  |
| 2 | Cable Road via Cedar Grove Exit: exit US 50 at the Cedar Grove (exit 54) interchange, Carson Road west, right (north) on Cable Road, | 15.4 |


| Table 1. | Alternative Transportation Routes recommended for evaluation by the IHJAC. |  |
| :---: | :--- | :---: |
| Route \# | Route Name and Description | Length (mi.) |
|  | terminate at Cable Point Road. |  |
| 6 | Cable Road via Camino Exit: north from the Camino at-grade <br> intersection, Carson Road east, left (north) on Cable Road, terminate at <br> Cable Point Road. | 13.8 |
| 7 | Badger Hill Road: exit US 50 at the Pollock Pines (exit 57) interchange, <br> right (east) on Pony Express Trail, left (north) on Blair Road, left <br> (northwest) on Badger Hill Road, right (northwest) on Cable Road, <br> terminate at Cable Point Road. | 15.7 |
| 9 | Mace Road/ Cable Connector: exit US 50 at the Cedar Grove (exit 54) <br> interchange, right (northeast) on Pony Express Trail, left (northwest) on <br> Mace Road, right (north) on Mace to Cable connector, right (east) on <br> Cable Road, terminate at Cable Point Road. |  |
| 13 | Golf Course with Underpass with New Road to Upper Site: exit US 50 at <br> a new connection in the vicinity of the existing Carson Road at-grade <br> intersection, new road north through Apple Mountain Golf Resort, right <br> (northeast) on North Canyon Road, left (northeast) on Slab Creek Road, <br> then take a new road (Southwest Connector) to the upper construction <br> site. | 14.4 |

${ }^{1}$ Source: SMUD, September 2007a. For comparative purposes, all route lengths are computed from the same starting point at the Point View Drive interchange along US 50, the westernmost highway exit. Use of this common starting point is based on the assumption that majority of traffic will be accessing the construction site from the west via US 50 .

### 2.1 Southwest Connector

One of the components of Route 13 recommended by the IHJAC is a new road that would start from the existing Slab Creek Road on the southwest side of Iowa Hill and would end at the upper construction site. The Southwest Connector would begin on a steep hillside on the southwest slope of Iowa Hill, then transition into a gradual rise along an existing dirt road (11N84) to the project upper construction site. The land on the steep hillside consists of SMUD-owned land and federal land managed by the US Forest Service (USFS) while the gradual rise runs entirely through land managed by the USFS. The distance of the Southwest Connector is approximately 1.5 miles, consisting of the proposed new road up the steep slope and the existing FS road (11N84) along the gradual rise. The alignment of the new road up the steep slope has not been surveyed.

While this road is specifically recommended as a component of Route 13, in reality it is a generic route from the lower construction site to the upper construction site. The Southwest Connector could be added to any of the alternative routes to the lower site, including Routes $1,3,5,8,10$, and 11. For simplicity, the Southwest Connector is evaluated independently in this report. Thus, there is no need to present an evaluation of Route 13 as defined by the IHJAC - which essentially consists of Route 11 along with the Southwest Connector.

### 2.2 Routes Identified but Not Recommended For Evaluation

Five other routes were also identified by the IHJAC as possible routes for evaluation. Ultimately, the IHJAC did not recommend these routes for evaluation, because, in general, one or more of the 11 recommended route alternatives represent similar or substantially superior options. As recommended by the IHJAC, these routes were not analyzed as part of this report. These five routes include:

- Use of Schnell School Road in Placerville, although similar to use of Jacquier Road (included in Route 10), would provide no clear benefit over Route 10. Although the IHJAC initially considered the use of Schnell School Road, via exit 48 to Carson Road to North Canyon Road to Slab Creek Road, it was deemed inferior to other alternative IHJAC routes.
- Use of Hassler Road via Union Ridge Road and Carson Road would involve a greater distance and provide no clear benefit over North Canyon Road via Carson Road (included in Routes 3, 10, and 11).
- Use of Copperton Road would provide no clear benefit over using Cable Road or a new road segment (Mace to Cable Connector) to access the upper construction site (included in Routes 2, 6 and 9).
- Use of Chute Camp Road (the upper-most portion near North Canyon Road) would involve a narrower road and provide no clear benefit over using Slab Creek Road ${ }^{2}$ (included in Routes 1, 3, 5, 8, 10, and 11) to access either the lower tunnel portal site or the upper construction site.
- Use of Mosquito Road to Union Ridge Road to Carson Road to North Canyon Road would involve a greater distance and provide no clear benefit over the other routes that include North Canyon Road (Routes 3, 10, and 11).


### 3.0 EXISTING TRAFFIC VOLUMES

To characterize the existing traffic conditions, which will allow assessment of the effects of project construction traffic on local road operations, traffic data were collected along the roadways that comprise the routes. Twenty-four-hour traffic counts were obtained at 19 roadway locations in the Camino area. Of the 19 locations, roadway segment volumes at ten locations were obtained from the traffic counts collected by the El Dorado County Department of Transportation (EDCDOT) in October, 2007. Roadway segment volumes at the remaining nine locations were collected by CH2M HILL in November, 2007. October is considered the peak month for tourism in the Apple Hill area. Since traffic volumes, on average, were 32 percent lower in November than the counts in October, the November traffic counts were adjusted to make them consistent with the counts obtained during October. In other words, the traffic counts

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represent peak traffic volumes for all roadway segments (see the methodology described in Appendix B). Table 2 is a list of the roadway segment locations where traffic counts are compiled, the source of traffic counts at each location, and the factored average weekday and weekend daily traffic at each location.

Appendix C includes detailed traffic count summaries for all the roadway segment locations. All traffic count summaries contained in Appendix C are raw data, before adjustments.

| Table 2: $\begin{array}{l}\text { Roadway Segment Weekday and Weekend Daily Traffic Volumes during October/November } \\ \text { 2007. }\end{array}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Average Daily Traffic |  |
| Roadway | From | To | Source | Weekday | Weekend |
| Jacquier Road | Smith Flat Road | Carson Road | CH2M HILL | 570 | 640 |
| Carson Road | Jacquier Road | N. Canyon Road | CH2M HILL | 3,023 | 4,984 |
| Carson Road | N. Canyon Road | US 50 intersection | EDCDOT | 2,946 | 4,199 |
| N. Canyon Road | Carson Road | Slab Creek Road | EDCDOT | 1,357 | 4,326 |
| Slab Creek Road | North of North Canyon Road |  | CH2M HILL | 37 | 34 |
| Barkley Road | Carson Road | Larsen Drive | EDCDOT | 1,421 | 3,432 |
| Carson Road | Barkley Road | Larsen Drive | EDCDOT | 5,075 | 7,392 |
| Larsen Drive | Carson Road | Barkley Road | EDCDOT | 616 | 3,018 |
| N. Canyon Road | Larsen Drive | Slab Creek Road | EDCDOT | 1,263 | 3,461 |
| Carson Road | Pony Express Trail | Cable Road | EDCDOT | 3,418 | 5,245 |
| Carson Road | Larsen Drive | Cable Road | CH2M HILL | 6,122 | 5,590 |
| Cable Road | Carson Road | Mace Road | EDCDOT | 1,125 | 3,170 |
| Cable Road | North of Mace Road |  | CH2M HILL | 667 | 540 |
| Carson Road | US 50 Intersection | Barkley Road | CH2M HILL | 3,681 | 4,712 |
| Pony Express Trail | Carson Road | Mace Road | EDCDOT | 3,378 | 3,718 |
| Mace Road | Pony Express Trail | Crystal Springs Road | EDCDOT | 1,187 | 1,925 |
| Pony Express Trail | Ridgeway Drive | Blair Road | CH2M HILL | 7,209 | 5,837 |
| Blair Road | Pony Express Trail | Badger Hill Road | CH2M HILL | 521 | 442 |
| Badger Hill Road | West of Blair Road |  | CH2M HILL | 180 | 124 |

EDCDOT - El Dorado County Department of Transportation
Source: CH2M HILL, 2007a and EDCDOT, 2007. CH2M HILL data was collected in November and has been factored (increased) to correspond with data collected by EDCDOT in October.

### 4.0 EVALUATION CRITERIA

The following criteria have been identified to evaluate the alternative routes:

- Roadway features

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- Length of trip
- Additional construction required
- Potential park and ride/staging area facilities
- Neighborhood impacts
- Impacts to visitor trips to local businesses


### 4.1 Roadway Features

The alternatives routes were evaluated on the following roadway attributes: horizontal geometry, vertical geometry, and roadway width. This criterion ranks an alternative lower if one or more of the following roadway characteristics exist along the route:

- Sharp turns or narrow horizontal curves
- Grades
- Narrow lanes

All of these characteristics may have efficiency impacts to the contractor (if construction vehicles must drive slower due to horizontal or vertical geometry or grades). They also may affect safety, because lack of sight distance on turns or grades can increase hazards. Noise from trucks may also be an issue on some uphill grades. There are varying levels of impacts. For example, steep grades may affect all vehicles, while mild grades may only affect the largest construction vehicles.

Based on the field review performed in October 2007, Table 3 summarizes the assessment of roadway features.

| Table 3: Roadway Segment Locations with Roadway Issues. |  |  |  |
| :--- | :--- | :--- | :---: |
| Roadway | Location | Comments | Routes |
| Narrow Horizontal Curve or Sharp Turn Locations |  |  |  |
| Carson Road | At N. Canyon Road intersection | Sharp turn from WB Carson <br> Road to NB N. Canyon Road <br> and vice-versa | 3 |
| N. Canyon Rd. | At Slab Creek Road intersection | Sharp turn from WB N. <br> Canyon Road to NB Slab <br> Creek Road and vice-versa | $1,5,8$ |
| Badger Hill <br> Road | East of Cable Road | Narrow horizontal curves | 7 |
| Cable Road | Near Eldorado National Forest <br> boundary, two locations where small <br> streams go under the road | Sharp turns | $2,6,9$ |
| Southwest <br> Connector | Slab Creek Road to USFS Road <br> 11N84 | Sharp turns | (could be associated <br> with any of the <br> lower routes- <br> $1,3,5,8,10,11)$ |

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Table 3: Roadway Segment Locations with Roadway Issues.

| Roadway | Location | Comments | Routes |
| :--- | :--- | :--- | :---: |
| Grade Locations (for Extended Sections) | Mild grade | 5 |  |
| Barkley Road | North of Carson Road | Mild grade | 10 |
| Jacquier Road | North of Smith Flat Road | Mild grade | 3,10 |
| N. Canyon Rd. | North of Fruitridge Road | Steep grade | $3,10,11$ |
| N. Canyon Rd. | South of Slab Creek Road | Steep grade | $1,3,5,8,10,11$ |
| Slab Creek <br> Road | South of lower construction site | Steep grade | (could be associated <br> with any of the <br> lower routes -1, <br> $5,8,10,11)$ |
| Southwest <br> Connector | Slab Creek Road to USFS Road <br> 11N84 |  |  |


| Narrow Cross-Section Locations |  |  |  |
| :--- | :--- | :--- | :---: |
| Cable Road | Mace Road to Sierra Express Road | Single lane narrow road | 2,6 |
| Barkley Road | North of Carson Road | Narrow cross section | 5 |
| Blair Road | Bridge over EID Canal | Single lane bridge | 7 |
| Blair Road | Pony Express Trail to EID Canal | Narrow cross section | 7 |
| Badger Hill <br> Road | East of Cable Road | Single lane | 7 |
| Mace Road | Pony Express Trail to Cable Road | Narrow cross section | $2,6,9$ |
| Slab Creek <br> Road | Slab Creek Dam to access portal | Narrow cross section | $1,3,5,8,10,11$ |
| Cable Road | Near Eldorado National Forest <br> boundary, at a few locations | Single lane with narrow cross <br> section where two large trees <br> exist directly across from each <br> other | 7 |
| Deteriorated or Lack of Pavement Locations | Deteriorated pavement west of <br> Blair Road, dirt and <br> unimproved east of Cable Road |  |  |
| Badger Hill <br> Road | Cable Road to Blair Road | Gravel road | $1,3,5,8,10,11$, |
| Slab Creek <br> Road | North of N. Canyon Road | Deteriorated pavement | $2,6,9$ |
| Cable Road | North of Sierra Express Road | Deteriorated gravel and dirt <br> road | $2,6,9$ |
| Cable Road | Approximately one mile beyond <br> Mace Road |  |  |

### 4.2 Length of Trip

The length of a route's trip is the one-way distance a vehicle would travel on the route between its starting point and the project site. In general, longer trips would result in more interaction
with non-construction traffic, more potential physical impacts to roads, and increased travel time by construction workers and materials and equipment deliveries.

The alternatives were evaluated using the length of the routes shown in Table 1. The starting point for all the routes is designated to be the intersection of US 50 and Point View Drive, west of Camino.

### 4.3 Additional Construction Required

This criterion evaluates an alternative route based on the amount of additional construction required to make the route suitable for construction traffic. Additional construction includes both the construction of new roads and the improvement of existing roads to make them accessible. Table 4 presents the estimated cost of construction and the right-of-way acquisition associated with each construction/improvement.

## Table 4: Cost Estimate of Additional Construction for the Alternative Routes.

| Roadway Improvement Name | Construction/ Improvement | Routes Involving Improvement Projects | Improvement Cost ${ }^{\text {a, }}$ (\$ million) | Right-of- <br> Way Cost <br> (\$ million) | Total Estimated Cost (\$ million) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Carson Road Underpass | New underpass at Carson Road and US 50 | 3, 8, 11 | $23-100$ | $2.2{ }^{\text {c }}$ | 25-102 |
| Golf Course Road | New road across Apple Mountain Golf Resort | 11 | 4.5 | $30^{\text {c,e }}$ | 34.5 |
| Southwest Connector | New connector road from Slab Creek Road to USFS Road 11N84 leading to upper construction site | (could be associated with any of the lower routes - $1,3,5$, $8,10,11)$ | 5.5 | $0^{\text {f }}$ | 5.5 |
| Badger Hill \& Blair Road | Roadway improvements on Badger Hill Road and upgrade singlelane bridge over EID Canal along Blair Road | 7 | 8.0 | $2.2{ }^{\text {c }}$ | 10.2 |
| Mace/Cable Connector | New connector road from Mace Road to Cable Road | 9 | 1.0 | $0.5{ }^{\text {d }}$ | 1.5 |
| Cable Road beyond Mace Road | Widen and improve 4 miles of Cable Road ${ }^{\text {g }}$ | 2, 6, 7, 9 | $2^{\text {f }}$ | $2-5{ }^{\text {f }}$ | 4-7 |

## NOTES:

${ }^{\text {a }}$ Cost estimate does not include right-of-way or land acquisition costs.
${ }^{\mathrm{b}}$ Source: CH2M HILL, 2007b. The source for the upper range cost estimate for the underpass is the Sacramento Bee ("Solution sought to Apple Hill traffic woes"), November 8, 2007.
${ }^{\text {c }}$ Source: Bender Rosenthal, Inc., 2008.
${ }^{\mathrm{d}}$ Source: Recent property sales in area, SMUD, 2007b.
${ }^{e}$ The Apple Mountain Golf Resort owns surrounding lands and the estimate includes the assumption that use of the golf course would not be possible for a five-year period. An estimate of the operating revenue and additional marketing costs (needed to bring the course back to current use) was used as the dollar value cited. Another approach would be to estimate the cost to purchase then resell the course, but the selling price and the value in re-selling after construction is deemed too speculative, and therefore not estimated.
${ }^{\mathrm{f}}$ Source: SMUD, 2008a.
${ }^{\mathrm{g}}$ Because Routes 7 \& 9 only involve a portion of this roadway improvement project, only $50 \%$ of these costs should be applied to Route 7 , and only $75 \%$ should be applied to Route 9.

