TEHACHAPI
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# NEGATIVE DECLARATION

## STATE, COUNTY AND LOCAL AGENCY REVIEW

The City of Tehachapi Planning Department has prepared a Negative Declaration for the project identified below. As mandated by State law, the minimum public review period for this document is 30 days. The comment period for this document closes on March 10, 2015.

| | |
|---|---|
| **Project Title:** | City of Tehachapi Event Center and Rodeo Grounds |
| **Project Location:** | North and adjacent to the Tehachapi Municipal Airport, south and adjacent to SR 58, west and adjacent to Dennison Road. |
| **Project Description:** | A 77-acre event center consisting of the following breakdown; existing rodeo grounds, 7-acre motocross track, 15,000 sf banquet hall, 4,000 sf picnic shelter, 80,000 sf covered arena, 2,000 sf office/green room, 1,500 sf restrooms/concessions, 1-acre horse warm up arena, 6-acre parks/open space, 6-acre green buffer/planting, multi-use trail, performance area, water feature, and 16.5 acres to accommodate 1,100 parking spaces. |

For further information, please contact David James, Community Development Director at (661) 822-2200 ext. 119.

# DISTRIBUTION LIST

Tehachapi Event Center & Rodeo Grounds

**Local Agencies**

1._____Tehachapi Unified School Dist.
2._X__City of Tehachapi Police Dept.
3._X__Tehachapi Cummings County Water Dist.
4._X__Tehachapi Recreation & Parks Dist.
5._____Tehachapi Hospital
6._X__Benz Sanitation
7._X__Kern County Library-Tehachapi Branch
8._____Brighthouse Cable
9._X__Southern California Edison
10._X__Southern California Gas Company
11.____SBC Telephone Planning Dept.
12.____Tehachapi Resource Conservation Dist.
13.____Local Agency Formation Commission
14._X__City of Tehachapi Public Works Dept.
15._X__City of Tehachapi Engineer
16._X__City of Tehachapi Airport Dept.
17.____Other

**Kern County Agencies**

1._____Kern County Water Agency
2._X__Kern County Fire Dept.
3._____Kern County Sheriff's Dept. (Kelly Allred-Tract Maps)
4._X__Kern County Sheriff's Dept.
5._____Kern County Agriculture Commissions Office
6._____Kern Council of Government
7._____Kern County Public Works & Roads Dept.
8._____Kern County Building Dept.
9._X__Kern County Office of Planning
10._X__Kern County Environmental Health Dept.
11._X__Kern County Waste Management Dept.
12.____Air Pollution Control Dist.
13.____Other

**State/Federal**

1._X__State Office of Planning & Research/State Clearing House
2._____Soil conservation Service, US Dept. of Agriculture
3._X__Supervisor Zack Scrivner
4._X__CalTrans District 9 – Gayle Rosander
5._X__Native American Heritage Council of Kern County
6._X__California Regional Water Quality Control Board
7._X__California Department of Fish and Game
8._X__Southern San Joaquin Arch Information Center
9._____Fish and Wildlife
10.____Soil Conservation Service
11._X_U.S. Army Corps of Engineers
12._X_Native American Heritage League

**Other**

1._____Audobon Society-Sacramento
2._X__Sierra Club
3._X_ CalTrans Aeronautical Division
4._X__Federal Aviation Administration
5._X__County of Kern Department of Airports
6._X__TRA Environmental Sciences, Inc.
7._X__Harold Williams Kawaiisu Rep.

Date Mailed 2/4/2015

TEHACHAPI
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# City of Tehachapi
# 115 South Robinson Street
# Tehachapi, California 93561

TO WHOM IT MAY CONCERN:

Pursuant to California Environmental Quality Act of 1970 (CEQA), State EIR Guidelines, and the Regulations Governing the Evaluation of Project and the Preparation of Environmental Statements in the City of Tehachapi, the Responsible Official has made an Initial Study of possible environmental impacts of the following described project:

| | |
|---|---|
| APPLICANT: | City of Tehachapi<br>115 South Robinson Street<br>Tehachapi, CA 93561 |
| PROJECT DESCRIPTION: | A 77-acre Event Center consisting of the following breakdown; existing rodeo grounds, 7-acre motocross track, 15,000 sf banquet hall, 4,000 sf picnic shelter, 80,000 sf covered arena, 2,000 sf office/green room, 1,500 sf restrooms/concessions, 1-acre designated for 24 RV parking sites, 1-acre designated for 24 horse stalls, 1-acre horse warm up arena, 6-acre parks/open space, 6-acre green buffer/planting, multi-use trail, performance area, water feature, 16.5-acres to accommodate 1,100 parking spaces and various passive landscape treatments. |
| LOCATION: | The site is located north and adjacent to the Tehachapi Municipal Airport, south and adjacent to SR 58, west and adjacent to Dennison Road. |
| APN: | 223-030-11 and 415-012-20 |
| MITIGATION MEASURES: | <u>Cultural Resources/Archeological Resources</u><br>There are three cultural resource sites on prominent hill feature known as the Tehachapi "rock" preliminarily identified during the pedestrian survey, which should be avoided during all Event Center development and earth-disturbing activities. Prior to planned activities these resources should be formally recorded and proper documentation should be completed.<br><br><u>Biological Resources</u><br>Prior to any grading activity on site, a wetland delineation will need to be completed and verified by U.S. Army Corps of Engineers (USACE) to determine if wetlands and waters of the Unites States are present on site.<br><br><u>Geological/Seismicity</u><br>A Geo-Technical report shall be submitted for all areas slated for structures for human occupancy. |

Hydrology/Drainage
Storm water runoff will be required to be controlled during the construction phase.

Air Quality
The contractor shall comply with the Kern County Air Pollution Control District requirements to address short term construction related dust control and long term operational related fugitive dust impacts.

Airport Compatibility
Any future street lighting or security lighting shall meet the Dark Sky technology criteria in terms of light and glare.

FINDINGS: It has been found that said project will not have a significant effect on the environment and that an Environmental Impact Report (EIR) is therefore not required pursuant to CEQA.

Any person may object to dispensing with such EIR or respond to the findings contained in the Initial Study a copy of said Initial Study and other information relating to the proposed project are on file in the office of the Community Development Department, Tehachapi City Hall located at 115 South Robinson Street, Tehachapi, California, (661) 822-2200 ext. 119. Any person desiring to examine same or to obtain a copy of the Initial Study or this document, or seek information as to the time and manner to so object or respond, may do so by inquiring at said office during regular working hours.

A copy of the Initial Study; is attached hereto.

DAVID JAMES, Community Development Director

AGENCY CONSOLATION REQUIRED: X Yes _____ No

AGENCIES CONSULTED: Caltrans District 9, Tehachapi Public Works Department, Tehachapi City Engineer, Tehachapi Airport Manager

STATE CLEARING HOUSE NUMBER: N/A

INITIAL STUDY PREPARED BY: David James

DATE POSTED:

## Environmental Checklist Form

| | | |
|---|---|---|
| 1. | Project Title: | Tehachapi Event Center and Rodeo Grounds |
| 2. | Lead Agency Name and Address: | City of Tehachapi<br>115 South Robinson Street<br>Tehachapi, CA 93561 |
| 3. | Contact Person and Phone Number: | David James<br>(661) 822-2200 ext. 119 |
| 4. | Project Location: | The site is located north and adjacent to the Tehachapi Municipal Airport, south and adjacent to SR 58 and west of Dennison Road. (APN: 223-030-11, 415-012-20) |
| 5. | Applicant: | City of Tehachapi |
| 6. | General Plan Designation: | Tehachapi Municipal Airport Master Plan |
| 7. | Zoning: | Tehachapi Municipal Airport Special District 1 (SD-1) |
| 8. | Project Description: | A 77-acre Event Center consisting of the following breakdown; existing rodeo grounds, 7-acre motocross track, 15,000 sf banquet hall, 4,000 sf picnic shelter, 80,000 sf covered arena, 2,000 sf office/green room, 1,500 sf restrooms/concessions, 1-acre designated for 24 RV parking sites, 1-acre designated for 24 horse stalls, 1-acre horse warm up arena, 6-acre parks/open space, 6-acre green buffer/planting, multi-use trail, performance area, water feature, 16.5-acres to accommodate 1,100 parking spaces and informal landscape treatments |
| 9. | Surrounding Land Uses and Setting: | North: SR 58<br>South: Tehachapi Municipal Airport<br>West: Airport Runway<br>East: Benz Sanitation |
| 10. | Other agencies whose approval is required: | City Building Department, City Engineer, Tehachapi Municipal Airport/Airport Manager, City Public Works Department |

**Environmental Factors Potentially Affected:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as indicated by the checklist on the following pages.

| | | |
|---|---|---|
| ☐ Land Use and Planning | ■ Transportation/Circulation | ■ Public Services |
| ☐ Population and Housing | ■ Biological Resources | ■ Utilities and Service Systems |
| ■ Geophysical | ☐ Energy and Mineral Resources | ☐ Aesthetics |
| ■ Water | ☐ Hazards | ■ Cultural Resources |
| ■ Air Quality | ■ Noise | ☐ Recreation |
| ■ Airport Compatibility | ☐ Mandatory Findings of Significance | |

**Determination:**

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. ■

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

Signature of Community Development Director

2/4/2015
Date Sent Out For Review

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| Would the proposal result in potential impacts involving: | | | | |
| Land or Mudslides? | ☐ | ☐ | ☐ | ■ |
| **I. LAND USE AND PLANNING.** | | | | |
| Would the proposal: | | | | |
| a) Conflict with general plan designation or zoning? | ☐ | ☐ | ☐ | ■ |
| b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project? | ☐ | ☐ | ☐ | ■ |
| c) Be incompatible with existing land use in the vicinity? | ☐ | ☐ | ☐ | ■ |
| d) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)? | ☐ | ☐ | ☐ | ■ |
| e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community? | ☐ | ☐ | ☐ | ■ |
| **II. POPULATION AND HOUSING.** | | | | |
| Would the proposal: | | | | |
| a) Cumulatively exceed official regional or local population projections? | ☐ | ☐ | ☐ | ■ |
| b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure? | ☐ | ☐ | ☐ | ■ |
| c) Displace existing housing, especially affordable housing? | ☐ | ☐ | ☐ | ■ |
| **III. GEOLOGICAL PROBLEMS.** | | | | |
| Would the proposal result in or expose people to potential impacts involving: | | | | |
| a) Fault rupture? | ☐ | ☐ | ☐ | ■ |
| b) Seismic ground shaking? | ☐ | ■ | ☐ | ☐ |
| c) Seismic ground failure, including liquefaction? | ☐ | ■ | ☐ | ☐ |
| d) Seich, Tsumani, or volcanic hazard? | ☐ | ☐ | ☐ | ■ |

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| e) Landslides or mudflows? | ☐ | ☐ | ☐ | ■ |
| f) Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill? | ☐ | ☐ | ■ | ☐ |
| g) Subsidence of the land? | ☐ | ☐ | ☐ | ■ |
| h) Expansive soils? | ☐ | ■ | ☐ | ☐ |
| i) Unique geologic or physical features? | ☐ | ☐ | ☐ | ■ |
| **IV. WATER.** | | | | |
| Would the proposal result in: | | | | |
| a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff? | ☐ | ☐ | ■ | ☐ |
| b) Exposure of people or property to water related hazards such as flooding? | ☐ | ☐ | ■ | ☐ |
| c) Discharge into surface water or other alteration of surface water quality e.g. temperature, dissolved oxygen or turbidity)? | ☐ | ☐ | ☐ | ■ |
| d) Changes in the amount of surface water in any water body? | ☐ | ☐ | ☐ | ■ |
| e) Changes in currents, or the course or direction of water movements? | ☐ | ☐ | ■ | ☐ |
| f) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability? | ☐ | ☐ | ■ | ☐ |
| g) Altered direction or rate of flow of groundwater | ☐ | ☐ | ☐ | ■ |
| h) Impacts to groundwater quality? | ☐ | ☐ | ■ | ☐ |
| i) Substantial reduction in the amount of groundwater otherwise available for public water supplies? | ☐ | ☐ | ■ | ☐ |
| **V. AIR QUALITY.** | | | | |
| Would the proposal: | | | | |
| a) Violate any air quality standard or contribute to an existing or projected air quality violation? | ☐ | ☐ | ☐ | ■ |