Similar to the length of trip, feasibility of a route is indirectly proportional to the cost of additional construction involved. Routes with lower or no additional construction costs are preferred to routes involving higher construction costs.

The Carson Road Underpass Project would affect nine parcels, and would require the acquisition of two acres. It would require the displacement of two residences. Seven parcels would require
payment for minor improvements and restoration costs. It would result in a minor impact on the Apple Mountain Village Business Center. The concept for this Project is an undercrossing (under US 50) to provide access only for construction traffic to Carson Road. It would not be a full interchange, which would require much more substantial construction. The cost of a full interchange (i.e., with four ramps) has been estimated as high as $\$ 100$ million ("Solution sought to Apple Hill traffic woes", Sacramento Bee, November 8, 2007).

The Golf Course Road Project would require the purchase or reimbursement for temporary loss of use of the Apple Mountain Golf Resort and the construction of a new road from the existing clubhouse road through the course connecting to North Canyon Road. The main economic impact would be the loss of the Apple Mountain Golf Resort, a unique Sierra Nevada foothill recreational opportunity and meeting place venue. This project may also include the displacement of one residence.

The Southwest Connector Project would affect federal lands managed by the USFS and SMUDowned lands; no private property would be affected. A road use permit would be required from the USFS. There would be a loss of potential merchantable timber, although this would be slight, as roughly half of the approximately 1.5 -mile road segment consists of existing USFS road 11N84.

The Badger Hill/Blair Road Improvement Project would affect seven parcels, and would require the acquisition of 15 acres. It would cross mostly privately owned land along an existing dirt road and USFS road. It would result in no apparent residential displacements. There would be a loss of potential merchantable timber.

The Mace/Cable Connector Project would require access through approximately 1,500 feet of private property.

The Cable Road beyond Mace Road Improvement Project would affect about 36 private parcels, most of which are located along Cable Road from Mace Road to Sierra Express Road, and would require the acquisition of road easements for these parcels. The project would also affect several miles of federal lands managed by the USFS. It would result in no apparent residential displacements. There would be a loss of potential merchantable timber.

### 4.4 Potential Park-and-Ride/Staging Area Facilities

To reduce the construction vehicle trips passing through Camino, the IHJAC recommended several potential staging area facilities located near US 50. A staging area facility could serve as a park-and-ride location for the construction workers and/or staging for materials and equipment transported to the construction sites on large vehicles, such as semi-trailer trucks. Construction workers would park their vehicles at the staging area facility and travel to and from the project site using shuttle vans. Semi-trailers would stage at the facility then be escorted to the worksite during specified windows of time (see Appendix E). Figure 1 is a map of the locations of the potential park and ride/staging area facilities under consideration:

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- United States Forest Service (USFS) Site
- Pondorado Site
- Old Mill Site
- Sierra Pacific Industries (SPI) Sites A, B and C

A discussion of each staging area facility location along with its advantages and disadvantages is presented in this subsection.


FIGURE 1
Potential Locations of Park and Ride/Staging Facilities Upper American River Project - Evaluation of Alternatives

## USFS Site

This site is located along 8 Mile Road within USFS property, south of US 50. The site can serve as a potential park and ride location for three alternatives routes to the upper construction site: Routes 2, 7, and 9.

## Advantages

- This site would be accessed via the Cedar Grove exit, a grade-separated interchange, which avoids the need for at-grade left turns across US 50.
- This facility would minimize the number of construction workers' vehicles traveling through the residential and commercial areas located in Camino along Routes 2, 7, and 9.


## Disadvantages

- The site is space-limited due to steep topography. There does not appear to be sufficient right-of-way available on USFS property without displacement of an existing land use (e.g., pine arboretum).


## Pondorado Site

This site is located south of US 50 within the grounds of the old El Dorado High School and can be currently accessed via US 50 at Camino Heights Drive (an at-grade US 50 intersection), Sierra Blanca Drive, then Pondorado Drive to the site. To avoid at-grade left turns, the IHJAC suggested a potential new underpass at Carson Road and US 50, which might include an underpass under US 50 with connections to Carson Road and Sierra Blanca Drive. The Pondorado site could serve as a potential park and ride location for routes to the upper and lower construction sites: Routes 1, 2, 3, 5, 6, 8, and 11 .

## Advantages

- If a new underpass is constructed, at-grade left turns across US 50 traffic would be eliminated.
- This facility site would minimize the number of construction workers’ vehicles traveling through the residential and commercial areas located in Camino.


## Disadvantages

- A new underpass across US 50 (estimated cost approximately $\$ 102$ million) would be required. Also, underpass construction would likely require acquisition of right-of-way at the Apple Mountain Village Business Center and two residences.
- If Camino Heights Road is used to access the site, traffic volumes would increase at the intersection of Camino Heights Road and Sierra Blanca Road. The grade on Camino Heights Road may also reduce the sight distance for northbound drivers.
- If no underpass is constructed, traffic entering the project site would be required to make a left turn from eastbound US 50 to Carson Road, resulting in an at-grade crossing of US 50, which has high traffic volumes at high speeds. However, most workers would be making this at-grade crossing early in the morning (before 7:00 A.M.), when westbound US 50 traffic volumes are typically low.
- If no underpass is constructed, traffic leaving the staging facility toward the west would be required to make a left turn onto westbound US 50, resulting in an at-grade crossing of US 50, which has high traffic volumes at high speeds. Most workers would be making this at-grade crossing in the afternoon, when traffic volumes on US 50 are high in both directions.


## Old Mill Site

This site is located north of US 50 along Jacquier Road. The site appears to have adequate existing space for right-of-way; however, the area is planned for future development. Construction vehicles would use Point View Drive exit to access this site. However, access to this staging facility is contingent upon a new connector road from Point View Drive to Jacquier Road, presently under construction. This site can serve as a potential park-and-ride location for Route 10. The advantages and disadvantages of this staging facility location are as follows:

## Advantages

- Among all of the staging facilities, this location is the nearest to the project site.
- The US 50/Point View Drive interchange is already grade-separated. Thus, this park and ride location would not involve any at-grade left turns from eastbound US 50.
- This facility would minimize the number of construction workers' vehicles traveling through most of the residential and commercial areas located in the east Placerville/ Camino area.


## Disadvantages

- This site is currently planned for development and may not be available for a staging area facility.
- The El Dorado Bike Trail crosses Jacquier Road near this facility site.


## $\underline{\text { SPI Sites }}$

Three alternative staging facility sites exist in and around the SPI Camino mill property. The sites are located north of US 50 along Carson Road and can be accessed using either the Camino at-grade intersection or the Cedar Grove interchange. The sites within the Camino Mill property can serve as a potential park and ride location for Routes 1,5 and 6 .

Advantages

- If the Camino at-grade intersection is used to access any of the sites, the facility would minimize the number of construction workers’ vehicles traveling through the residential and commercial areas located in Camino.

Disadvantages

- Traffic entering this facility using the Camino at-grade intersection would be required to make an at-grade left turn from eastbound US 50 to Carson Road. This may cause a potential traffic operations issue (creating queues of vehicles in the left turn lane) on US 50; however, most workers would be arriving at the site early in the morning, when the volume of westbound US 50 traffic is relatively light.
- Traffic entering this facility using the Cedar Grove interchange would add traffic to central Camino.
- Bus routes of Camino School (Green Route) and El Dorado High School have stops near these sites.
- Sierra Pacific Industries may have other uses for this property at the time of construction.


### 4.5 Neighborhood Impacts

This criterion will identify if the alternatives would cause a potential impact to the neighborhood located along its route. Neighborhood impacts include the following:

- Impacts to residential and commercial areas
- Impacts to school bus routes
- Environmental impacts

School bus trips occur from 6:45 A.M. to 9:00 A.M. and from 2:00 P.M. to 4:30 P.M. on Monday through Friday. Figure 2 shows the existing school bus stops in the Camino area for Camino Elementary School and El Dorado High School.

Tables 5A and 5B are summaries of the neighborhood impacts that would be caused by the alternatives to the lower and upper construction sites, respectively.

| Table 5A: Potential Neighborhood Impacts Associated with Transportation Routes - Lower |  |
| :--- | :--- | :--- |
| Construction Site. |  |$\quad$| Route | Neighborhood Impacts |  |
| :--- | :--- | :---: |
| $\#$ |  |  |
| Routes to Lower Construction Site | 1. Along bus routes of Camino School (Yellow, Red, and <br> Green Routes) and El Dorado High School |  |
| 1 | Carson Road East (original route <br> proposed) |  |
| 3 | Carson Road West with Underpass |  |
| Underpass will affect Apple Village Business Center and two <br> residences adjacent to the center <br> Along bus routes of Camino School (Yellow and Green <br> Routes) and El Dorado High School |  |  |
| 5 | Barkley Road |  |
| 10 | Carson Road East with Underpass |  |
| 1. Along bus routes of Camino School (Yellow, Red, and |  |  |
| Green Routes) and El Dorado High School | Underpass will affect Apple Village Business Center and two <br> residences adjacent to the center <br> Along bus routes of Camino School (Yellow, Red, and Green <br> Routes) and El Dorado High School |  |
| 11 | Golf Course with Underpass |  |
| 1. Along bus routes of Camino School (Yellow and Green <br> Routes) and El Dorado High School |  |  |
| 1. New road would affect the viability of golf course <br> 2. Underpass will likely require right-of-way at the Apple <br> Village Business Center and two residences <br> 3. Requires access rights through approximately 1.2 miles of <br> private property <br> 4. Along bus routes of Camino School (Yellow Route) and El <br> Dorado High School |  |  |


| \# | Route | Neighborhood Impacts |
| :---: | :---: | :---: |
| Routes to Upper Construction Site |  |  |
| 2 | Cable Road via Cedar Grove Exit | Cable Road from Mace Road to Sierra Express Road is a narrow roadway with dense residential land uses Along bus routes of Camino School (Red Route) and El Dorado High School |
| 6 | Cable Road via Camino At-Grade Intersection | 1. Cable Road from Mace Road to Sierra Express Road is a narrow roadway with dense residential land uses <br> 2. Passes through Camino's Central Business District <br> 3. Along bus routes of Camino School (Red and Green Routes) and El Dorado High School |
| 7 | Badger Hill Road | 1. Requires access through approximately 1 mile of private property <br> 2. Construction traffic would affect the camping experience at Ghost Mountain Resort <br> 3. 0.5 mile of dense residential land uses along Blair Road <br> 4. Along bus routes of El Dorado High School (Pony Express Route) and Pollock Pines K-8 District (Silver Route and Red Route) |
| 9 | Mace Road/ Cable Connector | Requires access through approximately 1,500 feet of private property <br> Along bus route of Camino School (Red Route) |
|  | Southwest Connector | None |

[^2]

## LEGEND

$\square$ Camino Elementary School Yellow Route Bus Stop
$\triangle$ Camino Elementary School Red Route Bus Stop
O Camino Elementary School Green Route Bus Stop
(11) El Dorado High School Route 11 Bus Stop

B El Dorado High School Broadway Route Bus Stop
(P) El Dorado High School Pony Express Route Bus Stop

Pollock Pines K-8 Silver Route Bus Stop
O Pollock Pines K-8 Red Route Bus Stop

## $\wedge_{\text {North }}$

## FIGURE 2

School Bus Stop Locations in Camino Area Upper American River Project - Evaluation of Alternatives

### 4.6 Impact to Visitor Trips to Area Businesses

Many orchards, vineyards, wineries, apple-selling businesses, and recreational facilities in Camino attract visitors. Therefore, this criterion assesses the potential impact of constructionrelated traffic on visitor trips.

Table 6 is a summary of the number of businesses and organizations that are located along the alternative routes. A detailed list of all these businesses is included in Appendix D.

| Route \# | Route Name | Number of Businesses Located Along Route |
| :---: | :---: | :---: |
| Routes to Lower Construction Site |  |  |
| 1 | Carson Road East (original route proposed) | 11 |
| 3 | Carson Road West with Underpass | 19 |
| 5 | Barkley Road | 10 |
| 8 | Carson Road East with Underpass | 21 |
| 10 | Jacquier Road | 16 |
| 11 | Golf Course with Underpass | 6 |
| Routes to Upper Construction Site |  |  |
| 2 | Cable Road via Cedar Grove Exit | 12 |
| 6 | Cable Road via Camino At-Grade Intersection | 22 |
| 7 | Badger Hill Road | 7 |
| 9 | Mace Road/ Cable Connector | 11 |
|  | Southwest Connector | None |

Source: SMUD, September 2007a

### 5.0 MEASUREMENT OF EVALUATION CRITERIA

The alternative routes were assessed using each evaluation criterion with a scale of 0 to 5 , as follows:

```
5 Significant advantage
4 Measurable advantage
N Neutral
2 Measurable disadvantage
1 Significant disadvantage
0 Impractical/major flaw
```

Table 7 lists the interpretation what constitutes the advantages or disadvantages of the evaluation criteria for this analysis. The evaluation used available data and engineering judgment, and applied the criteria both quantitatively and qualitatively.

## Table 7: Interpretation of Evaluation Criteria

| Evaluation Criteria | Assessment |  |  |
| :---: | :---: | :---: | :---: |
|  | Advantage | Disadvantage | Major Flaw / Impractical |
| Roadway Features | Route includes no sharp turns, steep grades, or narrow roadways | Route includes one or more sharp turns, steep grades, or narrow roadways | Route has multiple horizontal and vertical geometric issues that would require significant construction to address |
| Length of Trip | Short trip | Long trip | N/A |
| Additional Construction Involved | Low or no cost of additional construction; minimal right-of-way impacts | High cost of additional construction; considerable right-of-way impacts | Infeasible high cost of additional construction; substantial right-of-way impacts |
| Park-and-Ride Location | Facility is located along the route and has minor or no impacts to the neighborhood and existing circulation | Facility is located either along or nearby the route; may require changes to neighborhood circulation patterns; high implementation costs | Facility is located far away from the route; will require major negative changes to neighborhood circulation patterns; very high implementation costs |
| Neighborhood Impacts | Minimal or no impacts to neighborhood, environment, and circulation; low implementation costs | Noticeable changes expected to neighborhood, environment, and circulation; high implementation costs | Major, undesirable changes to neighborhood, environment, and circulation |
| Impacts to Visitors | Minimal or no impact to visitors | Will noticeably affect visitors without reducing the volume of visitors; high costs to implement with affecting visitors | Would discourage visitors or affect the visitor experience |

N/A: Not applicable - no major flaw was identified.

### 5.1 Alternatives Evaluation

Based on the evaluation criteria and the measurement scale of the evaluation criteria discussed above, the alternatives are ranked. Table 8 is a summary of the evaluation framework, presenting the individual ratings against each criterion.

| Evaluation Criteria | Route to Lower Construction Site |  |  |  |  |  | Route to Upper Construction Site ${ }^{1}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 3 | 5 | 8 | 10 | 11 | 2 | 6 | 7 | 9 |
| Roadway Features | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Length of Trip | 3 | 4 | 4 | 3 | 5 | 5 | 1 | 2 | 1 | 2 |
| Additional Construction Involved | 5 | 1 | 5 | 1 | 5 | 1 | 3 | 3 | 3 | 4 |
| Park-and-Ride Location (highest value of the four sites) | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 2 | 2 |
| USFS Site | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| Pondorado Site | 3 | 4 | 3 | 4 | 0 | 4 | 4 | 3 | 0 | 0 |
| Old Mill Site | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| SPI Site | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Neighborhood Impacts | 5 | 2 | 5 | 3 | 5 | 2 | 2 | 1 | 2 | 4 |
| Impacts to Visitors | 3 | 1 | 3 | 1 | 2 | 4 | 3 | 1 | 4 | 3 |

${ }^{1}$ As stated previously in this report, the Southwest Connector (SWC) can be added to any of the routes to the lower construction site. For comparison with Routes $2,6,7$, and 9 , the SWC would add 0.5 miles of length and $\$ 5.5 \mathrm{M}$ in additional construction costs to any of the lower routes. There will be no additional neighborhood or visitor impacts. The steepness and sharp turns likely to be characteristic of the first segment of this road will not affect traffic because the SWC will be used exclusively for construction traffic.