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Expose sensitive receptors to pollutants? | ☐ | ■ | ☐ | ☐ |
| c) Alter air movement, moisture, or temperature, or cause any change in climate? | ☐ | ☐ | ☐ | ■ |
| d) Create objectionable odors? | ☐ | ☐ | ☐ | ■ |
| **VI. TRANSPORTATION/CIRCULATION.** Would the proposal result in. | | | | |
| a) Increased vehicle trips or traffic congestion? | ☐ | ☐ | ■ | ☐ |
| b) Hazards to safety from design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | ☐ | ☐ | ☐ | ■ |
| c) Inadequate emergency access or access to nearby users? | ☐ | ☐ | ☐ | ■ |
| d) Insufficient parking capacity on-site or off-site? | ☐ | ☐ | ☐ | ■ |
| e) Hazards or barriers for pedestrians or bicyclists? | ☐ | ☐ | ☐ | ■ |
| f) Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | ☐ | ☐ | ☐ | ■ |
| g) Rail, waterborne or air traffic impacts? | ☐ | ☐ | ☐ | ■ |
| **VII. BIOLOGICAL RESOURCES.** Would the proposal result in impacts to: | | | | |
| a) Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)? | ☐ | ☐ | ☐ | ■ |
| b) Locally designated species (e.g. heritage trees)? | ☐ | ☐ | ☐ | ■ |
| c) Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)? | ☐ | ☐ | ☐ | ■ |
| d) Wetland habitat (e.g. marsh, riparian and vernal pool)? | ☐ | ■ | ☐ | ☐ |
| e) Wildlife dispersal or migration corridors? | ☐ | ☐ | ☐ | ■ |
| **VIII. ENERGY AND MINERAL RESOURCES.** Would the proposal: | | | | |
| a) Conflict with adopted energy conservation plans? | ☐ | ☐ | ☐ | ■ |

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Use non-renewable resources in a wasteful and inefficient manner? | ☐ | ☐ | ☐ | ■ |
| c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State? | ☐ | ☐ | ☐ | ■ |
| **IX. HAZARDS.** | | | | |
| Would the proposal involve. | | | | |
| a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)? | ☐ | ☐ | ☐ | ■ |
| b) Possible interference with an emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ■ |
| c) The creation of any health hazard or potential health hazards? | ☐ | ☐ | ☐ | ■ |
| d) Exposure of people to existing sources of potential health hazards? | ☐ | ☐ | ☐ | ■ |
| e) Increased fire hazard in areas with flammable brush, grass, or trees? | ☐ | ☐ | ☐ | ■ |
| **X. NOISE.** | | | | |
| Would the proposal result in: | | | | |
| a) Increases in existing noise levels? | ☐ | ☐ | ■ | ☐ |
| b) Exposure of people to severe noise levels? | ☐ | ☐ | ■ | ☐ |
| **XI. PUBLIC SERVICES.** | | | | |
| Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas: | | | | |
| a) Fire protection? | ☐ | ☐ | ■ | ☐ |
| b) Police protection? | ☐ | ☐ | ■ | ☐ |
| c) Schools? | ☐ | ☐ | ☐ | ■ |
| d) Maintenance of public facilities, including roads? | ☐ | ☐ | ■ | ☐ |
| e) Other governmental services? | ☐ | ☐ | ■ | ☐ |

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XII. UTILITIES AND SERVICE SYSTEM.** Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities: | | | | |
| a) Power or natural gas? | ☐ | ☐ | ☐ | ■ |
| b) Communications systems? | ☐ | ☐ | ☐ | ■ |
| c) Local or regional water treatment or distribution facilities? | ☐ | ☐ | ■ | ☐ |
| d) Sewer or septic tanks? | ☐ | ☐ | ■ | ☐ |
| e) Storm water drainage? | ☐ | ☐ | ■ | ☐ |
| f) Solid waste disposal? | ☐ | ☐ | ■ | ☐ |
| g) Local or regional water supplies? | ☐ | ☐ | ■ | ☐ |
| **XIII. AESTHETICS.** Would the proposal: | | | | |
| a) Affect a scenic vista or scenic highway? | ☐ | ☐ | ☐ | ■ |
| b) Have a demonstrable negative aesthetic effect? | ☐ | ☐ | ☐ | ■ |
| c) Create light or glare? | ☐ | ☐ | ■ | ☐ |
| **XIV. CULTURAL RESOURCES.** Would the proposal. | | | | |
| a) Disturb paleontological resources? | ☐ | ☐ | ☐ | ■ |
| b) Disturb archaeological resources? | ☐ | ■ | ☐ | ☐ |
| c) Affect historical resources? | ☐ | ☐ | ☐ | ■ |
| d) Have the potential to cause a physical change which would affect unique ethnic cultural values? | ☐ | ☐ | ☐ | ■ |
| e) Restrict existing religious or sacred uses within the potential impact area? | ☐ | ☐ | ☐ | ■ |
| **XV. RECREATION.** Would the proposal. | | | | |
| a) Increase the demand for neighborhood or regional parks or other recreational facilities? | ☐ | ☐ | ☐ | ■ |
| b) Affect Existing recreational opportunities? | ☐ | ☐ | ☐ | ■ |

| Issues: | Potentially Significant Impact | Negative Declaration Significant Unless Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XVI. MANDATORY FINDINGS OF SIGNIFICANCE.** | | | | |
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ■ | ☐ | ☐ |
| b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | ☐ | ☐ | ☐ | ■ |
| c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects) | ☐ | ☐ | ☐ | ■ |
| d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☐ | ■ |

**NARRATIVE DISCUSSION OF ENVIRONMENTAL IMPACTS REGARDING TEHACHAPI EVENT CENTER AND RODEO GROUNDS**

## A. EARTH

The soil underlying the project area is predominately Havala Sandy Loam. This soil type is commonly found in the Tehachapi region and can be characterized as a well-drained alluvial soil. It is brown and grayish brown, sandy loam underlain by dark brown and yellowish brown sandy clay loam subsoil. Permeability of Havala soil is moderately slow, and its erosion hazard is moderate. Havala soils exhibit few development constraints and the Event Center is not a development in the conventional source. The most significant amount of "earth work" associated with the Event Center will be in the establishment of the Motocross track facility. The most common issue associated with soil types and characteristics has to do with soil stabilization in terms of the soils ability to support a structure. Issues such as expansion and construction or liquefaction could ultimately undermine the structural integrity of a building. However, a Motocross track is not a structure in this sense of the word and as such it is not anticipated that a geotechnical study will be required prior to the creation of the motocross track facility. Conventional watering and heavy equipment compaction techniques will be adequate to provide long term soil stabilization. The Event Center will also include a smattering of buildings for human occupancy such as restrooms, at least one multiple use building/banquet hall, and an administrative building. These structures are for human habitation and as such a technical report such as a geological study will be required prior to construction. Based upon the results of this report the soil underlying these structures may require some degree of over excavation and recompaction particularly if liquefiable and/or expansive soil condition are present. With respect to the parking areas and travel ways, these areas identified on the site plan will not be paved but rather surface with an all-weather permeable materials such as decomposed granite, gravel or cobble will be applied. There is a relatively prominent hill located in the approximate center of the subject site. The area commonly referred to as the "The Rock Pile" will be left in an open space condition. Therefore other than the above The Rock Pile reference, the project area does not appear to exhibit any unique geological features or topographic relief that would present a constraint to developing the Event Center as envisioned. (Please see the Vicinity Map at Attachment A for location detail)

## B. TRAFFIC/CIRCULATION

The proposed Event Center and Rodeo Grounds currently supports an arena that is utilized at various times throughout the year to host a variety of rodeo and equestrian events. In addition, the project at build out will include enhancements to the existing arena, in addition to the constructing of an additional arena intended to be covered, concession areas, banquet hall, parks, greenbelts, picnic facilities, motocross track, R.V. parking and parking lots. (Please see Attachment B (Site Plan) and Tehachapi Event Center & Rodeo Grounds Master Plan as Appendix A for details). At build out, the facility will be able to accommodate considerably larger events and more diversified events than the facility in its current condition can accommodate. In its current condition and utilization the facility generates minimal traffic and the areas circulation network with the assistance of human traffic control can accommodate the ebb and flow of event related traffic to and from the facility. However, at build out the facility will have a considerable increase in attendee event capacity and increase in the intensity of events, number of events, variety of events and frequency of events. This transition from an exclusively low key equestrian and rodeo facility to a full service diversified Event Center will have a corresponding and potentially significant increase in Event Center related traffic.

In terms of immediate access and circulation, until recently the only access to the facility was from Dennison Road by way of Tehachapi Boulevard. At the intersection of Tehachapi Boulevard and Dennison Road vehicles could be directed south, east or west and as such the disbursement of traffic exiting the facility was relatively manageable with temporary human traffic control present. At the conclusion of an event of significance all traffic had to pass through the four (4) way intersection of Tehachapi Boulevard and Dennison Road. On October 30, 2014 the Challenger Drive extension officially opened providing the residents and businesses in the area with a secondary point of ingress and egress extending from Dennison Road to essentially the Mill Street overpass and Highway 58 east and west bound on and off

ramps. This improvement can be characterized as a local improvement but the extension of Challenger Drive will never-the-less have regional implications. From a circulation perspective the Challenger extension will provide Event Center attendees with a secondary means of accessing the facility and perhaps more importantly a secondary means of distributing traffic at the conclusion of a major event. The extension of Challenger Drive is not a mitigation measure per-se relative to the build out of the Event Center. However, the Challenger Drive extension will certainly create a mitigating circumstance relative to providing multiple means of accessing the Event Center facility and exiting the Event Center facility.

The build out of the Event Center could accommodate in a single event of up to 4,000 attendees which as previously indicated is considerably more than the facility's current capacity. Major events will most likely not overlap however there may be some ancillary activity that occurs concurrent with a major activity such as a concert. Unlike conventional land uses that generate daily traffic on a rather consistent and predictable basis and have consistent impacts associated with peak hour traffic, traffic associated with the Event Center will typically occur in association with major events or as single impetus occurrences. Additionally, these occurrences can be characterized as peak hour occurrences. However, unlike conventional land uses whereby the peak hour occurs on a daily and predictable basis the peak hour associated with the Event Center will be rather unpredictable and sporadic. However, given the nature of the Event Center the peak period will most likely occur on Friday nights and Saturday mid-day and Saturday evenings and these three (3) time segments can in their own right be characterized as "Peak Periods" for purposes of assessing the Event Center's impact on area circulation.

Given the potential for increased traffic generation associated with an Event Center build out scenario nine (9) major intersections were analyzed in the traffic study included herein as Appendix B to determine the extent to which the Event Center during the course of a major event could impact said intersections to a measurable degree. The intersections in the study area are enumerated below.

1. Dennison Road/East Tehachapi Boulevard
2. Dennison Road/Valley Boulevard
3. SR-58 Eastbound Ramps/East Tehachapi Boulevard
4. SR-58 Westbound Ramps/East Tehachapi Boulevard
5. Mill Street/SR-58 Westbound Ramps
6. Mill Street/SR-58 Eastbound Ramps
7. Tucker Road/East Tehachapi Boulevard
8. Tucker Road/Valley Boulevard
9. Curry Road/Tehachapi Boulevard

Peak hour Event Center operations were analyzed for short term impacts associated with year 2018 with and without the "project" and long term impacts, year 2035 with and without project scenarios. This methodology provides a comparison of the impact future growth will have on these intersections in the absence of the Event Center and the Event Center's specific and incremental impact contribution to the selected intersections.

The baseline measurement in terms of the acceptable functionality of a given intersection is measured by the Level of Service (LOS) index. An LOS of C or better (non-peak period) and LOS D (peak period) is typically an acceptable condition and represents a free flow of traffic with only acceptable delays and congestion levels. All of the study intersections in their current condition operate at a LOS of C or better and are anticipated to continue to operate a LOS C or better under the short term 2018 scenario in the absence of the Event Center as illustrated in Table 1 below.

Table 1
Short Term (2018)
No Project Scenario
Intersection LOS

| ID | Intersection | Peak Hour | LOS |
|---|---|---|---|
| 1 | Dennison Rd/Tehachapi Blvd. | FRI PM | B |
| | | SAT MID | A |
| | | SAT PM | A |
| 2 | Dennison Rd/Valley Blvd. | FRI PM | A |
| | | SAT MID | A |
| | | SAT PM | A |
| 3 | SR-58 EB Ramps/Tehachapi Blvd. | FRI PM | B |
| | | SAT MID | B |
| | | SAT PM | A |
| 4 | SR-58 WB Ramps/Tehachapi Blvd. | FRI PM | C |
| | | SAT MID | B |
| | | SAT PM | B |
| 5 | Mill St/SR-58 WB Ramps | FRI PM | B |
| | | SAT MID | B |
| | | SAT PM | A |
| 6 | Mill St/SR-58 EB Ramps | FRI PM | B |
| | | SAT MID | A |
| | | SAT PM | A |
| 7 | Tucker Rd/Tehachapi Blvd. | FRI PM | C |
| | | SAT MID | C |
| | | SAT PM | C |
| 8 | Tucker Rd/Valley Blvd. | FRI PM | C |
| | | SAT MID | C |
| | | SAT PM | C |
| 9 | Curry St/Tehachapi Blvd. | FRI PM | C |
| | | SAT MID | B |
| | | SAT PM | A |

Source: AECOM, 2014

Short term year 2018 anticipated conditions also revealed that all intersections within the study area will continue to operate at an acceptable condition under a with project scenario as illustrated in Table 2 below.

Table 2
Short Term (2018)
With Project Scenario
Intersection LOS

| ID | Intersection | Peak Hour | 2018 No Project LOS | 2018 Plus Project LOS | Significant Impact? |
|---|---|---|---|---|---|
| 1 | Dennison Rd/Tehachapi Blvd. | FRI PM | B | C | N |
| | | SAT MID | A | B | N |
| | | SAT PM | A | B | N |
| 2 | Dennison Rd/Valley Blvd. | FRI PM | A | A | N |
| | | SAT MID | A | A | N |
| | | SAT PM | A | A | N |
| 3 | SR-58 EB Ramps/Tehachapi Blvd. | FRI PM | B | B | N |
| | | SAT MID | B | B | N |
| | | SAT PM | A | A | N |
| 4 | SR-58 WB Ramps/Tehachapi Blvd. | FRI PM | C | C | N |
| | | SAT MID | B | B | N |
| | | SAT PM | B | B | N |
| 5 | Mill St/SR-58 WB Ramps | FRI PM | B | B | N |
| | | SAT MID | B | B | N |
| | | SAT PM | A | A | N |
| 6 | Mill St/SR-58 EB Ramps | FRI PM | B | B | N |
| | | SAT MID | A | B | N |
| | | SAT PM | A | A | N |
| 7 | Tucker Rd/Tehachapi Blvd. | FRI PM | C | C | N |
| | | SAT MID | C | C | N |
| | | SAT PM | C | C | N |
| 8 | Tucker Rd/Valley Blvd. | FRI PM | C | C | N |
| | | SAT MID | C | C | N |
| | | SAT PM | C | C | N |
| 9 | Curry St/Tehachapi Blvd. | FRI PM | C | C | N |
| | | SAT MID | B | B | |
| | | SAT PM | A | A | |

Source: Aecom, 2014

However, under the long term 2035 build out scenario five (5) of the nine (9) intersections evaluated will experience an LOS of less than C under either a with project or without project scenario . These intersections are enumerated below and illustrated on Table 3.

1. Dennison Road/Tehachapi Boulevard
2. SR 58 Westbound Ramps/Tehachapi Boulevard
3. Tucker Road/Tehachapi Boulevard
4. Tucker Road/Tehachapi Boulevard
5. Curry Street/Tehachapi Boulevard

Table 3
Long Term (2035)
Within Project and Without Project Scenarios
Intersection LOS

| ID | Intersection | Peak Hour | 2035 No Project LOS | 2035 Plus Project LOS | Significant Impact? |
|---|---|---|---|---|---|
| 1 | Dennison Rd/Tehachapi Blvd. | FRI PM | B | F | Y |
| | | SAT MID | A | F | Y |
| | | SAT PM | A | F | Y |
| 2 | SR-58 WB Ramps/Tehachapi Blvd. | FRI PM | C | F | Y |
| | | SAT MID | B | F | Y |
| | | SAT PM | B | D | Y |
| 3 | Tucker Rd/Tehachapi Blvd. | FRI PM | C | D | Y |
| | | SAT MID | C | E | Y |
| | | SAT PM | C | C | Y |
| 4 | Tucker Rd/Valley Blvd. | FRI PM | C | E | Y |
| | | SAT MID | C | E | Y |
| | | SAT PM | C | C | Y |
| 5 | Curry St/Tehachapi Blvd. | FRI PM | C | F | Y |
| | | SAT MID | B | E | Y |
| | | SAT PM | A | C | Y |

Source: Aecom, 2014

It is important to note that of the above referenced five (5) impacted intersections only the intersection of Dennison Road and Tehachapi Boulevard in the long term 2035 scenario will fall below an LOS C as a direct result of the Event Center. In this regard in the absence of the Event Center build out the intersection for Dennison Road/Tehachapi Boulevard in the 2035 scenario would continue to operate at an acceptable LOS. Given that the anticipated reduction in LOS for the Dennison Road/Tehachapi Boulevard intersection is not in response to future growth in general but entirely in response to the build out of the event Center and will only occur in direct response to a major single impetus event. Under this condition no permanent solution such as a signal light is needed to maintain an acceptable LOS. Under this set of circumstances the mitigation can be implemented on an event by event basis through a temporary human traffic control strategy.

As illustrated above in Table 3 all but the intersection of Dennison Road/Tehachapi Blvd will drop below an acceptable LOS in response to regional incremental growth overtime. The Event Center under a build out scenario will contribute to this condition but is not solely responsible for the drop in LOS as concluded in the Dennison Road/Tehachapi Boulevard

example. Therefore all but the intersection of Dennison Road/Tehachapi Boulevard will require a permanent mitigation measure and cannot rely on an event by event mitigation strategy. Additionally, these intersections are too numerous and too far removed from the Event Center for an event by event temporary mitigation strategy to be effective and/or practical. Therefore, the improvements needed on all but the intersection of Dennison Road/Tehachapi Boulevard are required to be permanent solutions in response to regional growth pressure, rather than the exclusive responsibility of the Event Center related traffic.

On July 3, 2006 the City of Tehachapi in cooperation with the County of Kern adopted the Tehachapi Region Transportation Impact mechanism. This mechanism acknowledges the regional impacts that will occur overtime to 60 critical intersections of regional importance. The improvements/mitigation measures needed to bring the above referenced impacted intersections up to an acceptable LOS to accommodate the 2035 (Long Term) with and without project growth scenarios are incorporated onto the Tehachapi Regional Transportation Impact Fee mechanism. The City of Tehachapi's creation and implementation of the Tehachapi Regional Transportation Impact Fee mechanism provides the comprehensive mitigation solution needed to insure that the above referenced intersections receive adequate improvements to function at an acceptable level. The traffic study prepared by AECOM in association with this document made the following conclusionary statement:

> "Based on the results of the level of service analysis, and with the proposed mitigation measures, the proposed Event Center & Rodeo Grounds project can be both constructed and implemented without significantly impacting any of the study area intersections under Short-Term (2018) and Long-Term (2035) conditions."
> Source: Aecom, 2014

## C. NOISE

As previously indicated the City of Tehachapi is proposing improvements to the Tehachapi Event Center and Rodeo Grounds (Event Center) in order to expand the quality of the existing facility and to add additional venues to the facility. Currently the subject site supports a rodeo arena which has been at this location since the 1950's. The existing rodeo arena has seen significant improvements in recent history in terms of the functionality of the arena and the seating capacity of the arena. In terms of new venues the project includes the incorporation of an additional covered arena, a multi-purpose/banquet room and facility, a motocross track an area for R.V. parking. Some of the enhancements will be improved ingress/egress, public parking and overall improvements to the internal circulation system. A CEQA document has been developed to evaluate potential environmental issues associated with the expansion and improvements of this existing facility. One of the improvements that surfaced in conjunction with the initial environmental assessment was the potential for noise impacts to residential enclaves located to the south of the Event Center and to the east of the Event Center. These residential enclaves can be characterized as sensitive land use and are close enough to the subject site to warrant an evaluation of the potential for impacts associated with the construction phase of the Event Center (short term impacts) and the operational phase of the Event Center (long term impacts).

As suggested in the Environmental Noise Impact Assessment contained herein as Appendix C. Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources, such as an occasional aircraft or train passing by to virtually continuous noise sources such as traffic on a major highway. Table 1 illustrates representative noise levels in the environment.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people is largely dependent upon the total acoustic energy content of the noise, as well as the time of day when the noise occurs. When evaluating changes in community noise levels, a difference of 3 dBA is a barely perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness.

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and reflecting or shielding, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 exterior-to-exterior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer homes and office building is generally more than 30 dBA.

As previously indicated the improvements anticipated for the Event Center will produce potential impacts associated with the construction phase of the project (short term impacts) and the implementation phase of the project (long term or operational impacts). The following impact analysis and narrative has been divided into two (2) subsections corresponding to the short and long term impact scenarios.

**Construction Related Noise Impacts**

As previously indicated the Tehachapi Event Center and Rodeo Grounds (Event Center) is an existing facility that hosts a variety of rodeo and equestrian related activities throughout the year. However, the Event Center Master Plan will introduce some new venues into the facility and make various improvements in terms of ingress, egress parking and general circulation. In this regard the subject site is not a clean slate so to speak and as such the purpose of this environmental document is to evaluate the impact the anticipated change or intensification of the Event Center will have on a variety of issues including noise.

Evaluating a noise impact and determining the degree of impact is only part of the equation. The noise condition or impact, if you will, must also be evaluated against a set of standards or thresholds to determine if the impact is inconsequential or less than significant or consequential and therefore represents a significant impact. With respect to the noise sources and impacts associated with the operational phase of the project, in general Appendix G of the State CEQA Guidelines states a project could have a potentially significant impact associated with noise of any of the following were to occur:

(a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;

(b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

(d) A substantial temporary or periodic increase in ambient noise levels in the project above levels existing without the project;

(e) Exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two (2) miles of a public airport or public use airport; or

(f) Exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

More specifically with respect to construction related noise impact thresholds the CEQA Guidelines Appendix G Noise thresholds (a) and (d) would be most applicable when applied to noise impacts generated during and associated with construction activity. However, that stated the State CEQA Guidelines do not define the levels at which temporary or periodic increases in noise levels are considered "substantial" and in this regard local jurisdiction and agencies are given the latitude to establish their own thresholds.

The City's General Plan Noise Element has not adopted any noise standards for construction activities and associated noise levels. The City has also not adopted any thresholds of significance for construction-related noise impacts. The practice of the City with other recent CEQA analyses has been to require restrictions on the hours of construction activities and the control of construction equipment and operations to minimize the associated noise levels.

When evaluating the potential impacts of a project when thresholds of significance have not been adopted by the lead agency for the project, the analysis may consider thresholds that have been adopted by other agencies. This is particularly relevant when those other agencies have jurisdiction within the local vicinity. In the case of projects near Tehachapi, this includes the County of Kern, Caltrans, and the FTA. The regulations and policies of Kern County apply to the unincorporated areas surrounding Tehachapi. Caltrans has regulatory authority over the highways that traverse Tehachapi, and the FTA - along with Caltrans -has regulatory authority over the BNFF/UPRR railroad tracks that traverse Tehachapi.

Kern County's Noise Control Ordinance allows construction activities to take place between 6:00 a.m. and 9:00 p.m. Monday through Friday and 8:00 a.m. to 9:00 p.m. on weekends; activities scheduled for other times would be required to obtain a permit and would be subject to specific requirements from the County.

The opinion of Caltrans is that "construction noise is only substantial in exceptional cases, such as pile driving and crack and seal pavement rehabilitation operations." Section 14-08.02, Noise Control, of Caltrans standard specifications provides information that can be considered in determining whether construction would result in adverse noise impacts. The specification state:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.

- Equip an internal combustion engine with the manufacturer – recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

The FTA also provides Prescriptive Construction Noise Impact Guidelines that establish 90 dBA Leq 1hour and 80 dBA Leq 8-hour construction noise exposure thresholds for residential and other similarly sensitive uses. The FTA thresholds are used to evaluate construction noise impacts in the vicinity of Tehachapi associated with the proposed BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project.

Therefore, this analysis assumes that a significant impact would occur if 1-hour construction-related noise levels would exceed 90 dBA Leq or if 8-hour construction-related noise levels would exceed 80 dBA Leq at any off-site noise-sensitive location.

As previously indicated the Tehachapi Event Center and Rodeo Grounds is an existing facility. New venues such as a motocross track, R.V. parking spaces, permanent restrooms and banquet hall will be incorporated over time.