The next step was to develop a cumulative rating of the alternative routes. The overall ratings were calculated four different ways:

- Balanced rating, to consider all criteria roughly equally;
- Community-focused rating, with more focus on the neighborhood and visitor impacts (the last two criteria);
- Contractor efficiency rating, to minimize the costs, time, and construction challenges for the contractor;
- Cost-focused rating, considering the overall cost to construct the project as the primary concern (i.e., with a particular focus on the criterion for additional construction involved).

The weighting for each criterion varied for each focused evaluation. Table 9 is a summary of the weighting values used.

Table 9: Evaluation Framework Criteria Weighting

| Evaluation Criteria | Balanced | Community- <br> Focused | Contractor <br> Efficiency | Cost-Focused |
| :--- | :---: | :---: | :---: | :---: |
| Roadway Features | $15 \%$ | $5 \%$ | $20 \%$ | $5 \%$ |
| Length of Trip | $15 \%$ | $5 \%$ | $20 \%$ | $5 \%$ |
| Additional Construction <br> Involved | $20 \%$ | $0 \%$ | $20 \%$ | $60 \%$ |
| Park and Ride Location <br> (highest value of the four <br> sites) | $15 \%$ | $10 \%$ | $30 \%$ | $30 \%$ |
| Neighborhood Impacts | $20 \%$ | $50 \%$ | $10 \%$ | $0 \%$ |
| Impacts to Visitors | $15 \%$ | $30 \%$ | $0 \%$ | $0 \%$ |

The last step was to calculate the average score for each alternative route, using the four weighting criteria. The summary of the results is provided in Table 10. The three highest scoring alternatives routes (including ties) are highlighted in the table.

Table 10: Evaluation Summary

|  | Route to Lower Construction Site |  |  |  | Route to Upper <br> Construction Site |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Weighting | 1 | 3 | 5 | 8 | 10 | 11 | 2 | 6 | 7 | 9 |
| Balanced | 3.8 | 2.1 | 3.8 | 2.5 | 3.8 | 3.0 | 2.5 | 2.2 | 2.5 | 3.1 |
| Community-Focused | 4.0 | 2.0 | 4.0 | 2.5 | 3.8 | 3.0 | 2.4 | 1.4 | 2.6 | 3.4 |
| Contractor Efficiency | 3.6 | 2.6 | 3.6 | 2.9 | 3.8 | 3.2 | 2.5 | 2.6 | 2.2 | 2.8 |
| Cost-Focused | 4.2 | 2.1 | 4.2 | 2.1 | 4.3 | 2.2 | 2.9 | 3.0 | 2.6 | 3.3 |

As shown in Table 10, although the criteria weights were very different for the four scenarios, the three highest scoring alternative routes were consistent in all cases.

### 6.0 CONCLUSIONS

The comparative analysis presented in this report reveals a number of significant differences among the IHJAC-recommended routes to the Iowa Hill upper and lower construction sites. The analysis shows, for example, that routes to the lower construction site generally have advantages over those to the upper construction site. It also demonstrates the clear value of the Southwest Connector as a new road; when added to any of the lower construction site routes, it will be a better option as a route to the upper construction site, as compared to the routes using some portion of Cable Road.

### 6.1 Routes to the Upper Construction Site

In general, the routes to the upper construction site have more disadvantages than routes to the lower site. This is due to a number of factors, including longer driving distances, neighborhood conflicts, and the road feature limitations of Cable Road - the single road shared by all the routes. Cable Road has several narrow sections, including: 1) between Mace Road and Sierra Express Road; 2) the two hairpin turns at the two stream crossings; and 3) a few locations where two large trees exist directly across the road from each other. While these disadvantages can be overcome by road re-alignment, this would be limited in some locations by prescriptive rights of private property owners. All in all, these limitations preclude the use of large vehicles, in particular semi-tractors with trailers. Nevertheless, Cable Road can serve as an emergency evacuation route as well as a secondary route to the upper site.

Among the upper construction sites routes, the routes with the fewest negative assessments are Cable Road via Cedar Grove Exit (Route 2) or Mace Road/Cable Connector (Route 9). However, Route 2 would be less preferred by the community because of the traffic passing by residential areas, and Route 9 would result in more challenges for the contractor because of the physical characteristics of the roads and a higher overall cost.

### 6.2 Southwest Connector

All of the routes to the lower construction site could be used to access the upper construction site via the Southwest Connector. This road offers some specific advantages over the alternative upper construction site routes:

- It creates a secondary route to both construction sites, providing two evacuation options during emergency evacuations from either site.
- It provides an alternative to Cable Road for accessing the upper construction site, thereby alleviating the logistical problems associated with large truck use of Cable Road described above.
- It provides a convenient route for construction traffic to transit between the two construction sites without using community roads.

The addition of the Southwest Connector to any of the lower construction routes will not have a major effect to the evaluation scores of Table 8, except for the "additional construction involved" criterion. For this criterion, the additional cost of the new road, estimated at $\$ 5.5 \mathrm{M}$, would change the scores of " 5 " to " 3 " for Routes 1,5 , and 10 , which would not significantly alter the general overall rankings. Routes 1,5 , and 10 would rank among the top three for all but the costfocused weighting.

The Southwest Connector has not been studied in detail because potential route alignments of the first half of this road (i.e., the new segment up the steep hillside leading to Iowa Hill) have not been surveyed. Thus, the potential environmental effects of road construction and use are unknown. The remaining segment of the Southwest Connector is the existing USFS road (11N84) that runs up the gradual incline from Iowa Hill to the upper construction site. The entire Southwest Connector road (new and existing segments) will not create traffic impacts because the road will be used exclusively for construction activities.

## $6.3 \quad$ Routes to the Lower Construction Site

Three routes to the lower construction site were determined to have clear and consistent advantages: Carson Road East (the original proposed route - Route 1), Barkley Road (Route 5), and Jacquier Road (Route 10).

Carson Road East (Route 1) scored relatively well on all of the assessments. It would not require additional construction, and neighborhood impacts would be low. No significant disadvantages were identified for this alternative route. Barkley Road (Route 5) had similar scores, although it is somewhat shorter than Carson Road East, but includes segments with more roadway geometric issues. This alternative route would also not require additional construction.

Of these two routes (1 and 5), Carson Road East may be the easiest to implement. Although it was not rated the highest for all criterion assessments, it does not present any major disadvantages. However, in using both Carson Road East and Barkley Road, construction vehicles would be required to make a left turn off US 50 at the at-grade Carson Road intersection. This disadvantage is minimized if these routes are used primarily for construction worker access. Construction workers would be traveling to one of the SPI park-and-ride sites early in the morning (near 6:00 A.M.) when westbound traffic on US 50 is light. At the end of the workday, construction workers leaving the park-and-ride site would be entering westbound US 50 from the right side of the highway. Both Carson Road East and Barkley Road also have slight disadvantages related to sharp turns (e.g., intersection of North Canyon and Slab Creek Dam roads) and narrow cross sections. This may pose limitations for certain large vehicles, although portions of these routes are presently used by large truck traffic associated with the SPI mill in Camino.

Further to the west, Jacquier Road (Route 10) scored very well on most categories: it is the shortest route, requires no additional construction (assuming the Point View Drive interchange is connected to Jacquier Road, which is currently under construction), has no operational issues (difficult turns) for large trucks, and has low neighborhood impacts. These advantages point to the value of this route as the primary access for large trucks. If the site can be acquired, the Old Mill site would be large enough for the staging of equipment and materials deliveries during the
construction period. However, the use of Route 10 may result in impacts to visitors due to construction traffic on Carson Road and North Canyon Road and includes segments with issues related to roadway geometrics. If the Jacquier Road route is used primarily for heavy trucks, visitor impacts could be mitigated by limiting the majority of construction traffic to 9:00 A.M. 2:00 P.M. on weekdays during the Apple Hill season (Labor Day through Christmas Eve). As shown in Table 2 and Appendix C, traffic volumes during the Apple Hill season increase substantially on the weekends. The roadway geometric issues of the Jacquier Road route could be resolved by focused improvements or other strategies, but these would have to be evaluated in more detail. Finally, while the staging facility (the Old Mill site) has the best operational characteristics, it is likely that the land will not be available.

### 6.4 Overall Findings

The routes to the lower construction site are preferred. The results of the evaluation indicate that three routes to the lower construction site clearly offered the best balance of minimizing the community impacts, maximizing the contractor’s efficiency (and therefore minimizing construction time), and minimizing overall project costs. These three routes are Carson Road East (Route 1), Barkley Road (Route 5), and Jacquier Road (Route 10). Among these three routes, there is no clear "best" route; all offer benefits and some tradeoffs.

The recommendation for a lower construction site route is based on the assumption that the Southwest Connector is constructed. In other words, the Southwest Connector is a critical link to allow the use of the lower routes as a means of access the upper construction site, thereby resolving the issues of large truck traffic on Cable Road. In addition, the Southwest Connector provides two emergency evacuation routes from each construction sites and creates a route for construction traffic between the two sites that is away from local streets.

If there is no feasible way to construct the new road segment of the Southwest Connector, Routes 2 (Cable Road via Cedar Grove Exit) and 9 (Mace Road/Cable Connector) have the fewest negative characteristics among the upper construction site routes. However, both of these routes have associated issues because of traffic in residential areas (Route 2) and logistical issues for the contractor (Route 9). Therefore, it is recommended that the upper construction site routes should not be considered as the primary routes unless the Southwest Connector proves to be infeasible.

Finally, the concept of multiple routes should be considered. Different vehicle sizes and road uses (e.g., material transport, emergency evacuation) suggest the possibility of using different routes for different purposes. Smaller trucks could use an upper construction site route (e.g., Route 9) on occasion, which would "spread" the traffic on different routes. Among the lower construction site routes, trucks and deliveries could be assigned to any or all of the three best routes ( 1,5 , and 10 ). The specific details of construction traffic will be addressed in the project Transportation Management Plan (TMP), but the recommendation from this analysis is to use Routes 1,5 , or 10 , and explore the opportunities for using other routes for specific uses during construction.

### 7.0 REFERENCES

Bender Rosenthal, Inc. 2008. Right-of-Way Cost Estimates for Roadway Improvement Projects. January 2 and 3.
CH2M HILL. 2007a. Traffic Count Data. November.
CH2M HILL. 2007b. Preliminary Project Cost Estimate Summary. Project Nos. 1, 2, 3, 4, and 5. October.

CH2M HILL. 2007c. Worker Lodging Facility Cost Estimate. October.
CH2M HILL and Devine Tarbell \& Associates. 2005. Iowa Hill Pumped-storage Development, Socioeconomic Assessment of Construction and Operations Technical Report. January.
El Dorado County Department of Transportation (EDCDOT). 2007. Traffic Count Data.
October.
Federal Energy Regulatory Commission (FERC). 2007. Draft Environmental Impact Statement for Hydropower License. Upper American River Hydroelectric Project - FERC Project No. 2101-084, California, Chili Bar Hydroelectric Project - FERC Project No. 2155-024, California. September.
http://en.wikipedia.org/wiki/Camino,_California. Accessed January 22, 2008.
Locke, Cathy. "Solution sought to Apple Hill traffic woes", Sacramento Bee, November 8, 2007.

Sacramento Municipal Utility District (SMUD). 2008a. Cost estimates for road improvement projects. Personal communication with Loren Bloomberg/CH2M HILL on January 24. Sacramento Municipal Utility District (SMUD). 2007a. Description of Alternative Transportation Routes. September.
Sacramento Municipal Utility District (SMUD). 2007b. Mace-Cable Connector - Cost Estimate for Rights to Property. Personal communication with Wendy Haydon/CH2M HILL on October 4.

Sacramento Municipal Utility District (SMUD). 2005. Sacramento Municipal Utility District's Upper American River Project (FERC No. 2101). Application for New License. ApplicantPrepared Preliminary Draft Environmental Assessment. June.

## Appendix A - Alternative Transportation Routes




LEGEND
-Route 2 - Cable Road via Cedar Grove Exit ——Route 6 - Cable Road via Camino Exit
_Route 7-Badger Hill Road
-Route 9 - Mace Road/Cable Connector

- Southwest Connector
-Existing Transmission Lines
_Proposed Transmission Line Proposed Upper Reservoir
$\square$ Proposed Switchyard Note: All road segments shown w
with conceptual route alignments.
ource: Saan Mist Milty District 2008

FIGURE A-1
ALTERNATIVE TRANSPORTATION ROUTES TO THE UPPER CONSTRUCTION SITE
UPPER AMERICAN RIVER PROJECT



LEGEND
—Route 1 - Carson Road East
_Route 3 - Carson Road West with Underpass
-Route 5 - Barkley Road
—Route 8 - Carson Road East with Underpass
-Route 10-Jacquier Road
_Route 11 - Golf Course with Underpass

- Southwest Connector
=Existing Transmission Lines
-_Proposed Transmission Line
Proposed Upper Reservoir
$\square$ Proposed Switchyard


## te: All road

 with conceptual route alignments.Source: Sacramento Municipal Utility District, 2008

$$
\begin{array}{cc}
1,800 & { }^{3,600} \\
\hline
\end{array}
$$

## FIGURE A-2

ALTERNATIVE TRANSPORTATION ROUTES O THE LOWER CONSTRUCTION SITE TO THE LOWER CONSTR

## Appendix B - Adjustment of Traffic Counts

## APPENDIX B

## Adjustment of Traffic Counts

Roadway segment 24 -hour traffic counts were collected by the El Dorado County Department of Transportation and CH2M HILL during October and November, 2007, respectively (Appendix C). To compare these counts, duplicate traffic counts were collected at the following two locations along Carson Road:

- between North Canyon Road and Sierra Blanca Drive;
- between Pony Express Trail and Cable Road.

The traffic counts collected at both of these locations during October and November were compared to check for consistency between them. Table B-1 presents the comparison of the actual traffic counts.

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Table B-1: <br>  <br> Roadway | From | To | Day | Traffic Counts ${ }^{1}$ |  | Percent Difference in Traffic Counts |
|  |  |  |  | October | November |  |
| Carson Road | N. Canyon Road | Sierra Blanca <br> Drive | Thursday | 3,329 | 1,829 | 82\% |
|  |  |  | Friday | 3,281 | 2,354 | 39\% |
|  |  |  | Saturday | 4,559 | 4,088 | 12\% |
|  |  |  | Sunday | 3,838 | 3,538 | 8\% |
| Carson Road | Pony Express Trail | Cable Road | Thursday | 3,535 | 3,264 | 8\% |
|  |  |  | Friday | 3,593 | 3,368 | 7\% |
|  |  |  | Saturday | 5,406 | 3,273 | 65\% |
|  |  |  | Sunday | 5,084 | 2,934 | 73\% |
| Average |  |  |  | 4,078 | 3,081 | 32\% |

${ }^{1}$ Traffic data were collected from October 11 to 14, and November 8 to 11.

Table B-1 shows that November traffic counts were, on average, 32 percent lower than October traffic counts. To maintain consistency between the two sets of traffic data, traffic counts collected during November have been increased by 32 percent for the this analysis presented in this report. The November traffic count data contained in Appendix C are the actual, unadjusted traffic counts.