Additionally, the internal circulation network will be improved along with improvements to parking and to the ingress and egress opportunities over the Event Centers current condition towards making the access, parking and circulation more efficient and user friendly.

The construction activity associated with the proposed Event Center improvements will require the use of a variety of heavy equipment for site grading, site preparation and building construction. The heavy equipment will vary from each phase of construction activity. However, construction activity would only occur during the daytime between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and construction activity would not occur on Sundays and festival holidays.

Based on the Environmental Noise Impact analysis contained herein in its entirety as Appendix C. The maximum daytime noise levels that would be expected to occur (worst case scenario) as a consequence of construction activity would be approximately 70 dBA leq. This impact would not exceed the 1-hour 90 dBA Leq and 8-hour 80 dBA Leq threshold of significance as previously discussed. Therefore, the construction related noise impacts of the proposed project would be less than significant.

**Construction Related Ground – Borne Vibration Impacts**

An impact that is also associated with construction related noise is ground-borne vibration impacts. While vibration is not a noise impact per-se the two (2) issues are never-the-less related and as such vibration related impacts as it relates to construction activity were also evaluated.

In terms of impact thresholds the State CEQA Guidelines do not define the levels at which ground-borne vibration or ground-borne noise are considered "excessive." In addition, the City of Tehachapi has not adopted any thresholds for ground-borne vibration impacts. However, Caltrans has adopted the vibration standards related to construction activities. This analysis utilizes the Caltrans thresholds to evaluate the construction-related impacts of the proposed project. Therefore, this analysis assumes that a significant impact would occur if the nearby residential buildings are exposed to vibration levels of 0.3 inches per second PPV. The potential for nearby residents to be annoyed by ground-borne vibration would be significant if vibration levels reach 0.10 inches per second PPV construction activity in association with the development of the Event Center has the potential to generate low levels of ground-borne vibration. Residents located to the east of the subject site are the most sensitive uses and most likely to be impacted in terms of damage to structures or simple human annoyance. Based on the Environmental Noise Impact Analysis prepared by Cadence Environmental consultants and contained herein as Appendix C the vibration levels could reach as high as approximately 0.011 inches per second PPV within 100 feet of an operation large piece of heavy equipment such as a bulldozer. This maximum vibration level is below the aforementioned threshold of significance for both potential building damage and simple human annoyance. As such the noise study concluded that impacts associated with construction vibration would be less than significant.

**Operational Noise Impacts**

As previously indicated noise impacts associated with the Event Center will fall within one of two categories; short term construction related impacts and long term operational related impacts. The Environmental Noise Impact Analysis Utilized as the basis for this document also evaluated operational noise impacts from two (2) separate and distinct sources of noise as enumerated below:

- Roadway Noise Source Impacts
- On-Site Noise Source Impacts

The following narrative has been divided into two (2) subsets corresponding to the above referenced source of operational noise.

- **Roadway Noise Impacts**

As previously indicated the Tehachapi Event Center and Rodeo Grounds (Event Center) is on existing facilities. This document is on evaluation of various impacts including noise associated with the inclusion of various new venues within the facility in addition to improvements to the facilities entrance, circulation network public parking and ingress and egress opportunities. The changes and upgrades to the Event Center will cause a corresponding increase in traffic generation. Increase in traffic will in turn create a corresponding increase in traffic related noise impacts over the current or existing conditions.

The Environmental Noise Impact Analysis evaluated existing ambient roadway noise associated with the existing Event Center and the activities that currently occur therein and other noise sources in the area such as railway noise and the proximity of the Tehachapi Municipal Airport. All of these noise sources combine to create what can be characterized as an existing or ambient noise condition relative to the sensitive land use in proximity of the Event Center. Most notably the Ash Village residential neighborhood located along Dennison Road and east of the Event Center.

With respect to thresholds of significance CEQA Guidelines Appendix G, noise thresholds (a) and (c) would apply to the operational noise impacts generated associated with the proposed project. Threshold (a) objectively compares the project's impact with standards set by the local general plan or noise ordinance. Threshold (c) effectively asks whether the increase in ambient noise levels attributable to the project is substantial even if government standards are not exceeded. If noise does not exceed government standards, the CEQA Guidelines do not define the levels at which a permanent increase in ambient noise is considered "substantial." The determination of what quantum of noise is substantial is entrusted to the lead agency's discretion. For residential and other noise-sensitive uses, the standard within the City limits is 65 dBA CNEL.

With regard to a permanent increase in noise levels, the City has not adopted any thresholds of significance for operational noise impacts. As with the construction-related thresholds of significance discussed above, the analysis may consider thresholds that have been adopted by other agencies.

Under CEQA Guidelines Appendix G threshold (c), if the total ambient noise, with the project included, is less than the applicable standard, or if baseline noise is already above the standard, the FTA's Transit Noise and Vibration Impact Assessment manual is a useful aid in determining how much incremental noise is substantial, or how much noise is excessive, for noise-sensitive uses. The FTA developed a threshold of significance that incorporates both absolute and relative criteria that consider annoyance due to the change in the noise environment caused by the project. The FTA's threshold uses the Ldn value for noise-sensitive uses like the ones in the study are -residences and buildings where people normally sleep -which it refers to as Land Use Category 2. Ldn and CNEL both address land uses where nighttime sensitivity is a factor and the difference between the two is so slight that they are comparable to each other. As such, the FTA's thresholds are also usable for this analysis as CNEL.

The City of Tehachapi, as the lead agency, has determined that a sliding scale similar to the FTA threshold is appropriate for assessing the operational noise impact of the proposed project on noise-sensitive uses. Therefore, this analysis assumes that an increase in noise levels would be substantial and significant if any of the following thresholds are met at noise-sensitive locations:

- An increase of 3 or more dBA if the baseline (existing) exterior noise level is 56 dBA or more.
- An increase of 2 or more dBA if the baseline (existing) exterior noise level is 60 dBA or more.
- An increase of 1.5 or more dBA if the baseline (existing) exterior noise level is 65 dBA or more.
- An increase of 1 or more dBA if the baseline (existing) exterior noise level is 72 dBA or more.

- An increase of 0.5 or more dBA if the baseline (existing) exterior noise level is 75 dBA or more.
- Above 80 dBA, any increase in the baseline noise exposure is considered to be substantial and significant.

It should be noted that the City of Tehachapi has already utilized this threshold approach previously in association with the operational noise impacts assessment prepared in conjunction with the Tehachapi Walmart project.

It should also be noted the City focuses its noise control efforts on sensitive uses such as residential areas, schools, convalescent and acute care hospitals, parks, recreational areas, and churches. Both of these agencies do not consider uses such as offices and commercial buildings to be sensitive to community noise levels. Most commercial areas, such as those in the vicinity of the proposed project site, rely on traffic to bring customers and visibility from the roadways so that drivers can be aware of the commercial offerings. Therefore, the thresholds of significance identified above, only apply to sensitive receptors in the City and any potential increase in roadway noise levels at commercial uses is not considered to be significant.

With respect to the actual traffic related impacts Locations in the vicinity of the project site would experience a slight increase in noise resulting from the additional traffic generated by the proposed project and the increased activity at the project site. The changes in existing noise levels along the study-area roadway segments in the project vicinity are identified in Table 4 for standard events Fridays and Saturdays, and Table 5 for large events on Fridays and Saturdays.

As shown in Table 4, the increase in traffic noise associated with the proposed project under a standard event would not cause total exterior noise levels to exceed the 65 dBA CNEL standard at the residential uses along the Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps. Although the hotel along Mill Street north of the SR-58 ramps is a commercial use, the project under a standard event would not cause total exterior noise levels to exceed the 65 dBA CNEL standard for sensitive uses where people sleep. The maximum increase at any residential or sensitive location under a standard event would be 0.3 dBA CNEL, which would be below the applicable substantial threshold criteria. The land uses along Tehachapi Boulevard east and west of Dennison Road are commercial and the project would not cause a measurable increase in noise levels along these roadway segments under a standard event. Therefore, the impact of the proposed project on these locations would be less than significant under a standard event.

**TABLE 4 - PROJECT ROADWAY NOISE IMPACTS - STANDARD EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 58.9 | 0.2 | No | No |
| | south of Tehachapi Bl. | 62.9 | 63.0 | 0.1 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.2 | 0.0 | No | No |
| | east of Dennison Rd. | 71.3 | 71.3 | 0.0 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 52.2 | 0.2 | No | No |
| | south of SR-58 Ramps | 58.3 | 58.3 | 0.0 | No | No |

**TABLE 4 - PROJECT ROADWAY NOISE IMPACTS - STANDARD EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| **Saturday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.1 | 58.3 | 0.2 | No | No |
| | south of Tehachapi Bl. | 62.8 | 62.8 | 0.0 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.1 | 0.0 | No | No |
| | east of Dennison Rd. | 71.2 | 71.2 | 0.0 | No | No |
| Mill Street | north of SR-58 Ramps | 49.8 | 50.1 | 0.3 | No | No |
| | south of SR-58 Ramps | 57.3 | 57.3 | 0.0 | No | No |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A of the Environmental Noise Impact Analysis incorporated herein in its entirety; as Appendix C.

Source: Cadence Environmental Consultants, 2014

As shown in Table 5, the increase in traffic noise associated with the proposed project under a large event such as an outdoor concert would not cause total exterior noise levels to exceed the 65 dBA CNEL standard for residential uses and sensitive uses where people sleep at the residential uses along Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps, or the hotel along Mill Street north of the SR-58 ramps. The maximum increase at any residential or sensitive location under a large event would be 1.8 dBA CNEL, which would be below the applicable substantial threshold criteria. A large event would only cause an increase of 0.1 dBA CNEL at the commercial uses along Tehachapi Boulevard. Therefore, the impact of the proposed project on these locations would be less than significant under a large event.

**TABLE 5 - PROJECT ROADWAY NOISE IMPACTS - LARGE EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 59.6 | 0.9 | No | No |
| | south of Tehachapi Bl. | 62.9 | 63.3 | 0.3 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.2 | 0.0 | No | No |
| | east of Dennison Rd. | 71.3 | 71.3 | 0.1 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 53.3 | 1.3 | No | No |
| | south of SR-58 Ramps | 58.3 | 58.5 | 0.2 | No | No |
| **Saturday** | | | | | | |
| Dennison Road | north of Tehachapi | 58.1 | 59.2 | 1.0 | No | No |

**TABLE 5 - PROJECT ROADWAY NOISE IMPACTS - LARGE EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| | south of Tehachapi | 62.8 | 63.1 | 0.3 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.1 | 0.0 | No | No |
| | east of Dennison Rd. | 71.2 | 71.2 | 0.0 | No | No |
| Mill Street | north of SR-58 | 49.8 | 51.6 | 1.8 | No | No |
| | south of SR-58 | 57.3 | 57.5 | 0.3 | No | No |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A of the environmental Noise Impact Analysis incorporated herein in its entirety as Appendix C.

Source: Cadence Environmental Consultants, 2014

It is important to note that the large scale events that are anticipated to occur as a result of the proposed improvements will generate the greatest increase in traffic and as such represents the greatest source of increased traffic related noise against sensitive land uses in proximity to the Event Center. It is important to note that existing rodeo events already attract crowds of 3,000 to 4,000 individuals. These events can be characterized as "large scale" events. In this regard the City of Tehachapi could have dismissed this impact based on the fact that the Event Center already hosts large scale event with or without the adoption of a CEQA review. From a pragmatic perspective the modifications slatted for the Event Center in terms of improvements to the internal circulation network, parking and ingress and egress, etc., will cause these future large scale events to function more efficiently and create a more use friendly venue environment. However, these improvements are not necessarily required to accommodate and achieve a large scale event. The City elected to evaluate these noise related impacts in spite of the Event Centers existing capacity to accommodate large events in order to avoid having these issues challenged as part of the CEQA review process and being accused of creating a CEQA document that disingenuously dismisses traffic related noise as an environmental issue

- **On-Site Noise Source Impacts**

The two (2) on-site noise sources generated within the Event Center facility will be motorcycles operating at the proposed motocross track and loud speakers and sound equipment associated with the large scale events such as a concert, which would occur at the existing rodeo area which in its current condition can already be adapted to accommodate a concert. As previously indicated loud speakers and sound associated with a rodeo already occurs and as such the proposed project would result in no change associated with this source.