## Appendix C - 24-Hour Roadway Segment Traffic Counts

Location: Jacquier Rd between Smith Flat Rd and Carson Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 1 |  | 0 |  |  |  | 12:00 | 6 |  | 4 |  |  |  |  |
| 00:15 | 0 |  | 0 |  |  |  | 12:15 | 6 |  | 9 |  |  |  |  |
| 00:30 | 1 |  | 1 |  |  |  | 12:30 | 5 |  | 6 |  |  |  |  |
| 00:45 | 0 | 2 | 0 | 1 |  | 3 | 12:45 | 3 | 20 | 2 | 21 |  |  | 41 |
| 01:00 | 0 |  | 0 |  |  |  | 13:00 | 3 |  | 5 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 5 |  | 4 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 3 |  | 3 |  |  |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  |  | 13:45 | 5 | 16 | 5 | 17 |  |  | 33 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 5 |  | 9 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 4 |  | 5 |  |  |  |  |
| 02:30 | 0 |  | 0 |  |  |  | 14:30 | 5 |  | 8 |  |  |  |  |
| 02:45 | 0 | 0 | 0 | 0 |  |  | 14:45 | 7 | 21 | 4 | 26 |  |  | 47 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 4 |  | 6 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 7 |  | 8 |  |  |  |  |
| 03:30 | 0 |  | 0 |  |  |  | 15:30 | 5 |  | 9 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 0 |  |  | 15:45 | 5 | 21 | 2 | 25 |  |  | 46 |
| 04:00 | 0 |  | 0 |  |  |  | 16:00 | 7 |  | 5 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 5 |  | 3 |  |  |  |  |
| 04:30 | 0 |  | 0 |  |  |  | 16:30 | 7 |  | 6 |  |  |  |  |
| 04:45 | 1 | 1 | 0 | 0 |  | 1 | 16:45 | 6 | 25 | 3 | 17 |  |  | 42 |
| 05:00 | 2 |  | 0 |  |  |  | 17:00 | 6 |  | 3 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 3 |  | 3 |  |  |  |  |
| 05:30 | 0 |  | 1 |  |  |  | 17:30 | 6 |  | 3 |  |  |  |  |
| 05:45 | 0 | 2 | 0 | 1 |  | 3 | 17:45 | 3 | 18 | 0 | 9 |  |  | 27 |
| 06:00 | 1 |  | 0 |  |  |  | 18:00 | 7 |  | 1 |  |  |  |  |
| 06:15 | 0 |  | 0 |  |  |  | 18:15 | 8 |  | 3 |  |  |  |  |
| 06:30 | 1 |  | 1 |  |  |  | 18:30 | 1 |  | 0 |  |  |  |  |
| 06:45 | 3 | 5 | 4 | 5 |  | 10 | 18:45 | 2 | 18 | 2 | 6 |  |  | 24 |
| 07:00 | 2 |  | 2 |  |  |  | 19:00 | 1 |  | 1 |  |  |  |  |
| 07:15 | 2 |  | 4 |  |  |  | 19:15 | 1 |  | 0 |  |  |  |  |
| 07:30 | 3 |  | 2 |  |  |  | 19:30 | 0 |  | 1 |  |  |  |  |
| 07:45 | 5 | 12 | 7 | 15 |  | 27 | 19:45 | 4 | 6 | 0 | 2 |  |  | 8 |
| 08:00 | 4 |  | 4 |  |  |  | 20:00 | 0 |  | 1 |  |  |  |  |
| 08:15 | 5 |  | 5 |  |  |  | 20:15 | 0 |  | 0 |  |  |  |  |
| 08:30 | 4 |  | 2 |  |  |  | 20:30 | 1 |  | 0 |  |  |  |  |
| 08:45 | 3 | 16 | 3 | 14 |  | 30 | 20:45 | 1 | 2 | 0 | 1 |  |  | 3 |
| 09:00 | 4 |  | 0 |  |  |  | 21:00 | 1 |  | 1 |  |  |  |  |
| 09:15 | 3 |  | 9 |  |  |  | 21:15 | 0 |  | 1 |  |  |  |  |
| 09:30 | 1 |  | 3 |  |  |  | 21:30 | 0 |  | 1 |  |  |  |  |
| 09:45 | 4 | 12 | 2 | 14 |  | 26 | 21:45 | 1 | 2 | 0 | 3 |  |  | 5 |
| 10:00 | 1 |  | 2 |  |  |  | 22:00 | 0 |  | 0 |  |  |  |  |
| 10:15 | 3 |  | 1 |  |  |  | 22:15 | 0 |  | 0 |  |  |  |  |
| 10:30 | 3 |  | 0 |  |  |  | 22:30 | 0 |  | 1 |  |  |  |  |
| 10:45 | 3 | 10 | 4 | 7 |  | 17 | 22:45 | 0 | 0 | 0 | 1 |  |  | 1 |
| 11:00 | 5 |  | 4 |  |  |  | 23:00 | 0 |  | 0 |  |  |  |  |
| 11:15 | 3 |  | 4 |  |  |  | 23:15 | 1 |  | 0 |  |  |  |  |
| 11:30 | 2 |  | 0 |  |  |  | 23:30 | 0 |  | 0 |  |  |  |  |
| 11:45 | 5 | 15 | 6 | 14 |  | 29 | 23:45 | 0 | 1 | 0 | 0 |  |  | 1 |
| Total Vol. |  | 75 |  | 71 |  | 146 |  |  | 150 |  | 128 |  |  | 278 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 225 |  | 199 |  |  | 424 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 51.4\% |  | 48.6\% |  | 34.4\% |  |  | 54.0\% |  | 46.0\% |  |  | 65.6\% |
| Peak Hour |  | 11:45 |  | 11:45 |  | 11:45 |  |  | 16:00 |  | 13:45 |  |  | 14:45 |
| Volume |  | 22 |  | 25 |  | 47 |  |  | 25 |  | 27 |  |  | 50 |
| P.H.F. |  | 0.92 |  | 0.69 |  | 0.78 |  |  | 0.93 |  | 0.75 |  |  | 0.83 |

Location: Jacquier Rd between Smith Flat Rd and Carson Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 1 |  | 0 |  |  |  | 12:00 | 4 |  | 5 |  |  |  |  |
| 00:15 | 0 |  | 0 |  |  |  | 12:15 | 9 |  | 2 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  | 12:30 | 13 |  | 5 |  |  |  |  |
| 00:45 | 0 | 1 | 0 | 0 |  | 1 | 12:45 | 6 | 32 | 8 | 20 |  |  | 52 |
| 01:00 | 0 |  | 0 |  |  |  | 13:00 | 5 |  | 5 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 6 |  | 4 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 6 |  | 7 |  |  |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  |  | 13:45 | 1 | 18 | 2 | 18 |  |  | 36 |
| 02:00 | 2 |  | 1 |  |  |  | 14:00 | 8 |  | 8 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 3 |  | 2 |  |  |  |  |
| 02:30 | 1 |  | 1 |  |  |  | 14:30 | 8 |  | 8 |  |  |  |  |
| 02:45 | 0 | 3 | 0 | 2 |  | 5 | 14:45 | 8 | 27 | 2 | 20 |  |  | 47 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 3 |  | 8 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 7 |  | 4 |  |  |  |  |
| 03:30 | 0 |  | 0 |  |  |  | 15:30 | 5 |  | 13 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 0 |  |  | 15:45 | 6 | 21 | 6 | 31 |  |  | 52 |
| 04:00 | 0 |  | 0 |  |  |  | 16:00 | 6 |  | 8 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 4 |  | 6 |  |  |  |  |
| 04:30 | 0 |  | 0 |  |  |  | 16:30 | 3 |  | 3 |  |  |  |  |
| 04:45 | 2 | 2 | 1 | 1 |  | 3 | 16:45 | 7 | 20 | 5 | 22 |  |  | 42 |
| 05:00 | 0 |  | 0 |  |  |  | 17:00 | 10 |  | 2 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 4 |  | 2 |  |  |  |  |
| 05:30 | 0 |  | 0 |  |  |  | 17:30 | 5 |  | 1 |  |  |  |  |
| 05:45 | 1 | 1 | 0 | 0 |  | 1 | 17:45 | 4 | 23 | 1 | 6 |  |  | 29 |
| 06:00 | 0 |  | 1 |  |  |  | 18:00 | 1 |  | 2 |  |  |  |  |
| 06:15 | 1 |  | 0 |  |  |  | 18:15 | 1 |  | 1 |  |  |  |  |
| 06:30 | 0 |  | 1 |  |  |  | 18:30 | 4 |  | 0 |  |  |  |  |
| 06:45 | 3 | 4 | 2 | 4 |  | 8 | 18:45 | 2 | 8 | 1 | 4 |  |  | 12 |
| 07:00 | 2 |  | 2 |  |  |  | 19:00 | 2 |  | 0 |  |  |  |  |
| 07:15 | 1 |  | 1 |  |  |  | 19:15 | 2 |  | 1 |  |  |  |  |
| 07:30 | 1 |  | 2 |  |  |  | 19:30 | 1 |  | 0 |  |  |  |  |
| 07:45 | 4 | 8 | 6 | 11 |  | 19 | 19:45 | 0 | 5 | 1 | 2 |  |  | 7 |
| 08:00 | 3 |  | 5 |  |  |  | 20:00 | 2 |  | 1 |  |  |  |  |
| 08:15 | 1 |  | 4 |  |  |  | 20:15 | 1 |  | 0 |  |  |  |  |
| 08:30 | 2 |  | 0 |  |  |  | 20:30 | 1 |  | 0 |  |  |  |  |
| 08:45 | 3 | 9 | 3 | 12 |  | 21 | 20:45 | 0 | 4 | 1 | 2 |  |  | 6 |
| 09:00 | 4 |  | 1 |  |  |  | 21:00 | 1 |  | 0 |  |  |  |  |
| 09:15 | 3 |  | 3 |  |  |  | 21:15 | 0 |  | 0 |  |  |  |  |
| 09:30 | 3 |  | 0 |  |  |  | 21:30 | 0 |  | 1 |  |  |  |  |
| 09:45 | 4 | 14 | 1 | 5 |  | 19 | 21:45 | 0 | 1 | 0 | 1 |  |  | 2 |
| 10:00 | 5 |  | 2 |  |  |  | 22:00 | 0 |  | 2 |  |  |  |  |
| 10:15 | 6 |  | 4 |  |  |  | 22:15 | 0 |  | 0 |  |  |  |  |
| 10:30 | 7 |  | 7 |  |  |  | 22:30 | 2 |  | 1 |  |  |  |  |
| 10:45 | 2 | 20 | 4 | 17 |  | 37 | 22:45 | 0 | 2 | 1 | 4 |  |  | 6 |
| 11:00 | 2 |  | 2 |  |  |  | 23:00 | 2 |  | 0 |  |  |  |  |
| 11:15 | 7 |  | 3 |  |  |  | 23:15 | 1 |  | 0 |  |  |  |  |
| 11:30 | 3 |  | 2 |  |  |  | 23:30 | 1 |  | 3 |  |  |  |  |
| 11:45 | 2 | 14 | 1 | 8 |  | 22 | 23:45 | 1 | 5 | 1 | 4 |  |  | 9 |
| Total Vol. |  | 76 |  | 60 |  | 136 |  |  | 166 |  | 134 |  |  | 300 |
|  |  |  |  |  |  |  |  |  | NB |  | SB | Daily Totals | WB | Combined |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 242 |  | 194 |  |  | 436 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 55.9\% |  | 44.1\% |  | 31.2\% |  |  | 55.3\% |  | 44.7\% |  |  | 68.8\% |
| Peak Hour |  | 11:45 |  | 07:30 |  | 11:45 |  |  | 12:15 |  | 15:30 |  |  | 15:15 |
| Volume |  | 28 |  | 17 |  | 41 |  |  | 33 |  | 33 |  |  | 55 |
| P.H.F. |  | 0.54 |  | 0.71 |  | 0.57 |  |  | 0.65 |  | 0.63 |  |  | 0.76 |

Location: Jacquier Rd between Smith Flat Rd and Carson Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 0 |  | 0 |  |  |  | 12:00 | 10 |  | 8 |  |  |  |  |
| 00:15 | 1 |  | 1 |  |  |  | 12:15 | 6 |  | 6 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  | 12:30 | 9 |  | 4 |  |  |  |  |
| 00:45 | 1 | 2 | 0 | 1 |  | 3 | 12:45 | 7 | 32 | 9 | 27 |  |  | 59 |
| 01:00 | 1 |  | 0 |  |  |  | 13:00 | 8 |  | 7 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 8 |  | 13 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 6 |  | 7 |  |  |  |  |
| 01:45 | 1 | 2 | 0 | 0 |  | 2 | 13:45 | 13 | 35 | 12 | 39 |  |  | 74 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 14 |  | 8 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 7 |  | 10 |  |  |  |  |
| 02:30 | 1 |  | 0 |  |  |  | 14:30 | 7 |  | 8 |  |  |  |  |
| 02:45 | 0 | 1 | 0 | 0 |  | 1 | 14:45 | 5 | 33 | 10 | 36 |  |  | 69 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 7 |  | 6 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 9 |  | 10 |  |  |  |  |
| 03:30 | 0 |  | 0 |  |  |  | 15:30 | 5 |  | 5 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 0 |  |  | 15:45 | 3 | 24 | 1 | 22 |  |  | 46 |
| 04:00 | 0 |  | 0 |  |  |  | 16:00 | 6 |  | 15 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 5 |  | 4 |  |  |  |  |
| 04:30 | 0 |  | 0 |  |  |  | 16:30 | 1 |  | 7 |  |  |  |  |
| 04:45 | 0 | 0 | 0 | 0 |  |  | 16:45 | 2 | 14 | 8 | 34 |  |  | 48 |
| 05:00 | 0 |  | 0 |  |  |  | 17:00 | 4 |  | 7 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 5 |  | 2 |  |  |  |  |
| 05:30 | 0 |  | 0 |  |  |  | 17:30 | 4 |  | 2 |  |  |  |  |
| 05:45 | 3 | 3 | 0 | 0 |  | 3 | 17:45 | 3 | 16 | 2 | 13 |  |  | 29 |
| 06:00 | 0 |  | 0 |  |  |  | 18:00 | 1 |  | 2 |  |  |  |  |
| 06:15 | 1 |  | 1 |  |  |  | 18:15 | 1 |  | 0 |  |  |  |  |
| 06:30 | 1 |  | 0 |  |  |  | 18:30 | 1 |  | 0 |  |  |  |  |
| 06:45 | 2 | 4 | 0 | 1 |  | 5 | 18:45 | 1 | 4 | 0 | 2 |  |  | 6 |
| 07:00 | 0 |  | 0 |  |  |  | 19:00 | 4 |  | 0 |  |  |  |  |
| 07:15 | 0 |  | 0 |  |  |  | 19:15 | 2 |  | 0 |  |  |  |  |
| 07:30 | 0 |  | 3 |  |  |  | 19:30 | 3 |  | 0 |  |  |  |  |
| 07:45 | 1 | 1 | 4 | 7 |  | 8 | 19:45 | 0 | 9 | 0 | 0 |  |  | 9 |
| 08:00 | 2 |  | 3 |  |  |  | 20:00 | 2 |  | 1 |  |  |  |  |
| 08:15 | 2 |  | 2 |  |  |  | 20:15 | 0 |  | 0 |  |  |  |  |
| 08:30 | 3 |  | 1 |  |  |  | 20:30 | 1 |  | 2 |  |  |  |  |
| 08:45 | 3 | 10 | 0 | 6 |  | 16 | 20:45 | 1 | 4 | 1 | 4 |  |  | 8 |
| 09:00 | 4 |  | 5 |  |  |  | 21:00 | 2 |  | 0 |  |  |  |  |
| 09:15 | 1 |  | 5 |  |  |  | 21:15 | 2 |  | 0 |  |  |  |  |
| 09:30 | 5 |  | 1 |  |  |  | 21:30 | 0 |  | 0 |  |  |  |  |
| 09:45 | 4 | 14 | 2 | 13 |  | 27 | 21:45 | 0 | 4 | 0 | 0 |  |  | 4 |
| 10:00 | 3 |  | 6 |  |  |  | 22:00 | 2 |  | 1 |  |  |  |  |
| 10:15 | 3 |  | 0 |  |  |  | 22:15 | 0 |  | 0 |  |  |  |  |
| 10:30 | 6 |  | 6 |  |  |  | 22:30 | 0 |  | 0 |  |  |  |  |
| 10:45 | 0 | 12 | 0 | 12 |  | 24 | 22:45 | 0 | 2 | 0 | 1 |  |  | 3 |
| 11:00 | 2 |  | 3 |  |  |  | 23:00 | 0 |  | 1 |  |  |  |  |
| 11:15 | 4 |  | 9 |  |  |  | 23:15 | 0 |  | 0 |  |  |  |  |
| 11:30 | 6 |  | 5 |  |  |  | 23:30 | 0 |  | 0 |  |  |  |  |
| 11:45 | 9 | 21 | 7 | 24 |  | 45 | 23:45 | 1 | 1 | 0 | 1 |  |  | 2 |
| Total Vol. |  | 70 |  | 64 |  | 134 |  |  | 178 |  | 179 |  |  | 357 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 248 |  | 243 |  |  | 491 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 52.2\% |  | 47.8\% |  | 27.3\% |  |  | 49.9\% |  | 50.1\% |  |  | 72.7\% |
| Peak Hour |  | 11:45 |  | 11:15 |  | 11:45 |  |  | 13:15 |  | 13:15 |  |  | 13:15 |
| Volume |  | 34 |  | 29 |  | 59 |  |  | 41 |  | 40 |  |  | 81 |
| P.H.F. |  | 0.85 |  | 0.81 |  | 0.82 |  |  | 0.77 |  | 0.77 |  |  | 0.81 |