Unlike a concert which would occur very infrequently and periodically the proposed motocross facility represents the most consistent sources of noise within the project since the motocross track may be open on many Friday and Saturdays. In order to estimate the sound levels that could be generated at the motocross facility and effect residences located to the south and to the east of the facility sound level measurements were taken at an existing facility that is very similar to the proposed Event Center facility. Said existing facility is located in the Antelope Valley (Lancaster) and known as the AV Motoplex. Taking actual measurements was felt to be a more accurate depiction of the potential noise impacts in contrast to modeling the potential impacts. For a more detailed discussion of the actual equipment and methodology used please refer to the Environmental Noise Impact Analysis located herein as Appendix C.

The nearest homes to the proposed motocross track are located at the northern end of Mojave Road to the immediate south of Tehachapi Municipal Airport. Very little roadway traffic occurs on this roadway segment, but this area is exposed to noise levels from the airport, other nearby roadways, and the BNSF/UPRR lines. Daytime noise levels measured at this location over a 20-minute period on Saturday, November 14, 2014 averaged approximately 55 dBA Leq. The homes at this location are located at least 1,020 feet from the edge of the proposed motocross track. The sound levels measured at 100 feet from the AV Motoplex track would average approximately 49 dBA Leq at these homes. These sound levels are lower than the daytime noise levels measured at this location and would result in less than a 1.0 dBA increase in daytime noise levels. The motocross track would not operate at night, so the increase in noise levels would only occur during daytime hours. Therefore, the proposed project would not cause a substantial increase in noise levels at the homes nearest the motocross track.

The existing homes located along Dennison Road are located at least 2,540 feet from the edge of the proposed motocross track. Parts of the track would also be shielded from these homes by the tower hill that is in the approximately center of the site. Even without any reduction in noise levels from the tower hill, the sound levels measured at 100 feet from the AV Motoplex track would average approximately 41 dBA Leq at these homes. This is well below the daytime noise levels at homes and would result in less than a 1.0 dBA increase in daytime noise levels. Therefore, the proposed project would not cause a substantial increase in noise levels at the homes along Dennison Road.

An additional on-site noise source that was identified as a potential impact and evaluated in this document was sound associated with an outdoor concert event. As suggested in the Environmental Noise Impact Analysis incorporated herein as Appendix C potential noise levels associated with concert activities and events are an unknown factor due to the tremendous number of variables such as those enumerated below:

1. The type of music performed.

2. The type of sound equipment.

3. The sound levels controlled by audio technicians.

4. The actual placement of sound equipment.

However, irrespective of the above variables all concerts and music events would be sanctioned and controlled by the City of Tehachapi given that the Event Center is a City of Tehachapi owned facility. Additionally, all music events would be subject to the Tehachapi Municipal Codes Section 8.16.020, 8.16.030, 8.16.040 and 8.16.050. Under the regulations contained within the above referenced sections of the Municipal Code, amplified sound equipment can only be used between the hours of 9 a.m. and 6 p.m. of each day and the volume of sound shall be controlled such that it would be inaudible for a distance in excess of 150 feet from the exterior boundary of the Event Center. Compliance with this regulation would result in no increase noise at the newest homes.

It should be noted that future concerts/music events would be conducted at the existing rodeo arena. The arena in its current configuration and relative to seating arrangements would orientate the stage area such that the musicians and associated speakers would be facing away from the residential enclave located to the east of the subject site. This orientation would further enhance the ability of a music event and the residents in close proximity to peacefully co-exist.

Additionally, as indicated in the traffic related noise discussion it is important to note that large scale concert/music events that are anticipated to occur as a result of the proposed improvements could occur now in that the existing rodeo arena is already configured so as to accommodate a concert event. In this regard the City of Tehachapi could have dismissed this impact based on the fact that the Event Center can already accommodate a large music event in its current condition and configuration with or without a CEQA document. From a pragmatic perspective the improvements slated for the Event Center in terms of ingress/egress parking and internal circulation will allow these

events to occur more efficiently and create a more user friendly venue. However, these improvements are not necessarily required to accommodate a concert event. The City elected to evaluate the noise impact associated with a music event in spite of the Event Centers existing capacity to accommodate such an event in order to avoid having this issue challenged in conjunction with the public comment period of the CEQA process and being accused of creating a CEQA document that disingenuously dismisses concert/music events as a potential environmental issue.

Therefore based on the above information in the operational phase of the Event Center project will not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels at the residents nearest to the project.

**EXISTING CONDITIONS THAT COULD IMPACT THE EVENT CENTER**

The preceding narrative evaluated various potential noise related impacts associated with the Event Center on neighborhoods located in close proximity to the subject site. This section of the analysis evaluates existing conditions and circumstances that could impact the Event Center or be potentially incompatible with the Event Center and the uses and venues proposed therein.

**Public Airport Noise**

**Threshold**: Would the proposed project expose people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport.

**Impact**: The proposed project would not expose people residing or working in the project area to excessive noise levels within an area covered by an airport land use plan. No impact would occur.

***Impact Analysis***

The Event Center & Rodeo Grounds is located to the immediate north of Tehachapi Municipal Airport, which is a general aviation, public use airport. While noise from aircraft arrival and departures can be disruptive to noise-sensitive uses, the uses for the site are not considered to be sensitive to noise. As discussed previously, the Event Center & Rodeo Grounds is located beyond the airport's 60 dBA CNEL noise contour. As such, airport-related noise levels would not expose people working at the project site to excessive noise levels. This impact would be less than significant.

**CUMULATIVE IMPACTS**

In addition to evaluating various noise related impacts associated with the Event Center as a "project" in and of itself. The Environmental Noise Impact Analysis context herein as Appendix C also evaluated noise impacts from a cumulative impacts perspective.

Section 15130 of the State CEQA Guidelines requires that environmental analyses evaluate a project's cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the State CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. This cumulative impact analysis considers development of the proposed project in combination with ambient growth and other development projects within the vicinity of the proposed project site. As noise is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases, only projects and ambient growth in the nearby area could combine with the proposed project to result in cumulative noise impacts.

To that end the Environmental Noise Impact Analysis also evaluated the various types and categories of noise impacts from two (2) growth scenarios as listed below:

- Year 2018 Cumulative Noise Impacts
- Year 2035 Cumulative Noise Impacts

This analysis evaluated cumulative noise impacts based upon the list of other projects and ambient growth as provided in the traffic/circulation study prepared for this project and context herein as Appendix C.

The evaluation also considered if the Event Center contribution to the cumulative total impact was "cumulatively considerable" as defined in the State CEQA Guidelines. Commutative considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other projects and the effects of probable future projects.

The year 2018 cumulative evaluation concluded that the projects incremental effect is not considerable or significant when viewed in connection with the effects of past, current and probable future projects.

The year 2035 cumulative evaluation also concluded that the projects incremental effects is not considerable or significant when viewed in conjunction with the effects of past, current and probable future impacts. For a complete cumulative analysis please refer to the Environmental Noise Impact Analysis contained herein as Appendix C.

## D. AIR

The development of the 77 acre Event Center will have short term (construction related) and long term (operations related) air quality impacts associated with site preparation and the ongoing activities envisioned for the facility. The preparation of the Motocross track and the various travel lanes and parking areas will disturb the soil and create an increase in particulate matter commonly referred to as "Fugitive Dust" and P.M. 10. In accordance with the East Kern Air Pollution Control District the developer or developers of the various components of the Event Center whether constructed/installed concurrently or phases over time will be required to water down the site and/or use soil binders to reduce dust emissions and implement the District's policies and mitigation strategies. Additionally, the Motocross track and the travel lanes and parking areas will not be paved with impermeable services but rather treated with decomposed granite, gravel or some type of base materials. This will create an all-weather condition so that the travel ways and parking access can be used year round. However, the unpaved condition will create a circumstance in which the ongoing operational aspects of the Event Center could create fugitive dust. As such, periodic water and soil binder techniques will be required in augmentation of the Motocross track to maintain the integrity of the track and to control the fugitive dust. Similarly the travel ways and parking areas will periodically need to be watered down in particularly just prior to and at the conclusion of an event. Additionally, during the construction site preparation phase of the project when winds reach 20 MPH or greater in a two (2) or more hour period. The Event Center implementation will also generate additional traffic related air quality issues. This impact can likewise be characterized as a long term operational impact.

In terms of traffic related air quality issues, at full build-out the project could generate approximately 1,162 vehicle trips in association with a large event. It is anticipated the additional trips generated by this project can be absorbed by the area circulation network without causing the traffic flow to drop below an acceptable level of service. Level of service and traffic congestion is directly related to the issue of air quality relative to auto exhaust emissions. Additionally, unlike a conventional "development" the Event Center traffic will not create a daily, and relatively routine ebb and flow of vehicles with a corresponding AM and PM peak traffic occurrence. Rather the Event Center traffic will occur intermittently in conjunction with periodic events such as a rodeo or equestrian competition. This condition from a traffic congestion or circulation perspective represents an entirely different dynamic than traffic associated with a conventional development such as a housing tract, retail center or business park. The highest most significant concentration of vehicular related emissions will occur at the conclusion of a major event when the attendees attempt to exist the facility relatively simultaneously. The mitigation measures in terms of traffic control will ensure the efficient

and safe flow of traffic from the Event Center facility into the circulation network. The completion of the Challenger Drive extension while not a mitigation measure in and of itself will provide an additional opportunity for attendees to leave the area whereas until recently Dennison Road provided the only route to and from the Event Center. The activity, associated traffic generation and events may have an incremental impact on local air quality but will not individually or collectively cause a significant decrease in the region's air quality. The City will comply with East Kern Air Pollution Control District requirements included herein as Attachment B.

## E. WATER

The proposed Event Center will encompass a 77-acre site located on the Tehachapi Municipal Airport within an area designated within the Airport Master Plan as non-aviation. The Event Center will be anchored by the existing rodeo grounds that has been at this location since the 1950's. This existing feature will be enhanced by this proposal in terms of increased seating capacity. In addition, the facility will include a motocross track, passive park areas, green belts/paseos, banquet halls/pavilions and RV parking spaces. Water will be consumed in association with several activities as enumerated below:

- Dust control associated with the motocross track maintenance, non-paved parking and vehicular paths of travel maintenance and rodeo arena maintenance and dust control.
- Restroom facilities and domestic consumption.
- RV park assuming domestic water hookups are provided.
- Park and green belt irrigation.
- Livestock watering and grooming stations

Typically water consumption estimates are determined based on the predictable consumption of a single family residential dwelling unit pursuant to the City of Tehachapi Water and Wastewater Development Fee study. It assumes for water consumption calculations and estimation purposes that a single family residence will consume 470 gallons per day or 171,550 gallons per year. This translates into .52 acre feet per year. Therefore for a single family equivalent dwelling unit a single family residence has a factor of 1 EDU (Equivalent Dwelling Unit). Other uses such as manufacturing, retail and professional office are then based on an Equivalent Dwelling Unit or EDU factor. Retail for example has an EDU of .24 and manufacturing has an EDU of .48. It is in this regard that the water consumption rates for various uses are calculated and for the majority of land uses i.e., residential, commercial, office, manufacturing, retail, etc. and the amount of water consumption can be calculated relatively accurately pursuant to the equivalent dwelling unit methodology. However, the Event Center is an atypical land use which does not lend itself to the typical EDU methodology. Therefore, as an alternative the City of Tehachapi evaluated similar facilities within the state to determine the extent of water usage. Based upon this research the facility that most resembles the proposed Event Center in terms of its size, and types of uses was the Ingalls Park Equestrian Facility located in Norco California. This facility occupies a 55-acre site and is anchored by an 85,000 square foot covered arena which can accommodate 2,100 spectators. There is also a second smaller arena that is characterized as a warm up arena. The facility also possesses a 10,000 square foot banquet facility with seating for 400 individuals with an industrial kitchen, the Ingalls Park facility also includes an amphitheater with the capacity to accommodate 1,300 spectators. The facility is entirely reliant on potable water and according to the City of Norco Public Works Director, the facility is metered and therefore the water consumption associated within this facility is measured. The facility utilizes 3.2-acre feet of water per year which from an EDU prospective is equivalent to 6.4 single family residential units. Based on the above description the Ingalls Park Equestrian Center can therefore be characterized as similar enough to the proposed Tehachapi Event Center and Rodeo Grounds that it can be utilized as the basis for estimating the amount of water consumption utilized for this environmental document. It should be noted however that the Ingalls Park Equestrian Center currently does not

possess an RV park component as of the preparation of this document. However, an RV Park is proposed within the Ingalls Park Master Plan but currently does not exist. The Tehachapi Event Center and Rodeo Grounds Master Plan also includes an RV Park component in the Master Plan to accommodate up to 24 RV spaces. It is anticipated that these RV spaces will be primarily used by individuals attending an event. However, there is no restriction on individuals passing through the area to utilize the RV Park in a manor more consistent with conventional standalone RV Parks. Given that the Ingalls Park Equestrian Center does not have an RV Park currently, the 3.2-acre feet of water consumption associated with the Ingalls Park Equestrian Center does not currently include an RV component as proposed by the Tehachapi Event Center and Rodeo Grounds. Therefore, the anticipated water consumption associated with the RV Park venue has been added to the total water consumption projection/estimation. According to the American Water Works Research Foundation an RV uses approximately 17% of the amount of water used in a conventional single family residential structure. As previously indicated Tehachapi uses a factor of 470 gallons per day for a single family residence. Based on an assumption of 470 gallons/day X 17% the typical RV would consume approximately 79.9 gallons per day. However, in an RV Park environment patrons come and go and it is not likely that the City will allow the Event Center RV spaces to be occupied on a permanent or semi-permanent basis with potentially the exception of a care taker residence. According to KOA Corporate siting criteria, an RV park to remain viable should maintain an average of 60% occupancy. A 60% occupancy would translate into 14 RV spaces. In terms of water consumption this translates into 1,118.6 gallons of water per day as illustrated below.

- 14 continuously occupied RV spaces X 79.9 gallons/space/day=1,118.60 gallons of water per day or 408,289 gallons per year or 1.25 acre of feet per year.

In addition to the RV Park component, another design feature of the proposed Tehachapi Event Center and Rodeo Grounds that represents a distinction or departure, if you will, from the Ingalls Park Equestrian Center and which will have water consumption ramifications is the extent of landscaping. As previously indicated the Ingalls Park Equestrian Center consumes approximately 3.2 acre feet of water per year and has been used as the basis for water consumption projections associated with the Tehachapi Event Center and Rodeo Grounds. However, in its current condition the facility has very little in the way of landscaping. The Ingalls Park Equestrian Center Master Plan intends to incorporate landscaping as a future phased improvement but the facility in its current condition is nearly devoid of any formal landscape treatments. As such the aforementioned 3.2 annual acre feet of water consumption does not include landscape irrigation. The proposed Tehachapi Event Center and Rodeo Grounds in contrast is proposing a significant landscape component consisting of tree lined travel lanes, parks, paseos and passive informal landscape applications. Therefore as with the RV Park feature the anticipated volume of water anticipated to be applied to the various landscape treatments has been added to the water consumption total. As previously indicated the Tehachapi Event Center and Rodeo Grounds encompasses a 77 acre site. Of the 77 acres approximately 32 acres or .42 percent of the facility will be dedicated to various types of landscape treatments including parks, paseos, tree lined travel lanes and informal landscape nodes. Based on the City of Tehachapi water and wastewater fee study water consumption tables, 32 acres of landscape would consume approximately 63 acre feet of water per year.

Additionally, the Tehachapi Event Center and Rodeo Grounds will also include a Motocross track. Motocross tracks require watering to maintain track compaction and to prevent dust. The amount of water needed to maintain the Motocross tract could have been folded into the landscape water calculations. However, the landscape water consumption was based on the relatively short growing season in Tehachapi (approximately 244 days) after which the landscaping will be in a dormant condition and required no irrigation the balance of the year. The Motocross tract in contrast could potentially be utilized year round and on a daily basis. Therefore, while the landscape water consumption factor was also utilized as the basis for the Motocross water consumption the total yearly consumption was based on a year round activity in contrast to the landscape factor which was based on a 244 day growing season. Therefore, the Motocross tract water consumption estimated at 29 A.F./year was added to the overall water consumption as a separate line item.

Therefore, the total estimated water consumption of the proposed Tehachapi Event Center is 96.45 acre feet per year as illustrated below in Table 6.

TABLE 6

WATER CONSUMPTION PROJECTIONS

| | |
|---|---|
| 3.2 | A.F. utilizing Ingalls Equestrian Center as the basis |
| 1.25 | A.F. to account for the RV Park inclusion |
| 29 | A.F. to account for Motocross |
| 63 | A.F. to account for landscape irrigation |
| 96.45 | A.F. total water consumption |

The 96.45 A.F. is equivalent to 185 single family residential units. In terms of the City's capacity to absorb the anticipated uses and associated water consumption, the City's total water consumption is 2,122 A.F. per year based on the City of Tehachapi Groundwater Production Report. The underlying water basin (Tehachapi Basin) is adjudicated and a safe yield of the basin was established at 5,500 A.F./year. The amount of water currently being consumed within the City limits is significantly below the safe yield of 5,500 A.F./year The total consumption (existing plus project) would consume a total of 2,218.45 A.F. also well below the safe yield. It should be noted that there are additional municipal and agricultural users also tapping this adjudicated basin. However the management of the basin in terms of monitoring the safe yield is the responsibility of the Water Master (Tehachapi Cummings County Water District) and beyond the scope of this environmental document and the City of Tehachapi's jurisdiction. That said, the City of Tehachapi water consumption in and of itself falls significantly below the safe yield. However, in addition to the safe yield, the adjudication also established a protocol by which municipal users such as the City of Tehachapi can establish water rights/pumping rights. Currently the City of Tehachapi has the legal right to pump 3,116 A.F./year from sources as illustrated below in Table 7 .

TABLE 7
PUMPING RIGHT SOURCES

| | |
|---|---|
| 1,822 | A.F./year (Allowed Pumping Allocation) |
| 1,266 | A.F./year (Banked Water in Storage) |
| 3,116 | A.F./year (Total available water) |

In addition to the above the City has access to an additional 123 acre feet of pumping rights as enumerated in Table 8.

TABLE 8
ADDITIONAL PUMPING RIGHT SOURCES

| | |
|---|---|
| 90 | A.F./year (Allowable carry over) |
| 33 | A.F./year (Water transfers) |
| 123 | A.F./year (Additional sources) |

These two (2) additional sources have not been included in the total due to the fact that both of these sources tend to be a moving target, so to speak, and change from one (1) year to the next. Given the fluxuation in these two (2) sources an arguments could be made that it is disingenuous to include these sources in the overall water availability analysis. Therefore based on current conditions the City has the ability to accommodate up to 1,380 A.F. of additional water consumption/year of additional growth as illustrated below.

3,511 A.F./year (available pumping) – 2,131 A.F./year (current consumption) = 1,380 A.F./year (available for growth).

This translates into sufficient capacity to accommodate an additional 2,654 equivalent dwelling units. As previously indicated the proposed Tehachapi Event Center and Rodeo Grounds is anticipated to consume the equivalent of 185 single family residential units per year, which is well within the City's ability to accommodate.

Pursuant to CEQA, Mitigation Measures are required when a given impact exceeds a threshold of significance. In the case of domestic water consumption, were the projected consumption associated with the Event Center and Rodeo Grounds, to be greater than the City's ability to accommodate the impact the Event Center will have on domestic water supplies could be characterized as "Significant" and therefore Mitigation Measures would be required to reduce said impact to a "Level of Insignificance". Given that , from a CEQA perspective the Event Center's impact on domestic water supply will not be significant, and therefore no mitigation measure(s) are required. However, in spite of the City's ability to accommodate the anticipated water consumption and the fact that no mitigation measures are mandatory, the City never-the-less intends to utilize non-potable water sources for all of the aforementioned activities with the exception of domestic consumption associated with the RV Park, restrooms, drinking fountains, etc. The non-potable water will come from the Wastewater Treatment Plant that currently treats effluent to a secondary treatment level. Approximately 250 acre feet of this treated effluent is already being diverted and distributed to the Event Center site via a 12 inch force main and used for the flood irrigation application on an alfalfa crop as a disposal strategy. This method of effluent disposal has been approved by the Regional Water Quality Board. Therefore, the backbone infrastructure needed to utilize non-potable water for landscape and dust control purposes is already in place. It is the City's intention of utilizing this source of non-potable water for dust control and the irrigation of the various landscape elements. Providing the landscaping is irrigated via a drip system there is no restriction on the time of application. However, areas such as park sites that require overhead irrigation such as sprinklers will have "time of use" restrictions so as to avoid human contact. However, the City is also evaluating the construction of a "side stream treatment disinfection" process that would treat the effluent onsite to a higher level such that the time of use restriction for dust control, soil compaction and spray irrigation would no longer apply. It should be noted that the City has received tacit approval from the Regional Water Control Board (Region 5F Fresno) to change the treated water protocol from purely flood irrigation of crops to the above referenced purposes of irrigation and dust control. The amount of treated water available to the Event Center site is more than adequate to eliminate the need to use potable water for non-consumption purposes.

In terms of water consumption the areas slatted for large expanse of turf represent the most significant water consumption components of the overall landscape plan. As such it should be noted that the City intends to defer the installation of these expansive areas of sod until such time there is a qualified non-potable water supply available. In short no non-potable water source no turf area. This deferment strategy could be characterized as a mitigation measure. However, from the City's perspective the cost of applying a potable water source or the aforementioned turf areas is prohibitive. As previously indicated from a CEQA perspective the City is under no obligation, in terms of Mitigation Measuring, to utilize non-potable water sources for irrigation, dust control and facility maintenance purposes. However, the application of non-potable water for the aforementioned purposes will reduce the demand for potable water within the Event Center at build out from approximately 96.45 A.F./year to approximately 30 A.F. to potentially as low as approximately 2 A.F./year. Again, the use of non-potable water for non-consumption purposes is not a mitigation strategy per-se due to the fact that the water consumption will fall below a threshold of significance. Never-the-less the use of non-potable water represents a water conservation measure in and of itself and is considered a best management practices whether in the context of CEQA or not.

## F. SEWER

The Event Center and rodeo grounds will encompass a 77-acre site located on the northeastern segment of the Tehachapi Municipal Airport within an area designated as non-aviation per the Airport Master Plan. In its current condition the Event Center activity is restricted to an existing uncovered arena that supports periodic rodeos and other equestrian events at a relatively low key level. In the Event Centers current condition there are no permanent restroom facilities. During an event "porta-potties" are brought in on an event by event basis in a quantity commensurate with the expected event attendance. When porta-potties are clean out the "effluent" is hauled to a special treatment facility located in the Antelope Valley and as such this waste does not end up at the Tehachapi Wastewater Treatment Plant.

Therefore, in its current condition the Event Center has little to no impact on the sewer line network or on the capacity of the Wastewater Treatment Plant itself.

The Event Center as previously indicated is slated to be expanded to include enhancements to the existing arena, in addition to the construction of an additional arena intended to the covered, concession areas, banquet hall, green belts, picnic facilities, motocross track, R.V. park and parking lot. At build out the facility will be able to accommodate considerably larger events and more frequent events which will create a corresponding increase in Event Center attendance capacity. This expansion and intensification of the Event Center will include the construction of a smattering of permanent restroom facilities which will be distributed at a key location within the facility and may be adequate for the day to day low intensity use and perhaps to accommodate the number of attendees during a low key event however during a significant event these permanent restroom facilities could be over taxed and therefore during a significant event the City and/or event sponsor will continue to bring in porta-potties in a quantity adequate to accommodate the anticipated number of attendees. Therefore, even under a build out scenario the primary source of restroom facilities available will continue to be porta-potties. As previously indicated the effluent removed from these portable units in conjunction with a maintenance protocol will be delivered and processed at a facility located in the Antelope Valley and not at the City of Tehachapi Wastewater Treatment facility.

Therefore, even under a build out scenario the Event Center will not produce a significant amount of effluent. The City of Tehachapi Waste Water Treatment Plant is designed with a capacity to process up to 1.25 million gallons per day (MGD) and is currently operating at 80% capacity leaving a capacity of .25 MGD available for future growth. To put the remaining .25 MGD capacity into perspective a typical single family residential dwelling unit uses 220 gallons of effluent per day. Therefore, .25 MGD per day is sufficient capacity to accommodate up to 1,136 additional single family dwelling unit count.