Location: Jacquier Rd between Smith Flat Rd and Carson Rd


Location: Carson Rd between Jacquier Rd and N Canyon Rd


Location: Carson Rd between Jacquier Rd and $N$ Canyon Rd


Location: Carson Rd between Jacquier Rd and N Canyon Rd


Location: Carson Rd between Jacquier Rd and N Canyon Rd





| EL DORADO COUNTYDEPARTMENT OF TRANSPORTATIONCount Summary Beginning: $\quad$ October 15, 2007 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count Station: City/Town: Road Name: Lanes: | Special <br> Camino <br> North Canyon Rd 2 |  |  | Counter ID: <br> Mile Post: <br> Location: <br> Direction: |  | 71 <br> N of Carson Rd Combined |  |  |  |
| Date | 21 | 15 | 16 | 17 | 18 | 19 | 20 | Weekly | Wk Day |
| $\begin{gathered} \text { Day } \\ \text { Time } \end{gathered}$ | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Average | Avg. |
| 100 | 5 | 6 | 3 | 2 | 3 | 5 | 5 | 4 | 4 |
| 200 | 7 | 0 | 1 | 1 | 3 | 2 | 5 | 3 | 1 |
| 300 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 400 | 3 | 1 | 1 | 0 | 1 | 2 | 2 | 1 |  |
| 500 | 2 | 6 | 3 | 2 | 2 | 6 | 4 | 4 | 4 |
| 600 | 2 | 9 | 12 | 11 | 15 | 11 | 2 | 9 | 12 |
| 700 | 7 | 29 | 38 | 36 | 43 | 27 | 13 | 28 | 35 |
| 800 | 38 | 49 | 55 | 55 | 66 | 45 | 42 | 50 | 54 |
| 900 | 70 | 62 | 60 | 71 | 66 | 66 | 95 | 70 | 65 |
| 1000 | 160 | 75 | 84 | 74 | 94 | 75 | 109 | 96 | 80 |
| 1100 | 266 | 72 | 70 | 73 | 84 | 73 | 214 | 122 | 74 |
| 1200 | 477 | 126 | 109 | 103 | 136 | 139 | 377 | 210 | 123 |
| 1300 | 563 | 135 | 140 | 135 | 143 | 187 | 518 | 260 | 148 |
| 1400 | 579 | 144 | 112 | 120 | 113 | 181 | 509 | 251 | 134 |
| 1500 | 610 | 135 | 100 | 108 | 134 | 190 | 538 | 259 | 133 |
| 1600 | 574 | 131 | 86 | 120 | 130 | 207 | 557 | 258 | 135 |
| 1700 | 456 | 114 | 103 | 122 | 101 | 133 | 516 | 221 | 115 |
| 1800 | 326 | 103 | 75 | 93 | 100 | 79 | 342 | 160 | 90 |
| 1900 | 90 | 50 | 54 | 50 | 49 | 52 | 77 | 60 | 51 |
| 2000 | 39 | 22 | 27 | 37 | 45 | 38 | 42 | 36 | 34 |
| 2100 | 32 | 21 | 22 | 23 | 28 | 22 | 26 | 25 | 23 |
| 2200 | 16 | 7 | 17 | 14 | 16 | 22 | 27 | 17 | 15 |
| 2300 | 6 | 7 | 9 | 5 | 10 | 14 | 12 | 9 | 9 |
| 2400 | 10 | 6 | 4 | 3 | 3 | 8 | 12 | 7 | 5 |
| Totals | 4340 | 1312 | 1186 | 1259 | 1385 | 1584 | 4045 | 2159 | 1345 |
| AM Peak Hr | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 |
| AM Count | 477 | 126 | 109 | 103 | 136 | 139 | 377 | 210 | 123 |
| PM Peak Hr | 3:00 | 2:00 | 1:00 | 1:00 | 1:00 | 4:00 | 4:00 | 1:00 | 1:00 |
| PM Count | 610 | 144 | 140 | 135 | 143 | 207 | 557 | 260 | 148 |

Location: Slab Creek Rd north of N Canyon Rd

| AM Period | NB |  | SB |  | EB | WB |  | PM Period | NB |  | SB |  | EB | WB |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 2 |  | 0 |  |  |  |  | 12:00 | 0 |  | 0 |  |  |  |  |
| 00:15 | 0 |  | 0 |  |  |  |  | 12:15 | 3 |  | 3 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  |  | 12:30 | 1 |  | 0 |  |  |  |  |
| 00:45 | 0 | 2 | 0 | 0 |  |  | 2 | 12:45 | 0 | 4 | 0 | 3 |  |  | 7 |


| 01:00 | 0 |  | 1 |  |  | 13:00 | 1 |  | 0 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01:15 | 0 |  | 0 |  |  | 13:15 | 0 |  | 0 |  |  |
| 01:30 | 0 |  | 0 |  |  | 13:30 | 0 |  | 0 |  |  |
| 01:45 | 0 | 0 | 0 | 1 | 1 | 13:45 | 0 | 1 | 0 | 0 | 1 |
| 02:00 | 0 |  | 0 |  |  | 14:00 | 0 |  | 0 |  |  |
| 02:15 | 0 |  | 0 |  |  | 14:15 | 1 |  | 0 |  |  |
| 02:30 | 0 |  | 0 |  |  | 14:30 | 0 |  | 0 |  |  |
| 02:45 | 0 | 0 | 0 | 0 |  | 14:45 | 0 | 1 | 1 | 1 | 2 |
| 03:00 | 0 |  | 0 |  |  | 15:00 | 2 |  | 1 |  |  |
| 03:15 | 0 |  | 0 |  |  | 15:15 | 0 |  | 1 |  |  |
| 03:30 | 0 |  | 0 |  |  | 15:30 | 0 |  | 0 |  |  |
| 03:45 | 0 | 0 | 0 | 0 |  | 15:45 | 1 | 3 | 0 | 2 | 5 |


| $04: 00$ | 0 | 0 | $16: 00$ | 1 |  | 1 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $04: 15$ | 0 | 0 | $16: 15$ | 0 |  | 0 |  |
| $04: 30$ | 0 |  | 0 | $16: 30$ | 0 |  | 0 |
| 0 | $16: 45$ | 0 | 1 | 0 | 1 |  |  |
| $04: 45$ | 0 | 0 | 0 | 0 | $17: 00$ | 0 |  |
| $05: 00$ | 0 | 0 | $17: 15$ | 0 |  | 1 |  |
| $05: 15$ | 0 | 0 | $17: 30$ | 0 |  | 0 |  |
| $05: 30$ | 0 | 0 |  | $17: 45$ | 2 | 2 | 0 |
| $05: 45$ | 0 | 0 | 0 | 0 | 2 | 2 |  |


| $06: 00$ | 0 | 0 | $18: 00$ | 0 | 0 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $06: 15$ | 0 | 0 | $18: 15$ | 0 | 0 |  |  |
| $06: 30$ | 0 | 0 | $18: 30$ | 0 |  | 0 |  |
| $06: 45$ | 0 | 0 | 0 | 0 | $18: 45$ | 0 | 0 |
| 0 | 0 | 0 |  |  |  |  |  |

$\left.\begin{array}{llllll}\hline 07: 00 & 0 & 1 & 19: 00 & 0 & 0 \\ 07: 15 & 1 & 1 & 19: 15 & 0 & 0 \\ 07: 30 & 0 & 0 & 19: 30 & 0 & 0 \\ 07: 45 & 0 & 1 & 0 & 19: 45 & 0\end{array}\right)$

| $07: 45$ | 0 | 1 | 0 | 2 | 3 | $19: 45$ | 0 | 0 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $08: 00$ | 0 |  | 0 |  |  | $20: 00$ | 0 |  | 0 |  |
| $08: 15$ | 0 |  | 0 |  |  | $20: 15$ | 0 |  | 0 |  |
| $08: 30$ | 0 |  | 0 |  |  | $20: 30$ | 0 |  | 0 |  |
| $08: 45$ | 0 | 0 | 0 | 0 | $20: 45$ | 0 | 0 | 0 | 0 |  |
| $09: 00$ | 0 |  | 0 |  | $21: 00$ | 0 |  | 0 |  |  |
| $09: 15$ | 0 |  | 0 |  |  | $21: 15$ | 0 | 0 |  |  |
| $09: 30$ | 0 | 0 |  |  | $21: 30$ | 0 |  | 0 |  |  |
| $09: 45$ | 2 | 2 | 0 | 0 | $21: 45$ | 0 | 0 | 0 | 0 |  |


|  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10:00 | 1 |  | 1 |  | 2 | $21: 45$ | 0 | 0 | 0 |
| 0 | 0 | 0 |  |  |  |  |  |  |  |
| $10: 15$ | 0 |  | 0 |  |  | $22: 00$ | 0 |  | 0 |

$\begin{array}{llll}\text { Total Vol. } & 6 & 4 & 10\end{array}$


Location: Slab Creek Rd north of N Canyon Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | $E B \quad W B$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 0 |  | 0 |  |  |  | 12:00 | 0 |  | 0 |  |  |  |  |
| 00:15 | 0 |  | 0 |  |  |  | 12:15 | 2 |  | 0 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  | 12:30 | 0 |  | 0 |  |  |  |  |
| 00:45 | 0 | 0 | 0 | 0 |  |  | 12:45 | 0 | 2 | 0 | 0 |  |  | 2 |
| 01:00 | 0 |  | 0 |  |  |  | 13:00 | 0 |  | 0 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 0 |  | 0 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 0 |  | 1 |  |  |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  |  | 13:45 | 0 | 0 | 0 | 1 |  |  | 1 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 0 |  | 0 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 0 |  | 0 |  |  |  |  |
| 02:30 | 0 |  | 0 |  |  |  | 14:30 | 0 |  | 0 |  |  |  |  |
| 02:45 | 0 | 0 | 0 | 0 |  |  | 14:45 | 0 | 0 | 0 | 0 |  |  |  |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 0 |  | 0 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 0 |  | 0 |  |  |  |  |
| 03:30 | 0 |  | 0 |  |  |  | 15:30 | 1 |  | 0 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 0 |  |  | 15:45 | 4 | 5 | 2 | 2 |  |  | 7 |
| 04:00 | 0 |  | 0 |  |  |  | 16:00 | 0 |  | 1 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 0 |  | 0 |  |  |  |  |
| 04:30 | 0 |  | 0 |  |  |  | 16:30 | 0 |  | 1 |  |  |  |  |
| 04:45 | 2 | 2 | 2 | 2 |  | 4 | 16:45 | 0 | 0 | 0 | 2 |  |  | 2 |
| 05:00 | 0 |  | 0 |  |  |  | 17:00 | 0 |  | 0 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 0 |  | 0 |  |  |  |  |
| 05:30 | 0 |  | 0 |  |  |  | 17:30 | 1 |  | 0 |  |  |  |  |
| 05:45 | 0 | 0 | 0 | 0 |  |  | 17:45 | 0 | 1 | 0 | 0 |  |  | 1 |
| 06:00 | 0 |  | 0 |  |  |  | 18:00 | 1 |  | 0 |  |  |  |  |
| 06:15 | 0 |  | 1 |  |  |  | 18:15 | 1 |  | 1 |  |  |  |  |
| 06:30 | 0 |  | 0 |  |  |  | 18:30 | 0 |  | 0 |  |  |  |  |
| 06:45 | 0 | 0 | 0 | 1 |  | 1 | 18:45 | 0 | 2 | 0 | 1 |  |  | 3 |
| 07:00 | 0 |  | 0 |  |  |  | 19:00 | 0 |  | 0 |  |  |  |  |
| 07:15 | 0 |  | 0 |  |  |  | 19:15 | 0 |  | 0 |  |  |  |  |
| 07:30 | 0 |  | 0 |  |  |  | 19:30 | 0 |  | 0 |  |  |  |  |
| 07:45 | 0 | 0 | 0 | 0 |  |  | 19:45 | 0 | 0 | 0 | 0 |  |  |  |
| 08:00 | 0 |  | 0 |  |  |  | 20:00 | 0 |  | 0 |  |  |  |  |
| 08:15 | 0 |  | 0 |  |  |  | 20:15 | 0 |  | 0 |  |  |  |  |
| 08:30 | 1 |  | 0 |  |  |  | 20:30 | 0 |  | 0 |  |  |  |  |
| 08:45 | 0 | 1 | 0 | 0 |  | 1 | 20:45 | 0 | 0 | 0 | 0 |  |  |  |
| 09:00 | 1 |  | 0 |  |  |  | 21:00 | 0 |  | 0 |  |  |  |  |
| 09:15 | 0 |  | 1 |  |  |  | 21:15 | 0 |  | 0 |  |  |  |  |
| 09:30 | 0 |  | 0 |  |  |  | 21:30 | 0 |  | 0 |  |  |  |  |
| 09:45 | 0 | 1 | 0 | 1 |  | 2 | 21:45 | 0 | 0 | 0 | 0 |  |  |  |
| 10:00 | 0 |  | 0 |  |  |  | 22:00 | 0 |  | 0 |  |  |  |  |
| 10:15 | 0 |  | 0 |  |  |  | 22:15 | 0 |  | 0 |  |  |  |  |
| 10:30 | 0 |  | 0 |  |  |  | 22:30 | 0 |  | 0 |  |  |  |  |
| 10:45 | 0 | 0 | 0 | 0 |  |  | 22:45 | 1 | 1 | 0 | 0 |  |  | 1 |
| 11:00 | 0 |  | 0 |  |  |  | 23:00 | 0 |  | 0 |  |  |  |  |
| 11:15 | 0 |  | 0 |  |  |  | 23:15 | 0 |  | 0 |  |  |  |  |
| 11:30 | 0 |  | 0 |  |  |  | 23:30 | 0 |  | 0 |  |  |  |  |
| 11:45 | 0 | 0 | 0 | 0 |  |  | 23:45 | 0 | 0 | 0 | 0 |  |  |  |
| Total Vol. |  | 4 |  | 4 |  | 8 |  |  | 11 |  | 6 |  |  | 17 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 15 |  | 10 |  |  | 25 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 50.0\% |  | 50.0\% |  | 32.0\% |  |  | 64.7\% |  | 35.3\% |  |  | 68.0\% |
| Peak Hour |  | 04:00 |  | 04:00 |  | 04:00 |  |  | 15:00 |  | 15:45 |  |  | 15:15 |
| Volume |  | 2 |  | 2 |  | 4 |  |  | 5 |  | 4 |  |  | 8 |
| P.H.F. |  | 0.25 |  | 0.25 |  | 0.25 |  |  | 0.50 |  | 0.50 |  |  | 0.33 |