In contrast to a conventional land use such as a shopping center, subdivision or industrial park, the Event Center under a build out scenario represents an atypical land use in terms of estimating the projects impact on the existing Wastewater Treatment Plant's available capacity to accommodate an additional 1,136 single family dwelling units. Currently there are apparently 2,016 single family dwelling units within the City limits. 1,136 additional single family dwelling units represents 56% of the City of Tehachapi's current single family residential units. Therefore, an argument can be made that there is sufficient capacity to accommodate growth within the City limits for the near term. Additionally, on anecdotal argument can be made that the inclusion of a smattering of permanent restroom facilities will absorb only a fraction of the available capacity and will not place a demand on the system that is incongruent with planned and anticipated growth in the region as envisioned in the City of Tehachapi General Plan update adopted on April 16, 2012.

In terms of the discharge of effluent from the permanent facilities there is a 15 inch sewer trunk main that extends along the northern edge of the Event Center property and is ultimately discharged at the wastewater treatment plant. The smattering of permanent restrooms and similar facilities planned for the Event Center will tie into this regional trunk line. This 15 inch trunk line serves the industrial and residential parcels located within the Dennison Road sewer service area and as such represents a regional improvement. The size and invert of the Dennison Road service area trunk line has more than sufficient capacity to accommodate the intermittent effluent produced within the Event Center build out.

## G. GEOLOGY/SEISMICITY

The subject site is considered seismically active, as is most of Kern County. All proposed structures and utility installations anticipated to occur at the development stage would be designed to withstand anticipated ground acceleration within an acceptable level of risk. It is assumed that the Garlock Fault located approximately 10 miles southeast of the project area will be the design fault by which construction parameters will be established in conjunction with other Uniform Building Code (UBC) seismic standards applicable to the project site and future development proposals. The Garlock Fault shows the characteristic features of high-angle faults with major strike-slip component. The Garlock Fault has a Richter Magnitude potential of 8.0 and a Peak Execration range of .409 (g) to .904 (g). Further, at the development stage the project proponent(s) shall be required to submit a geo-technical report for all areas

slatted for structures for human occupancy. The findings of the geo-technical report shall be incorporated into the project design of future structures on a phase-by-phase basis in terms of grading activity and structural details pursuant to the Uniform Building Code.

## H. CULTURAL RESOURCES

A Cultural Survey was conducted by Dr. Alan Gold, Ph.D., R.P.A. on June 14, 2011 over the 264-acre Tehachapi Municipal Airport site. (Please see Appendix D)The runway, taxiway and other aviation related structures and an open drainage system used to convey localized storm flows, are south of the proposed Event Center. The proposed site consists of an existing rodeo grounds used intermittently for cattle grazing, a large rock outcrop complex (The Rock Pile) and fields used for the disposal of treated water from the City of Tehachapi Wastewater Treatment Plant. Most of the site has been heavily disturbed with the exception of The Rock Pile which is relatively undistributed with the exception of a cell tower complex. Dr. Gold was joined by Mr. Benjamin Vargas, R.P.A. to inspect The Rock Pile more closely. Three (3) cultural resource sites were discovered located adjacent to and on the skirt of The Rock Pile. The entire base of the hill will be fenced to keep individuals attending an event from wondering into the area and "discovering" these sites and potentially disturb or destroy these sites. In addition to the fence no trespassing and/or beware of rattle snakes signs will be attached to the fence to unauthorized individuals wondering around The Rock Pile. This mitigation strategy can be characterized as mitigation by avoidance. Additionally, prior to planned activities within the Event Center complex the potential resources will be required to be formally recorded and proper documentation should be completed. This effort could include photography the sites, formal recordation of the sites characteristics and this information filed with the Information Center using standard OPR-523 forms.

## I. PLANT LIFE/WILDLIFE

The subject site has been disturbed by access to the existing rodeo grounds and the City's wastewater reclamation area. A Biological Constraints Review was conducted over the site as part of the Tehachapi Municipal Airport project dated May 24, 2011 included herein as Appendix E. The report states that although highly disturbed, the wastewater disposal fields, levied channels and drainage ditch that run across the site could potentially meet the definition of Waters of the US. Prior to any grading activity on site, a wetland delineation will need to be completed and verified by the U.S. Army Corps of Engineers (USACE) to determine if wetlands and waters of the Unites States are present on site. Additionally, a Spring Botanical Survey was conducted on site May 6, 2014 by Robin Murray, Biologist with AECOM (Please see Appendix G). There are several plant and animal species in the Tehachapi region that are of special concern. However, the survey concluded there are no rare and/or endangered flora species, flora communities or fauna species on the subject site. .

## J. DRAINAGE/HYDROLOGY

With the exception of the prominent hill, the subject site is relatively track. There are no prominent well defined water courses or ephemeral drainage on the subject site and as such storm water tends to sheet flow in a north westerly direction from a high of 4,000 foot elevation to a low of 3,960 within an average slope of approximately one-percent until it reaches the State Highway 58 where the storm water is collected in a manmade relatively well defined drainage swell that extends the length of the Highway 58 right-of-way ultimately tributary to Tehachapi Creek.

The development of the Event Center will require only minor alterations of the subject site. (Please see the Event Center Infrastructure Project plans as Appendix G). Travel lanes and parking areas will be treated with an all-weather surface but will remain permeable. As such natural drainage patterns will be perpetuated and the amount of imperious service will be minimal and associated with buildings intended for human occupancy and the proposed covered arena. This limited are of impervious surface will not increase and/or intensify the amount or intensity of run off in any significant way. As such some temporary measures to control run-off during the construction phase will be required to control storm water runoff as a temporary mitigation measure. Due to the fact that very little impervious surfaces will be created and natural storm water runoff will be perpetuated, no long term mitigation is required.

## K. PUBLIC SERVICES

This is a City project and impacts of the project to law enforcement, fire protection facilities, water availability and sewer capacity have been analyzed and all City facilities will be able to accommodate the increases resulting from this project moving forward. The project will generate revenue to the City of Tehachapi increasing available funds for future improvements as necessary.

The project area at build-out may result in the need for increased law enforcement and fire protection facilities. To mitigate/off-set the incremental impact/demand

## L. AIRPORT

The subject site is located within Flight Zones B1 and D as reflected on the Flight Zone overlay map as Attachment s C-1 and C-2. The Airport Land Use Compatibility Plan (ALUCP) lists uses that would be considered compatible within the different Flight Zones (A, B1/B2, C and D) Flight Zone A being the most restrictive, Flight Zone D being the most permissive. The Event Center has been designed to keep structures and the area most heavily concentration with people within Flight Zone D. An Event Center use is not listed in the ALUCP as a specific use given that it would be difficult to list every possible use that may occur on a legal parcel. Fairgrounds and race track are listed as a use type and in Staff's opinion closest resemble the proposed Event Center. Fairgrounds and race track uses are not listed as compatible uses within Flight Zone B1 however fairgrounds and race track are considered a permitted us within Flight Zone D. The site plan reflects the majority of the parking located with Flight Zone B1 and the adult Motocross track. The adult Motocross track may accommodate up to 12 riders at any given time which is well below the maximum density threshold of 60 people per acre within the B1 zone. A facility center is located within Flight Zone D consisting of a concessions stand, office, restrooms, and maintenance room. Adjacent to the concession stand structure is a picnic/viewing area. As noted above, the highest concentration of people in attendance at the Event Center will park within Flight Zone B1 and congregate within Flight Zone D during the scheduled events. The project applicant (City of Tehachapi) will be required to submit Form 7460-1 to the Federal Aviation Administration for review and approval prior to project construction. Non-reflective materials are required on all building surfaces and lighting on site shall be shielded and directed downward.

# Tehachapi Event Center & Rodeo Grounds
# Summary of Potential Impacts and Proposed Mitigation Measures
# And Mitigation Monitoring Program

| Impact | Mitigation Measure | Level of Significance After Mitigation | Monitoring Program Agency Responsibility |
|---|---|---|---|
| **LAND USE AND PLANNING** | | | |
| Potential conflict with applicable land use plan, policy or regulation of the City of Tehachapi. | The project is consistent with the policies of the General Plan which provide for orderly growth and development in the City in a manner that avoids this impact. | No mitigation required | City of Tehachapi Community Development Department in conjunction with the development review process. |
| **POPULATION AND HOUSING** | | | |
| The development of an Event Center will not directly impact population or housing within the community. | Increase in population is consistent with KernCOG population projections. | No mitigation required | N/A |
| **GEOLOGY/SEISMIC/SAFETY** | | | |
| The subject is located in a seismically active area. The Garlock Fault is the design fault by which construction parameters are established in conjunction with the Uniform Building Code. | The applicant (City of Tehachapi) will be required to submit a geotechnical report. The recommendations of the report are to be incorporated into future structural designs and grading activity. | Less than significant | City Engineer . |
| **NOISE** | | | |
| The development of the site may increase area noise associated with the incremental increase in traffic. | No Thresholds of Significance were exceeded therefore no mitigation measures required. For concerts the City of Tehachapi Municipal Code Compliance shall be required relative to outdoor events. | Less than significant | City of Tehachapi Community Development Department. |

| Impact | Mitigation Measure | Level of Significance After Mitigation | Monitoring Program Agency Responsibility |
|---|---|---|---|
| **WATER** | | | |
| The development of an Event Center will consume an estimated 96.45 acre feet per year of domestic water. The project individually or collectively when taken into consideration with other projects will not exceed the City of Tehachapi's base pumping rights. | The Event Center's impact on domestic water supply will not be significant, and therefore no mitigation measure(s) are required. Although no mitigation measures are mandatory, the City intends to utilize non-potable water sources for most activities with the exception of domestic consumption associated with the RV Park, restrooms, and drinking fountains. | Less than significant | City of Tehachapi Community Development Department and the City Engineer. |
| **SEWER** | | | |
| Wastewater treatment capacity is 1.25 million gallons per day advance secondly, operating at 80% capacity leaving a capacity of .25 MGD available for future growth. | This expansion and intensification of the Event Center will include the construction of permanent restroom facilities which will be distributed at a key location within the facility and may be adequate for the day to day low intensity use and perhaps to accommodate the number of attendees during a low key event however during a significant event these permanent restroom facilities could be over taxed and therefore during a significant event the City and/or event sponsor will continue to bring in porta-potties in a quantity adequate to accommodate the anticipated number of attendees. | Less than significant | City of Tehachapi Community Development Department and Public Works Department. |

| Impact | Mitigation Measure | Level of Significance After Mitigation | Monitoring Program Agency Responsibility |
|---|---|---|---|
| **TRANSPORTATION AND CIRCULATION** | | | |
| The development of the subject site could generate approximately 1,162 vehicle trips during a major event. | The project site is located within the Core area of the City. The City of Tehachapi's creation and implementation of the Tehachapi Regional Transportation Impact Fee mechanism provides the comprehensive mitigation solution needed to insure that the referenced intersections in the Negative Declaration receive adequate improvements to function at an acceptable level. | Less than significant | City of Tehachapi Community Development Department |
| **BIOLOGICAL RESOURCES** | | | |
| The proposed project could have an impact on known sensitive flora and fauna species in the region. | A Spring Survey in May 2014 and it was determined that there are no sensitive flora or fauna species on the proposed site. | No mitigation required | |
| Although highly disturbed, the wastewater disposal fields, levied channels and drainage ditch on site could potentially meet the definition of Waters of the US. | A Botanical Constraints Review was conducted May 2011 and the report states that a wetland delineation would need to be completed and verified by USACE to conclusively determine if wetlands and waters of the United States are present on the project site. | Negative Declaration Significant Unless Mitigation Incorporated. | City of Tehachapi Community Development Department. |

| Impact | Mitigation Measure | Level of Significance After Mitigation | Monitoring Program Agency Responsibility |
|---|---|---|---|
| **PUBLIC SERVICES** | | | |
| The enhancements to the Tehachapi Event Center and Rodeo Grounds will consume domestic water and produce sewer effluent. The amount of domestic water consumption anticipated will not over tax the City of Tehachapi's ability to store and distribute domestic water nor will the Event Center water consumption foreclose on the City's ability to accommodate future residential, commercial and industrial growth. The amount of sewer effluent anticipated to be produced will not exceed the sewer treatment plants capacity to process the effluent or foreclose on future private development. The Event Center activity could cause a need for increased police presence for traffic control and other public safety scenarios. | The majority of water consumption for non-human usage will be from treated wastewater. The Event Center enhancements will include a smattering of permanent toilet facilities but the majority of toilet facilities during a major event will be of the portable variety. The effluent from these portable units is processed in the Antelope Valley and will not impact the City's Wastewater Treatment Plant. The Event Center activities will attract significant individuals and families from outside the Tehachapi region. In this regard the Event Center can be characterized as a tourist attraction related revenue to the City which will in turn offset only fiscal impact the Event Center may have on public safety interventions. | Less than significant | City of Tehachapi Community Development Department, City of Tehachapi Police Department, County of Kern Fire Department, City Building Department and Tehachapi Unified School District. |
| **CULTURAL RESOURCES** | | | |
| The subject site is located within the ancestral home of the Kawaiisu cultural group. The development of the site could impact archaeological resources. | A cultural survey was conducted on June 14, 2011 over the site and a survey clearance was granted. If, however, resources are excavated during the construction phase the project will be stopped until such time as the resources can be recovered and properly documented. | Less than significant | City of Tehachapi Community Development Department and the Native American Heritage Commission if subsurface resources are discovered. |