Location: Slab Creek Rd north of N Canyon Rd

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | WB


| 01:00 | 0 |  | 0 |  |  | 13:00 | 0 |  | 0 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 01:15 | 0 |  | 0 |  |  | 13:15 | 0 |  | 1 |  |  |
| 01:30 | 0 |  | 0 |  |  | 13:30 | 0 |  | 0 |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  | 13:45 | 0 | 0 | 0 | 1 | 1 |
| 02:00 | 0 |  | 0 |  |  | 14:00 | 0 |  | 0 |  |  |
| 02:15 | 0 |  | 0 |  |  | 14:15 | 0 |  | 0 |  |  |
| 02:30 | 2 |  | 0 |  |  | 14:30 | 0 |  | 0 |  |  |
| 02:45 | 0 | 2 | 0 | 0 | 2 | 14:45 | 1 | 1 | 0 | 0 | 1 |


| $03: 00$ | 0 | 0 | $15: 00$ | 0 |  | 0 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $03: 15$ | 0 | 0 |  | $15: 15$ | 0 | 0 |  |
| $03: 30$ | 0 | 0 | $15: 30$ | 0 |  | 0 |  |
| $03: 45$ | 0 | 0 | 0 | 0 | $15: 45$ | 0 | 0 |


| $04: 00$ | 0 | 0 | $16: 00$ | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $04: 15$ | 0 | 0 | $16: 15$ | 0 | 0 |
| $04: 30$ | 0 | 0 | $16: 30$ | 2 | 0 |
| $0: 45$ | 0 | 0 | $16: 45$ | 0 | 2 |
| 0 | 1 |  |  |  |  |


| $04: 45$ | 0 | 0 | 0 | 0 | $16: 45$ | 0 | 2 | 0 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $05: 00$ | 0 |  | 0 |  | $17: 00$ | 0 |  | 0 |  |
| $05: 15$ | 0 |  | 0 |  | $17: 15$ | 1 |  | 0 |  |
| $05: 30$ | 0 |  | 0 |  | $17: 30$ | 0 |  | 0 |  |
| $05: 45$ | 0 | 0 | 0 | 0 | $17: 45$ | 0 | 1 | 0 | 0 |


| $17: 45$ | 0 | 1 | 0 | 0 | 1 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $06: 00$ | 0 | 0 | $18: 00$ | 0 |  | 0 |  |
| $06: 15$ | 0 | 0 | $18: 15$ | 0 | 0 |  |  |
| $06: 30$ | 0 | 0 | $18: 30$ | 0 |  | 0 |  |
| $06: 45$ | 0 | 0 | 0 | 0 | $18: 45$ | 0 | 0 |
| 0 | 0 | 0 |  |  |  |  |  |


| $07: 00$ | 0 |  | 0 |  | $19: 00$ | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |
| $07: 15$ | 1 |  | 0 |  | $19: 15$ | 0 | 0 |
| $07: 30$ | 0 |  | 1 |  | $19: 30$ | 0 | 0 |
| $07: 45$ | 0 | 1 | 1 | 2 | $19: 45$ | 0 | 0 |
| 0 | 0 | 0 |  |  |  |  |  |


| $07: 45$ | 0 | 1 | 0 | 1 | 2 | $19: 45$ | 0 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0 | 0 |  |  |  |  |  |  |  |  |
| $08: 00$ | 0 |  | 0 |  |  | $20: 00$ | 0 |  | 0 |
| $08: 15$ | 0 |  | 0 |  |  | $20: 15$ | 0 |  | 0 |
| $08: 30$ | 1 |  | 0 |  | 1 | $20: 30$ | 0 |  | 0 |
| $08: 45$ | 0 | 1 | 0 | 0 |  | $20: 45$ | 0 | 0 | 2 |
| $09: 00$ | 3 |  | 2 |  |  | 2 |  |  |  |
| $09: 15$ | 0 |  | 1 |  |  | $21: 15$ | 0 |  | 0 |
| $09: 30$ | 0 |  | 0 |  | 7 | $21: 30$ | 0 |  | 0 |
| $09: 45$ | 0 | 3 | 1 | 4 | $21: 45$ | 0 | 0 | 0 | 0 |


| $10: 00$ | 1 |  | 0 |  |  | $22: 00$ | 0 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $10: 15$ | 0 |  | 0 |  |  | 0 |  |  |
| $10: 30$ | 0 |  | 0 |  | $22: 15$ | 0 | 0 |  |
| $10: 45$ | 0 | 1 | 0 | 0 | $22: 30$ | 0 |  | 0 |



Location: Slab Creek Rd north of $N$ Canyon Rd





TOTAL ADT:








Location: Carson Rd between Larsen Dr and Cable Rd


Location: Carson Rd between Larsen Dr and Cable Rd


Location: Carson Rd between Larsen Dr and Cable Rd


Location: Carson Rd between Larsen Dr and Cable Rd


| EL DORADO COUNTYDEPARTMENT OF TRANSPORTATIONCount Summary Beginning: $\quad$ October 11, 2007 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count Station: City/Town: Road Name: Lanes: |  | cial mino ble Rd |  |  | nter ID <br> Post: <br> ation: <br> ction: |  | le Rd mbined | Larsen Dr |  |
| Date | 14 | 15 | 16 | 17 | 11 | 12 | 13 | Weekly | Wk Day |
| $\begin{gathered} \text { Day } \\ \text { Time } \end{gathered}$ | Sun | Mon | Tue | Wed | Thu | Fri | Sat | Average | Avg. |
| 100 | 9 | 2 | 1 | 1 | 4 | 2 | 12 | 4 | 2 |
| 200 | 5 | 5 | 6 | 1 | 3 | 2 | 13 | 5 | 3 |
| 300 | 0 | 6 | 0 | 0 | 0 | 0 | 7 | 2 | 1 |
| 400 | 1 | 1 | 1 | 1 | 0 | 2 | 4 | 1 | 1 |
| 500 | 2 | 2 | 3 | 2 | 4 | 1 | 1 | 2 | 2 |
| 600 | 2 | 5 | 6 | 6 | 10 | 6 | 8 | 6 | 7 |
| 700 | 5 | 33 | 32 | 28 | 32 | 37 | 19 | 27 | 32 |
| 800 | 20 | 56 | 51 | 59 | 64 | 59 | 28 | 48 | 58 |
| 900 | 25 | 46 | 50 | 42 | 46 | 45 | 49 | 43 | 46 |
| 1000 | 93 | 46 | 54 | 50 | 58 | 49 | 87 | 62 | 51 |
| 1100 | 160 | 49 | 46 | 61 | 120 | 74 | 162 | 96 | 70 |
| 1200 | 308 | 103 | 80 | 66 | 124 | 141 | 295 | 160 | 103 |
| 1300 | 409 | 100 | 113 | 102 | 176 | 146 | 397 | 206 | 127 |
| 1400 | 476 | 129 | 88 | 101 | 160 | 131 | 482 | 224 | 122 |
| 1500 | 481 | 138 | 76 | 120 | 160 | 150 | 501 | 232 | 129 |
| 1600 | 464 | 129 | 85 | 94 | 163 | 126 | 486 | 221 | 119 |
| 1700 | 326 | 107 | 67 | 72 | 110 | 78 | 382 | 163 | 87 |
| 1800 | 177 | 78 | 61 | 76 | 70 | 78 | 195 | 105 | 73 |
| 1900 | 43 | 28 | 36 | 45 | 60 | 46 | 63 | 46 | 43 |
| 2000 | 26 | 21 | 18 | 33 | 27 | 34 | 24 | 26 | 27 |
| 2100 | 22 | 17 | 19 | 25 | 24 | 20 | 22 | 21 | 21 |
| 2200 | 12 | 15 | 20 | 16 | 15 | 18 | 7 | 15 | 17 |
| 2300 | 7 | 4 | 5 | 8 | 7 | 20 | 11 | 9 | 9 |
| 2400 | 3 | 2 | 3 | 5 | 7 | 16 | 8 | 6 | 7 |
| Totals | 3076 | 1122 | 921 | 1014 | 1444 | 1281 | 3263 | 1732 | 1156 |
| AM Peak Hr | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 | 12:00 |
| AM Count | 308 | 103 | 80 | 66 | 124 | 141 | 295 | 160 | 103 |
| PM Peak Hr | 3:00 | 3:00 | 1:00 | 3:00 | 1:00 | 3:00 | 3:00 | 3:00 | 3:00 |
| PM Count | 481 | 138 | 113 | 120 | 176 | 150 | 501 | 232 | 129 |



Location: Cable Rd north of Mace Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 1 |  | 0 |  |  |  | 12:00 | 1 |  | 5 |  |  |  |  |
| 00:15 | 0 |  | 0 |  |  |  | 12:15 | 6 |  | 2 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  | 12:30 | 10 |  | 3 |  |  |  |  |
| 00:45 | 0 | 1 | 0 | 0 |  | 1 | 12:45 | 2 | 19 | 5 | 15 |  |  | 34 |
| 01:00 | 0 |  | 0 |  |  |  | 13:00 | 2 |  | 5 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 5 |  | 0 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 2 |  | 3 |  |  |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  |  | 13:45 | 5 | 14 | 0 | 8 |  |  | 22 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 3 |  | 3 |  |  |  |  |
| 02:15 | 1 |  | 0 |  |  |  | 14:15 | 7 |  | 3 |  |  |  |  |
| 02:30 | 0 |  | 0 |  |  |  | 14:30 | 7 |  | 8 |  |  |  |  |
| 02:45 | 0 | 1 | 0 | 0 |  | 1 | 14:45 | 1 | 18 | 0 | 14 |  |  | 32 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 7 |  | 4 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 2 |  | 1 |  |  |  |  |
| 03:30 | 0 |  | 1 |  |  |  | 15:30 | 4 |  | 4 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 1 |  | 1 | 15:45 | 4 | 17 | 5 | 14 |  |  | 31 |
| 04:00 | 1 |  | 1 |  |  |  | 16:00 | 10 |  | 9 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 10 |  | 12 |  |  |  |  |
| 04:30 | 0 |  | 1 |  |  |  | 16:30 | 6 |  | 3 |  |  |  |  |
| 04:45 | 0 | 1 | 1 | 3 |  | 4 | 16:45 | 7 | 33 | 2 | 26 |  |  | 59 |
| 05:00 | 0 |  | 0 |  |  |  | 17:00 | 8 |  | 2 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 3 |  | 4 |  |  |  |  |
| 05:30 | 0 |  | 1 |  |  |  | 17:30 | 7 |  | 2 |  |  |  |  |
| 05:45 | 0 | 0 | 2 | 3 |  | 3 | 17:45 | 6 | 24 | 1 | 9 |  |  | 33 |
| 06:00 | 0 |  | 1 |  |  |  | 18:00 | 9 |  | 4 |  |  |  |  |
| 06:15 | 1 |  | 2 |  |  |  | 18:15 | 2 |  | 3 |  |  |  |  |
| 06:30 | 2 |  | 4 |  |  |  | 18:30 | 3 |  | 3 |  |  |  |  |
| 06:45 | 0 | 3 | 3 | 10 |  | 13 | 18:45 | 5 | 19 | 1 | 11 |  |  | 30 |
| 07:00 | 4 |  | 6 |  |  |  | 19:00 | 3 |  | 2 |  |  |  |  |
| 07:15 | 3 |  | 6 |  |  |  | 19:15 | 3 |  | 1 |  |  |  |  |
| 07:30 | 0 |  | 12 |  |  |  | 19:30 | 2 |  | 1 |  |  |  |  |
| 07:45 | 1 | 8 | 10 | 34 |  | 42 | 19:45 | 4 | 12 | 1 | 5 |  |  | 17 |
| 08:00 | 3 |  | 5 |  |  |  | 20:00 | 3 |  | 6 |  |  |  |  |
| 08:15 | 0 |  | 7 |  |  |  | 20:15 | 2 |  | 1 |  |  |  |  |
| 08:30 | 5 |  | 5 |  |  |  | 20:30 | 3 |  | 1 |  |  |  |  |
| 08:45 | 3 | 11 | 7 | 24 |  | 35 | 20:45 | 3 | 11 | 0 | 8 |  |  | 19 |
| 09:00 | 2 |  | 5 |  |  |  | 21:00 | 2 |  | 1 |  |  |  |  |
| 09:15 | 1 |  | 5 |  |  |  | 21:15 | 2 |  | 1 |  |  |  |  |
| 09:30 | 1 |  | 4 |  |  |  | 21:30 | 1 |  | 0 |  |  |  |  |
| 09:45 | 0 | 4 | 0 | 14 |  | 18 | 21:45 | 2 | 7 | 0 | 2 |  |  | 9 |
| 10:00 | 2 |  | 7 |  |  |  | 22:00 | 6 |  | 0 |  |  |  |  |
| 10:15 | 1 |  | 3 |  |  |  | 22:15 | 2 |  | 0 |  |  |  |  |
| 10:30 | 2 |  | 2 |  |  |  | 22:30 | 4 |  | 0 |  |  |  |  |
| 10:45 | 2 | 7 | 1 | 13 |  | 20 | 22:45 | 3 | 15 | 0 | 0 |  |  | 15 |
| 11:00 | 2 |  | 9 |  |  |  | 23:00 | 0 |  | 0 |  |  |  |  |
| 11:15 | 3 |  | 5 |  |  |  | 23:15 | 0 |  | 1 |  |  |  |  |
| 11:30 | 0 |  | 4 |  |  |  | 23:30 | 0 |  | 0 |  |  |  |  |
| 11:45 | 5 | 10 | 3 | 21 |  | 31 | 23:45 | 3 | 3 | 0 | 1 |  |  | 4 |
| Total Vol. |  | 46 |  | 123 |  | 169 |  |  | 192 |  | 113 |  |  | 305 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 238 |  | 236 |  |  | 474 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 27.2\% |  | 72.8\% |  | 35.7\% |  |  | 63.0\% |  | 37.0\% |  |  | 64.3\% |
| Peak Hour |  | 11:45 |  | 07:00 |  | 07:00 |  |  | 16:00 |  | 15:30 |  |  | 15:45 |
| Volume |  | 22 |  | 34 |  | 42 |  |  | 33 |  | 30 |  |  | 59 |
| P.H.F. |  | 0.55 |  | 0.71 |  | 0.88 |  |  | 0.80 |  | 0.63 |  |  | 0.67 |

Location: Cable Rd north of Mace Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 2 |  | 0 |  |  |  | 12:00 | 7 |  | 6 |  |  |  |  |
| 00:15 | 1 |  | 0 |  |  |  | 12:15 | 4 |  | 6 |  |  |  |  |
| 00:30 | 1 |  | 0 |  |  |  | 12:30 | 3 |  | 2 |  |  |  |  |
| 00:45 | 0 | 4 | 0 | 0 |  | 4 | 12:45 | 4 | 18 | 6 | 20 |  |  | 38 |
| 01:00 | 0 |  | 0 |  |  |  | 13:00 | 2 |  | 3 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 2 |  | 1 |  |  |  |  |
| 01:30 | 0 |  | 0 |  |  |  | 13:30 | 4 |  | 4 |  |  |  |  |
| 01:45 | 0 | 0 | 0 | 0 |  |  | 13:45 | 8 | 16 | 6 | 14 |  |  | 30 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 3 |  | 2 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 6 |  | 6 |  |  |  |  |
| 02:30 | 0 |  | 0 |  |  |  | 14:30 | 2 |  | 3 |  |  |  |  |
| 02:45 | 1 | 1 | 0 | 0 |  | 1 | 14:45 | 4 | 15 | 7 | 18 |  |  | 33 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 1 |  | 4 |  |  |  |  |
| 03:15 | 0 |  | 0 |  |  |  | 15:15 | 3 |  | 5 |  |  |  |  |
| 03:30 | 0 |  | 1 |  |  |  | 15:30 | 4 |  | 3 |  |  |  |  |
| 03:45 | 0 | 0 | 0 | 1 |  | 1 | 15:45 | 4 | 12 | 7 | 19 |  |  | 31 |
| 04:00 | 2 |  | 1 |  |  |  | 16:00 | 6 |  | 3 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 14 |  | 4 |  |  |  |  |
| 04:30 | 1 |  | 1 |  |  |  | 16:30 | 4 |  | 3 |  |  |  |  |
| 04:45 | 0 | 3 | 0 | 2 |  | 5 | 16:45 | 7 | 31 | 6 | 16 |  |  | 47 |
| 05:00 | 0 |  | 0 |  |  |  | 17:00 | 4 |  | 4 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 4 |  | 6 |  |  |  |  |
| 05:30 | 0 |  | 0 |  |  |  | 17:30 | 5 |  | 7 |  |  |  |  |
| 05:45 | 0 | 0 | 1 | 1 |  | 1 | 17:45 | 6 | 19 | 3 | 20 |  |  | 39 |
| 06:00 | 0 |  | 1 |  |  |  | 18:00 | 8 |  | 9 |  |  |  |  |
| 06:15 | 4 |  | 6 |  |  |  | 18:15 | 3 |  | 6 |  |  |  |  |
| 06:30 | 0 |  | 4 |  |  |  | 18:30 | 3 |  | 3 |  |  |  |  |
| 06:45 | 6 | 10 | 4 | 15 |  | 25 | 18:45 | 4 | 18 | 3 | 21 |  |  | 39 |
| 07:00 | 4 |  | 7 |  |  |  | 19:00 | 7 |  | 0 |  |  |  |  |
| 07:15 | 4 |  | 11 |  |  |  | 19:15 | 2 |  | 0 |  |  |  |  |
| 07:30 | 0 |  | 8 |  |  |  | 19:30 | 2 |  | 0 |  |  |  |  |
| 07:45 | 2 | 10 | 5 | 31 |  | 41 | 19:45 | 1 | 12 | 1 | 1 |  |  | 13 |
| 08:00 | 1 |  | 11 |  |  |  | 20:00 | 3 |  | 1 |  |  |  |  |
| 08:15 | 4 |  | 3 |  |  |  | 20:15 | 6 |  | 1 |  |  |  |  |
| 08:30 | 2 |  | 9 |  |  |  | 20:30 | 5 |  | 1 |  |  |  |  |
| 08:45 | 2 | 9 | 8 | 31 |  | 40 | 20:45 | 3 | 17 | 0 | 3 |  |  | 20 |
| 09:00 | 0 |  | 5 |  |  |  | 21:00 | 1 |  | 1 |  |  |  |  |
| 09:15 | 4 |  | 7 |  |  |  | 21:15 | 1 |  | 0 |  |  |  |  |
| 09:30 | 2 |  | 5 |  |  |  | 21:30 | 2 |  | 0 |  |  |  |  |
| 09:45 | 3 | 9 | 6 | 23 |  | 32 | 21:45 | 0 | 4 | 0 | 1 |  |  | 5 |
| 10:00 | 4 |  | 5 |  |  |  | 22:00 | 4 |  | 0 |  |  |  |  |
| 10:15 | 2 |  | 8 |  |  |  | 22:15 | 3 |  | 1 |  |  |  |  |
| 10:30 | 4 |  | 4 |  |  |  | 22:30 | 0 |  | 0 |  |  |  |  |
| 10:45 | 1 | 11 | 3 | 20 |  | 31 | 22:45 | 4 | 11 | 1 | 2 |  |  | 13 |
| 11:00 | 2 |  | 1 |  |  |  | 23:00 | 5 |  | 0 |  |  |  |  |
| 11:15 | 4 |  | 5 |  |  |  | 23:15 | 4 |  | 0 |  |  |  |  |
| 11:30 | 7 |  | 8 |  |  |  | 23:30 | 4 |  | 2 |  |  |  |  |
| 11:45 | 1 | 14 | 2 | 16 |  | 30 | 23:45 | 2 | 15 | 0 | 2 |  |  | 17 |
| Total Vol. |  | 71 |  | 140 |  | 211 |  |  | 188 |  | 137 |  |  | 325 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 259 |  | 277 |  |  | 536 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 33.6\% |  | 66.4\% |  | 39.4\% |  |  | 57.8\% |  | 42.2\% |  |  | 60.6\% |
| Peak Hour |  | 11:15 |  | 07:15 |  | 06:45 |  |  | 16:00 |  | 17:15 |  |  | 17:15 |
| Volume |  | 19 |  | 35 |  | 44 |  |  | 31 |  | 25 |  |  | 48 |
| P.H.F. |  | 0.68 |  | 0.80 |  | 0.73 |  |  | 0.50 |  | 0.69 |  |  | 0.71 |

Location: Cable Rd north of Mace Rd

| AM Period | NB |  | SB | EB | WB |  | PM Period | NB |  | SB |  | EB WB |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00:00 | 0 |  | 0 |  |  |  | 12:00 | 5 |  | 1 |  |  |  |  |
| 00:15 | 1 |  | 0 |  |  |  | 12:15 | 7 |  | 9 |  |  |  |  |
| 00:30 | 0 |  | 0 |  |  |  | 12:30 | 1 |  | 1 |  |  |  |  |
| 00:45 | 0 | 1 | 0 | 0 |  | 1 | 12:45 | 3 | 16 | 1 | 12 |  |  | 28 |
| 01:00 | 1 |  | 0 |  |  |  | 13:00 | 6 |  | 6 |  |  |  |  |
| 01:15 | 0 |  | 0 |  |  |  | 13:15 | 5 |  | 3 |  |  |  |  |
| 01:30 | 0 |  | 2 |  |  |  | 13:30 | 1 |  | 1 |  |  |  |  |
| 01:45 | 0 | 1 | 0 | 2 |  | 3 | 13:45 | 2 | 14 | 4 | 14 |  |  | 28 |
| 02:00 | 0 |  | 0 |  |  |  | 14:00 | 7 |  | 5 |  |  |  |  |
| 02:15 | 0 |  | 0 |  |  |  | 14:15 | 4 |  | 2 |  |  |  |  |
| 02:30 | 1 |  | 0 |  |  |  | 14:30 | 4 |  | 5 |  |  |  |  |
| 02:45 | 0 | 1 | 0 | 0 |  | 1 | 14:45 | 4 | 19 | 5 | 17 |  |  | 36 |
| 03:00 | 0 |  | 0 |  |  |  | 15:00 | 2 |  | 1 |  |  |  |  |
| 03:15 | 1 |  | 0 |  |  |  | 15:15 | 6 |  | 8 |  |  |  |  |
| 03:30 | 0 |  | 1 |  |  |  | 15:30 | 4 |  | 5 |  |  |  |  |
| 03:45 | 0 | 1 | 0 | 1 |  | 2 | 15:45 | 2 | 14 | 1 | 15 |  |  | 29 |
| 04:00 | 1 |  | 0 |  |  |  | 16:00 | 4 |  | 2 |  |  |  |  |
| 04:15 | 0 |  | 0 |  |  |  | 16:15 | 7 |  | 5 |  |  |  |  |
| 04:30 | 0 |  | 1 |  |  |  | 16:30 | 7 |  | 7 |  |  |  |  |
| 04:45 | 0 | 1 | 0 | 1 |  | 2 | 16:45 | 7 | 25 | 4 | 18 |  |  | 43 |
| 05:00 | 0 |  | 2 |  |  |  | 17:00 | 5 |  | 4 |  |  |  |  |
| 05:15 | 0 |  | 0 |  |  |  | 17:15 | 3 |  | 2 |  |  |  |  |
| 05:30 | 0 |  | 0 |  |  |  | 17:30 | 9 |  | 4 |  |  |  |  |
| 05:45 | 0 | 0 | 0 | 2 |  | 2 | 17:45 | 3 | 20 | 7 | 17 |  |  | 37 |
| 06:00 | 0 |  | 1 |  |  |  | 18:00 | 8 |  | 3 |  |  |  |  |
| 06:15 | 0 |  | 0 |  |  |  | 18:15 | 1 |  | 3 |  |  |  |  |
| 06:30 | 0 |  | 0 |  |  |  | 18:30 | 2 |  | 1 |  |  |  |  |
| 06:45 | 0 | 0 | 2 | 3 |  | 3 | 18:45 | 4 | 15 | 5 | 12 |  |  | 27 |
| 07:00 | 0 |  | 0 |  |  |  | 19:00 | 3 |  | 1 |  |  |  |  |
| 07:15 | 2 |  | 2 |  |  |  | 19:15 | 3 |  | 5 |  |  |  |  |
| 07:30 | 1 |  | 2 |  |  |  | 19:30 | 2 |  | 1 |  |  |  |  |
| 07:45 | 1 | 4 | 2 | 6 |  | 10 | 19:45 | 2 | 10 | 1 | 8 |  |  | 18 |
| 08:00 | 7 |  | 3 |  |  |  | 20:00 | 1 |  | 1 |  |  |  |  |
| 08:15 | 1 |  | 3 |  |  |  | 20:15 | 3 |  | 1 |  |  |  |  |
| 08:30 | 0 |  | 2 |  |  |  | 20:30 | 3 |  | 1 |  |  |  |  |
| 08:45 | 1 | 9 | 8 | 16 |  | 25 | 20:45 | 3 | 10 | 2 | 5 |  |  | 15 |
| 09:00 | 2 |  | 6 |  |  |  | 21:00 | 4 |  | 0 |  |  |  |  |
| 09:15 | 4 |  | 10 |  |  |  | 21:15 | 1 |  | 1 |  |  |  |  |
| 09:30 | 1 |  | 11 |  |  |  | 21:30 | 3 |  | 2 |  |  |  |  |
| 09:45 | 1 | 8 | 5 | 32 |  | 40 | 21:45 | 1 | 9 | 0 | 3 |  |  | 12 |
| 10:00 | 7 |  | 4 |  |  |  | 22:00 | 4 |  | 0 |  |  |  |  |
| 10:15 | 1 |  | 5 |  |  |  | 22:15 | 0 |  | 0 |  |  |  |  |
| 10:30 | 5 |  | 4 |  |  |  | 22:30 | 1 |  | 2 |  |  |  |  |
| 10:45 | 3 | 16 | 3 | 16 |  | 32 | 22:45 | 1 | 6 | 1 | 3 |  |  | 9 |
| 11:00 | 3 |  | 3 |  |  |  | 23:00 | 1 |  | 0 |  |  |  |  |
| 11:15 | 3 |  | 5 |  |  |  | 23:15 | 0 |  | 1 |  |  |  |  |
| 11:30 | 2 |  | 4 |  |  |  | 23:30 | 0 |  | 0 |  |  |  |  |
| 11:45 | 5 | 13 | 7 | 19 |  | 32 | 23:45 | 1 | 2 | 0 | 1 |  |  | 3 |
| Total Vol. |  | 55 |  | 98 |  | 153 |  |  | 160 |  | 125 |  |  | 285 |
|  |  |  |  |  |  |  |  |  |  |  |  | Daily Totals |  |  |
|  |  |  |  |  |  |  |  |  | NB |  | SB | EB | WB | Combined |
|  |  |  |  |  |  |  |  |  | 215 |  | 223 |  |  | 438 |
|  |  | AM |  |  |  |  |  |  | PM |  |  |  |  |  |
| Split \% |  | 35.9\% |  | 64.1\% |  | 34.9\% |  |  | 56.1\% |  | 43.9\% |  |  | 65.1\% |
| Peak Hour |  | 11:30 |  | 08:45 |  | 08:45 |  |  | 16:15 |  | 16:15 |  |  | 16:15 |
| Volume |  | 19 |  | 35 |  | 43 |  |  | 26 |  | 20 |  |  | 46 |
| P.H.F. |  | 0.68 |  | 0.80 |  | 0.77 |  |  | 1.00 |  | 0.71 |  |  | 0.82 |

Location: Cable Rd north of Mace Rd

| AM Period | NB | SB | EB | WB |  | PM Period | NB | SB | EB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | WB


| $01: 00$ | 0 | 0 | $13: 00$ | 5 | 3 | 3 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $01: 15$ | 0 | 0 | $13: 15$ | 6 |  | 2 |  |
| $01: 30$ | 0 | 0 | $13: 30$ | 8 |  | 7 |  |
| $01: 45$ | 0 | 0 | 0 | $13: 45$ | 7 | 26 | 3 |
| 15 | 41 |  |  |  |  |  |  |


| 01:45 | 0 | 0 | 0 | 0 | 13:45 | 7 | 26 | 3 | 15 | 41 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02:00 | 0 |  | 0 |  | 14:00 | 3 |  | 6 |  |  |
| 02:15 | 0 |  | 0 |  | 14:15 | 6 |  | 4 |  |  |
| 02:30 | 0 |  | 0 |  | 14:30 | 9 |  | 2 |  |  |
| 02:45 | 0 | 0 | 0 | 0 | 14:45 | 8 | 26 | 3 | 15 | 41 |
| 03:00 | 0 |  | 0 |  | 15:00 | 5 |  | 6 |  |  |
| 03:15 | 0 |  | 0 |  | 15:15 | 2 |  | 2 |  |  |
| 03:30 | 0 |  | 0 |  | 15:30 | 2 |  | 4 |  |  |
| 03:45 | 1 |  | 0 | 0 | 15:45 | 1 | 10 | 4 | 16 | 26 |


| $04: 00$ | 0 | 0 | $16: 00$ | 5 | 2 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $04: 15$ | 1 | 1 | $16: 15$ | 5 | 5 |  |
| $04: 30$ | 0 | 1 |  | $16: 30$ | 5 | 4 |
| $04: 45$ | 1 | 2 | 0 | $16: 45$ | 6 | 21 |
| 5 | 5 | 16 |  |  |  |  |


| $04: 45$ | 1 | 2 | 0 | 2 | 4 | $16: 45$ | 6 | 21 | 5 | 16 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $05: 00$ | 2 |  | 0 |  |  | $17: 00$ | 5 |  | 9 |  |
| $05: 15$ | 0 |  | 0 |  |  | $17: 15$ | 6 | 5 |  |  |
| $05: 30$ | 0 |  | 2 |  |  | $17: 30$ | 8 |  | 4 |  |
| $05: 45$ | 0 | 2 | 0 | 2 | 4 | $17: 45$ | 2 | 21 | 1 | 19 |


| $05: 45$ | 0 | 2 | 0 | 2 | 4 | $17: 45$ | 2 | 21 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 19 | 40 |  |  |  |  |  |  |  |  |
| $06: 00$ | 0 |  | 0 |  |  | $18: 00$ | 0 |  | 2 |
|  |  |  |  |  |  |  |  |  |  |
| $06: 15$ | 0 |  | 2 |  |  | $18: 15$ | 0 |  | 2 |
| $06: 30$ | 0 |  | 0 |  |  | $18: 30$ | 3 |  | 2 |
| $06: 45$ | 0 | 0 | 0 | 2 | 2 | $18: 45$ | 2 | 5 | 0 |
| 06 | 6 | 11 |  |  |  |  |  |  |  |


| $06: 45$ | 0 | 0 | 2 | $18: 45$ | 2 | 5 | 0 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $07: 00$ | 0 | 1 |  | $19: 00$ | 3 | 0 |  |  |
| $07: 15$ | 0 | 2 |  | $19: 15$ | 2 | 1 |  |  |
| $07: 30$ | 0 | 2 |  |  | $19: 30$ | 5 | 1 |  |
| $07: 45$ | 1 | 1 | 7 | 8 | $19: 45$ | 1 | 11 | 3 |


| $07: 45$ | 1 | 1 | 2 | 7 | 8 | $19: 45$ | 1 | 11 | 3 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $08: 00$ | 1 |  | 3 |  |  | $20: 00$ | 2 |  | 2 |  |
| $08: 15$ | 0 |  | 1 |  |  | $20: 15$ | 1 | 4 |  |  |
| $08: 30$ | 1 |  | 4 |  |  | $20: 30$ | 1 |  | 0 |  |
| $08: 45$ | 1 | 3 | 3 | 11 | 14 | $20: 45$ | 2 | 6 | 1 | 7 |



|  | AM |  |  |  | PM |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Split \% | $32.3 \%$ | $67.7 \%$ | $\mathbf{2 6 . 1 \%}$ | $55.4 \%$ | $44.6 \%$ | $\mathbf{7 3 . 9 \%}$ |
| Peak Hour | $11: 45$ | $11: 45$ | $\mathbf{1 1 : 4 5}$ | $14: 15$ | $12: 00$ | $\mathbf{1 6 : 4 5}$ |
| Volume | 17 | 25 | $\mathbf{4 2}$ | 28 | 25 | $\mathbf{4 8}$ |
| P.H.F. | 0.53 | 0.57 | $\mathbf{0 . 6 6}$ | 0.86 | 0.57 | $\mathbf{0 . 8 6}$ |

Location: Carson Rd between Sierra Bianca Dr and Barkley Rd


Location: Carson Rd between Sierra Bianca Dr and Barkley Rd


Location: Carson Rd between Sierra Bianca Dr and Barkley Rd


Location: Carson Rd between Sierra Bianca Dr and Barkley Rd






Location: Pony Express Trail between Ridgeway Dr and Blair Rd


Location: Pony Express Trail between Ridgeway Dr and Blair Rd


Location: Pony Express Trail between Ridgeway Dr and Blair Rd


Location: Pony Express Trail between Ridgeway Dr and Blair Rd


Location: Blair Rd between Pony Express Trail and Badger Hill Rd


Location: Blair Rd between Pony Express Trail and Badger Hill Rd


Location: Blair Rd between Pony Express Trail and Badger Hill Rd


Location: Blair Rd between Pony Express Trail and Badger Hill Rd

Volumes for: Thursday, November 08, 2007

Location: Badger Hill Rd west of Blair Rd

| AM Period NB | SB | EB | WB | PM Period | NB | SB | EB | WB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $00: 00$ | 0 | 0 | $12: 00$ | 1 | 1 |  |  |  |
| $00: 15$ | 0 | 0 | $12: 15$ | 0 | 0 |  |  |  |
| $00: 30$ | 0 | 0 | $12: 30$ | 0 | 2 |  |  |  |
| $00: 45$ | 0 | 0 | 0 | 0 | $12: 45$ | 6 | 7 | 5 |


| $00: 45$ | 0 | 0 | 0 | 0 | $12: 45$ | 6 | 7 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $01: 00$ | 0 |  | 0 |  | $13: 00$ | 0 | 1 |  |
| $01: 15$ | 0 |  | 0 |  | $13: 15$ | 7 |  |  |
| $01: 30$ | 0 |  | 0 |  | $13: 30$ | 1 |  |  |
| $01: 45$ | 0 | 0 | 0 | 0 | $13: 45$ | 4 | 10 | 0 |


| 01:45 | 0 | 0 | 0 | 0 | 13:45 | 4 | 10 | 0 | 9 | 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 02:00 | 0 |  | 0 |  | 14:00 | 1 |  | 0 |  |  |
| 02:15 | 0 |  | 0 |  | 14:15 | 1 |  | 1 |  |  |
| 02:30 | 0 |  | 0 |  | 14:30 | 0 |  | 0 |  |  |
| 02:45 | 0 | 0 | 0 | 0 | 14:45 | 0 | 2 | 1 | 2 | 4 |
| 03:00 | 0 |  | 0 |  | 15:00 | 2 |  | 0 |  |  |
| 03:15 | 0 |  | 0 |  | 15:15 | 1 |  | 2 |  |  |
| 03:30 | 0 |  | 0 |  | 15:30 | 2 |  | 0 |  |  |
| 03:45 | 0 | 0 | 0 | 0 | 15:45 | 0 | 5 | 0 | 2 | 7 |


| $04: 00$ | 0 | 0 | $16: 00$ | 0 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $04: 15$ | 0 | 0 | $16: 15$ | 3 |  |  |
| $04: 30$ | 0 | 0 | $16: 30$ | 1 |  |  |
| $04: 45$ | 0 | 0 | 0 | 0 | $16: 45$ | 3 |


| $04: 45$ | 0 | 0 | 0 | 0 |  | $16: 45$ | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $05: 00$ | 0 |  | 0 |  |  | $17: 00$ | 1 |  |
| $05: 15$ | 0 |  | 0 |  | $17: 15$ | 0 |  |  |
| $05: 30$ | 2 |  | 1 |  |  | $17: 30$ | 0 |  |
| $05: 45$ | 0 | 2 | 0 | 1 | 3 | $17: 45$ | 0 | 1 |
| $06: 00$ | 0 |  | 0 |  |  | $18: 00$ | 0 | 0 |
| $06: 15$ | 0 |  | 0 |  |  | $18: 15$ | 0 | 0 |
| $06: 30$ | 2 |  | 0 |  |  | $18: 30$ | 0 | 0 |
| $06: 45$ | 0 | 2 | 2 | 2 | 4 | $18: 45$ | 0 | 0 |


| $07: 00$ | 0 | 0 | $19: 00$ | 1 | 1 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $07: 15$ | 0 | 2 | $19: 15$ | 0 |  |  |
| $07: 30$ | 0 |  | 1 |  | $19: 30$ | 0 |
| $07: 45$ | 4 | 4 | 0 | 3 | 7 | $19: 45$ |


| 07:45 | 4 | 4 | 0 | 3 | 7 | 19:45 | 0 | 1 | 0 | 1 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 08:00 | 0 |  | 1 |  |  | 20:00 | 0 |  | 0 |  |  |
| 08:15 | 0 |  | 0 |  |  | 20:15 | 0 |  | 0 |  |  |
| 08:30 | 1 |  | 0 |  |  | 20:30 | 0 |  | 0 |  |  |
| 08:45 | 5 | 6 | 7 | 8 | 14 | 20:45 | 0 | 0 | 0 | 0 |  |
| 09:00 | 0 |  | 1 |  |  | 21:00 | 0 |  | 0 |  |  |
| 09:15 | 0 |  | 2 |  |  | 21:15 | 0 |  | 0 |  |  |
| 09:30 | 2 |  | 5 |  |  | 21:30 | 1 |  | 0 |  |  |
| 09:45 | 0 | 2 | 0 | 8 | 10 | 21:45 | 0 | 1 | 0 | 0 | 1 |
| 10:00 | 0 |  | 0 |  |  | 22:00 | 0 |  | 0 |  |  |
| 10:15 | 0 |  | 2 |  |  | 22:15 | 0 |  | 0 |  |  |
| 10:30 | 1 |  | 1 |  |  | 22:30 | 0 |  | 0 |  |  |
| 10:45 | 1 | 2 | 0 | 3 | 5 | 22:45 | 0 | 0 | 0 | 0 |  |
| 11:00 | 0 |  | 0 |  |  | 23:00 | 0 |  | 0 |  |  |
| 11:15 | 0 |  | 0 |  |  | 23:15 | 0 |  | 0 |  |  |
| 11:30 | 0 |  | 0 |  |  | 23:30 | 0 |  | 0 |  |  |
| 11:45 | 0 | 0 | 1 | 1 | 1 | 23:45 | 0 | 0 | 0 | 0 |  |
| tal Vol. |  | 18 |  | 26 | 44 |  |  | 33 |  | 31 | 64 |



Location: Badger Hill Rd west of Blair Rd



Location: Badger Hill Rd west of Blair Rd


## Appendix D - Business and Organizations Located Along Alternative Transportation Routes

Table D-1: Businesses and Organizations Located along the Alternative Transportation Routes

| Roadway | Segment | Alternatives Involved | Businesses and Organizations Located Along Roadway |
| :---: | :---: | :---: | :---: |
| Point View Dr. | US 50 exit to Jacquier Rd. | 10 | New hotel near US 50 (under construction) |
| Jacquier Rd. | Point View Dr. to Carson Rd. | 10 | Fenton Herriott Vineyards \& Winery |
|  |  |  | Willow Pond Farm |
| Carson Rd. | Jacquier Rd. N. Canyon Rd. | 10 | Smokey Ridge Ranch |
|  |  |  | Abel's Apple Acres |
|  |  |  | Goldbud Farms |
|  |  |  | USFS Genetics and Work Center |
|  |  |  | Pine-O-Mine |
|  |  |  | Grace Parrott Wine |
| N. Canyon Rd. | Carson Rd. to Slab Creek Rd. | 3, 10 | Duppeti Farms |
|  |  |  | Hill Side Tree Farm |
|  |  |  | El Dorado Orchards |
|  |  |  | Sun Mountain Farm |
|  |  |  | Bavarian Hills Orchard \& Restaurant |
|  |  |  | Kids Inc. |
|  |  |  | Apple Pantry |
|  |  |  | Stone's Throw Winery |
| N. Canyon Rd. | Slab Creek Rd. to Larsen Dr. | 1, 5, 8 | Goyette's N. Canyon Ranch |
| Larsen Dr. | N. Canyon Rd. to Barkley Rd. |  | Indian Rock Tree Farm |
|  |  |  | Argyres Orchard |
|  |  |  | Mother Lode Orchards |
|  |  |  | Larsen Apple Barn |
|  |  |  | Rainbow Orchards |
| Larsen Dr. | Barkley Rd. to Carson Rd. | 1, 8 | Primus Winery |
|  |  |  | Camino Coffee Shop |
|  |  |  | SPI Lumber Mill |
| Carson Rd. | Larsen Dr. to Camino interchange | 1, 6, 8 | SPI Lumber Mill |
|  |  |  | Fire Station 21 |
| Carson Rd. | Camino interchange to Carson interchange | 8 | Colson / El Dorado Wines |
|  |  |  | Mountain Pizza |
|  |  |  | Gas Station / Convenience Store |

Table D-1: Businesses and Organizations Located along the Alternative Transportation Routes

| Roadway | Segment | Alternatives Involved | Businesses and Organizations Located Along Roadway |
| :---: | :---: | :---: | :---: |
|  |  |  | Crystal Basin Cellars |
|  |  |  | Snowline Hospice |
|  |  |  | $7{ }^{\text {th }}$ Day Adventist Church |
|  |  |  | Auriga, Findleton, Illuminare Wineries |
|  |  |  | Apple Mt. Golf Resort |
|  |  |  | Jodar Vineyards \& Winery |
|  |  |  | Camino Garden Center |
| New Route | Pondorado Staging Site to N. Canyon Rd., via Apple Mountain Golf Course | 11 | Jodar Vineyards \& Winery |
|  |  |  | Camino Garden Center |
|  |  |  | Apple Mt. Village Business Center |
| N. Canyon Rd. | Apple Mountain Golf Course to Slab Creek Rd. | 11 | Apple Pantry |
|  |  |  | Stone's Throw Winery |
| Carson Rd. | Carson interchange to N. Canyon Rd. | 3 | Chalet Bellevue |
|  |  |  | High Hill Ranch |
|  |  |  | Fudge Factory Farm |
|  |  |  | Cardanini's Pumpkin Patch |
|  |  |  | Madrona Vineyards |
|  |  |  | McGee Tree Farm |
|  |  |  | Carson Ridge Evergreens |
|  |  |  | Holly Grove Tree Farm |
|  |  |  | Boa Vista Orchards |
| Sierra Bianca Dr. | Carson interchange to Pondorado Rd. | 1, 2, 3, 5, 8, 9, 11 | Tesaro Gas Station |
| Pondorado Rd. | Sierra Bianca Dr. to Pondorado Staging Facility | 3, 8, 11 | Apple Mt. Village Business Center |
| Barkley Rd. | Carson Rd. to Larsen Dr. | 5 | Santa's Acres |
|  |  |  | Honey Bear Ranch |
| Carson Rd. | Larsen Dr. to Cable Rd. | 6 | Animal Hospital |
|  |  |  | Sugar Pine Inn |
|  |  |  | Camino Hotel |
|  |  |  | Green's Auto Repair |
|  |  |  | Forester Restaurant |
|  |  |  | Camino Post Office |

Table D-1: Businesses and Organizations Located along the Alternative Transportation Routes

| Roadway | Segment | Alternatives Involved | Businesses and Organizations Located Along Roadway |
| :---: | :---: | :---: | :---: |
|  |  |  | Camino Coffee Shop |
|  |  |  | Mini Storage |
|  |  |  | Camino Floral Shop |
|  |  |  | Camino Food Center |
|  |  |  | Camino Auto Works |
|  |  |  | Gold Country Reality |
|  |  |  | Swisher's Hat Store |
| Carson Rd. | Cable Rd. to Cedar Grove interchange | 2 | Camino Community Church |
| Cable Rd. | Carson Rd. to Mace Rd. | 2, 6 | Mill View Ranch |
|  |  |  | Plubells Family Orchard |
|  |  |  | Grandpa's Cellar |
|  |  |  | Bodhaine Ranch / Organic Pies |
|  |  |  | O'Halloran's Apple Trail Ranch |
|  |  |  | Exotic Parrots |
|  |  |  | Bill's Apples \& Felice's Dolls |
|  |  |  | Crystal Creek Tree Farm |
| Cable Rd. | Mace Rd. to Sierra Express Rd. | 2,6 | Golden Apple Ranch |
| Mace Rd. | Mace Connector to Pony Express Tr. | 9 | Marvin Larsen Ranch |
|  |  |  | DeBarttes Tree Farm |
| Pony Express Tr. | Mace Rd. to Carson Rd. | 9 | Church |
|  |  |  | Smarts Christmas Trees |
|  |  |  | Goodness Orchard |
|  |  |  | Patrick's Berry Farm |
|  |  |  | Mountain Glass and Mirrors |
|  |  |  | Floral Arrangements |
|  |  |  | Tim's Auto Repair |
| Pony Express Tr. | Pollock Pines interchange to Blair Rd. | 7 | Valero Gas Station |
|  |  |  | Pony Express Reality |
|  |  |  | Sportsman's Hall Restaurant |
|  |  |  | U Turn For Christ |
|  |  |  | Westhaven Inn |
| Badger Hill Rd. | Blair Rd. to Cable Rd. | 7 | 84 Harris Tree Farm |

Table D-1: Businesses and Organizations Located along the Alternative Transportation Routes

| Roadway | Segment | Alternatives Involved | Businesses and Organizations <br> Located Along Roadway |
| :--- | :--- | :--- | :--- |
|  |  |  | Ghost Mountain Resort |

Source: SMUD, September 2007.

## Appendix E-IHJAC Transit Matrix




[^0]:    ${ }^{1}$ Iowa Hill is a geographic feature near the town of Camino, which is not related to the town of Iowa Hill, located near the town of Auburn on Interstate 80.

[^1]:    2 Slab Creek Road crosses two privately owned parcels in addition to land owned by SMUD and federal land managed by the USFS. In 1964, SMUD received a right-of-way grant from each private property owner for a perpetual 60 -foot-wide right-of-way and easement for construction, reconstruction, operation, and maintenance and use of a road on the property. In 1966, each right-of-way was revised whereby the property owner agreed that SMUD could also allow the general public to use the road (Grant of Right of Way dated June 23, 1966, recorded at Book 794, page 268 in the Land Department Files of El Dorado County, California).
    Iowa Hill Pumped-storage Development Transportation Route Technical Report
    01/30/2008

[^2]:    Iowa Hill Pumped-storage Development Transportation Route Technical Report
    01/30/2008
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