| Impact | Migitation Measure | Level of Significane After Mitigation | Level of Significance After Mitigation |
|---|---|---|---|
| **STORM WATER** | | | |
| The development of the subject site may have a temporary impact associated with grading activity. | Grading plans will be submitted to demonstrate the manner in which storm water run off will be collected and conveyed to the regional drainage facility. | Less than significant. | City Engineer. |
| **AIR QUALITY** | | | |
| The development of the site will create a temporary increase in dust during grading activity. Long-term air quality issues are associated with the incremental increase in traffic. | The site will be watered down during grading activity to keep fugitive dust to a minimum. Grading on the site will not be permitted when winds reach 20 mph or greater. Periodic water and soil binder techniques will be required in augmentation of the Motocross track to control potential fugitive dust. | Less than significant | Future grading approval will be conditioned to keep the site watered down or the use of soil binders during grading and motocross activities. The City Engineer will monitor in conjunction with grading and construction management. |
| **AIRPORT COMPATIBILITY** | | | |
| The project site is located within Flight Zones B1 and D of the Kern County Airport Compatibility Map. | In terms of airport mitigation, the City shall comply with the following:<br><br>Submit Form 7460-1 to the Federal Aviation Administration for review and approval.<br><br>Non-reflective materials are required on all building surfaces.<br><br>Lighting on site shall be shielded and directed downward. | Less than significant | City of Tehachapi Community Development Department and Airport Manager. |

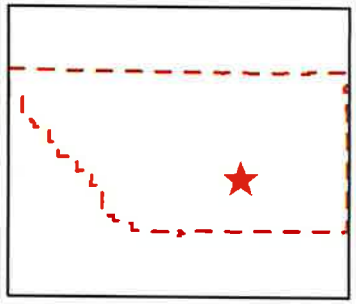
# ATTACHMENTS

| | |
|---|---|
| ATTACHMENT A | VICINITY MAP |
| ATTACHMENT B | EVENT CENTER SITE PLAN |
| ATTACHMENT C | EAST KERN AIR POLLUTION CONTROL DISTRICT REQUIREMENTS |
| ATTACHMENT D-1 & D-2 | AIRPORT FLIGHT ZONE OVERLAY MAPS |

# ATTACHMENT A

Vicinity Map

# Vicinity Map for Event Center



## Legend

Roads

- Arterial
- Collector
- Highway
- Local
- Ramp
- Unpaved

County of Kern

Assessment Parcels

Scale: 1:8,556

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

# ATTACHMENT B

Event Center Site Plan

# Master Plan

## Legend

1. Existing Rodeo Area
2. Picnic Shelter
3. Covered Arena
4. Banquent Hall
5. Restrooms/Concessions
6. Parking
7. VIP Parking
8. RV Parking
9. Horse Stalls
10. Horse Warm Up Area
11. Central Park/Park Areas
12. Green Buffer
13. Motocross/BMX Track
14. Multi-use Trail
15. Temporary Parking/Multi-use Fields
16. Performance Area
17. Identity/Wayfinding Signage
18. Office/Green Room
19. Employee Parking
20. Site Fencing
21. Entertainment Parking
22. VIP Entry/Area
23. Water Feature
24. Maintenance/Storage Area

TEHACHAPI EVENT CENTER & RODEO GROUNDS

AECOM

February 26, 2013

# ATTACHMENT C

East Kern Air Pollution Control District Requirements

# SUGGESTED AIR POLLUTANT MITIGATION MEASURES FOR CONSTRUCTION SITES FOR KERN COUNTY APCD

The following list of reduction measures should be used where they are applicable and feasible. This list should not be considered all-inclusive. Any other measures not listed are encouraged.

**LAND PREPARATION, EXCAVATION and/or DEMOLITION** - The following dust control measures should be implemented:

1. All soil excavated or graded should be sufficiently watered to prevent excessive dust. Watering should occur as needed with complete coverage of disturbed soil areas. Watering should be a minimum of twice daily on unpaved/untreated roads and on disturbed soil areas with active operations.

2. All clearing, grading, earth moving and excavation activities should cease
   a. during periods of winds greater than 20 mph (averaged over one hour), if disturbed material is easily windblown, or
   b. when dust plumes of 20% or greater opacity impact public roads, occupied structures or neighboring property.

3. All fine material transported offsite should be either sufficiently watered or securely covered to prevent excessive dust.

4. If more than 5,000 cubic yards of fill material will be imported or exported from the site, then all haul trucks should be required to exit the site via an access point where a gravel pad or grizzly has been installed.

5. Areas disturbed by clearing, earth moving or excavation activities should be minimized at all times.

6. Stockpiles of soil or other fine loose material shall be stabilized by watering or other appropriate method to prevent wind-blown fugitive dust.

7. Where acceptable to the fire department, weed control should be accomplished by mowing instead of discing, thereby, leaving the ground undisturbed and with a mulch covering.

**BUILDING CONSTRUCTION** - After clearing, grading, earth moving and/or excavating, the following dust control practices should be implemented:

8. Once initial leveling has ceased all inactive soil areas within the construction site should either be seeded and watered until plant growth is evident, treated with a dust palliative, or watered twice daily until soil has sufficiently crusted to prevent fugitive dust emission.

9. All active disturbed soil areas should be sufficiently watered to prevent excessive dust, but no less than twice per day.

**VEHICULAR ACTIVITIES** - During all phases of construction, the following vehicular control measures should be implemented:

**DUST**

10. Onsite vehicle speed should be limited to 15 mph.

11. All areas with vehicle traffic should be paved, treated with dust palliatives, or watered a minimum of twice daily.

12. Streets adjacent to the project site should be kept clean and accumulated silt removed.

13. Access to the site should be by means of an apron into the project from adjoining surfaced roadways. The apron should be surfaced or treated with dust palliatives. palliatives If operating on soils that cling to the wheels of the vehicles, a grizzly or other such device should be used on the road exiting the project, immediately prior to the pavement, in order to remove most of the soil material from the vehicle's tires.

**TAILPIPE EMISSIONS**

14. Properly maintain and tune all internal combustion engine powered equipment.

15. Require employees and subcontractors to comply with California's idling restrictions for compression ignition engines.

16. Use low sulfur (CARB) diesel fuel.

## SUGGESTED AIR POLLUTANT MITIGATION MEASURES FOR RESIDENTIAL PROJECTS FOR KERN COUNTY APCD

The following list of reduction measures should be used where applicable and feasible. This list should not be considered all-inclusive. Other effective measures not listed are encouraged.

* **ACCESSIBILITY** - Provide direct pedestrian and bicycle access to neighborhood amenities, shopping areas, existing bike paths and transit stops in any residential development with a density of four or more residences per acre. Low, medium, and high density developments should have curbs and sidewalks on both sides of the street.

* **SURFACING ROADS** – Pave the access roadways and the project's interior streets where there are expected to be 50 vehicle trips per day on the road.

* **BIKE PATHS** - For medium to high density developments provide designated bicycle paths and easy access to these paths.

* **SCHOOLS** - Provide easy and safe pathways to existing schools.

* **NEIGHBORHOOD PARKS** – Residential developments should provide easy and safe pathways to existing parks and planned parks.

* **BUS TURNOUT (Where Transit Exists)** – For medium to high density residential development where transit services exist, construct bus turnouts and loading areas with shelters and locations acceptable to the local transit provider. This area will provide future easement for bus turnouts and shelters. If transit does not exist, but the project is within a transit district's sphere of influence, provide a site at a location and size acceptable to the transit provider

* **FIREPLACES** - Install low-emitting, EPA-certified fireplace inserts and/or wood stoves or natural gas fireplaces. (Wood burning fireplaces are prohibited in developments of 10 or more residences by KCAPCD Rule 416.1)

* **TREES AND SHRUBS** - Provide indigenous trees and shrubs around residences. This provides several air quality benefits by generating oxygen, anchoring soil and providing wind breaks and conserving energy by providing shade. Trees should be drought tolerant and planted in accordance with fire safe guidelines.

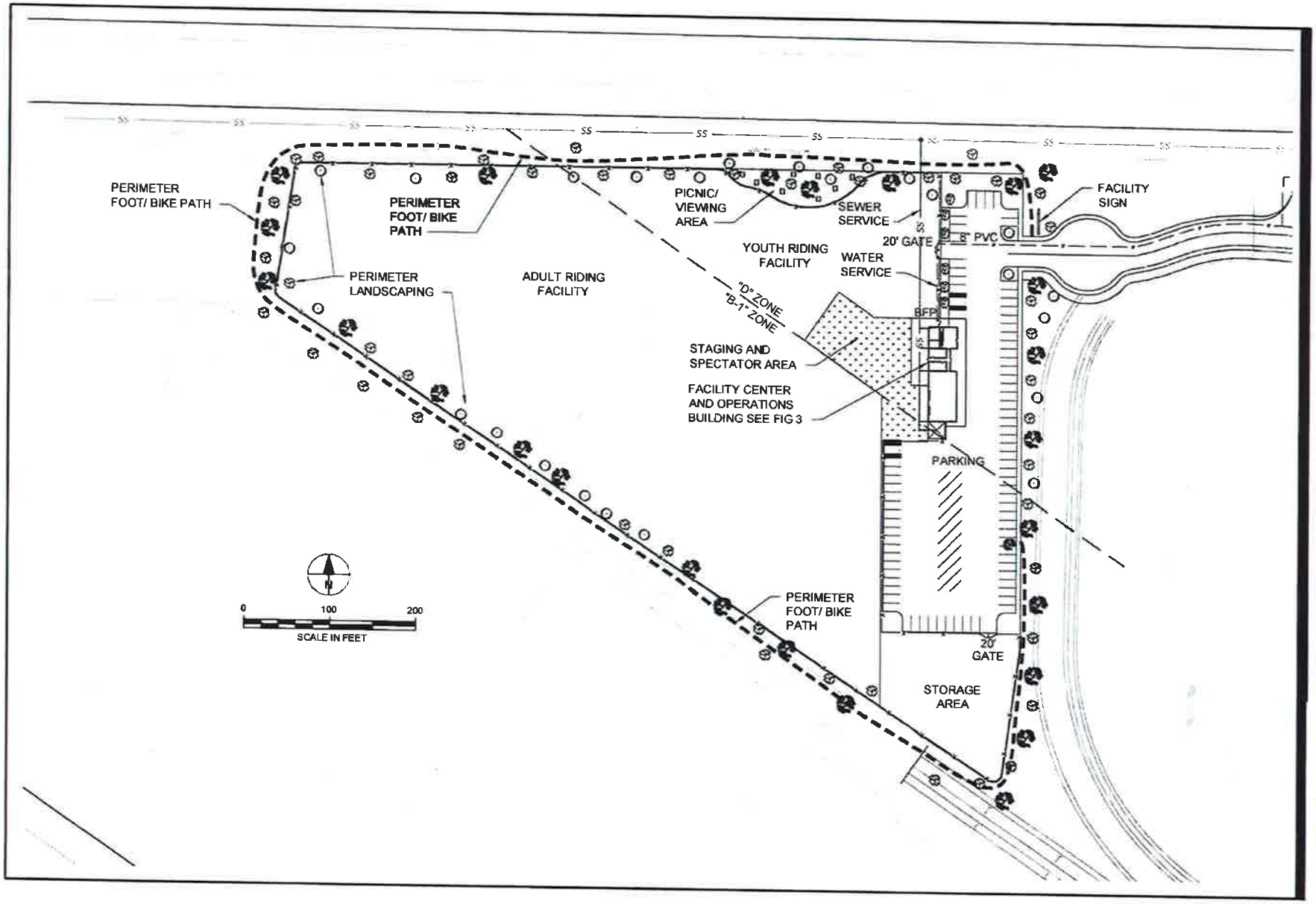
* **NATURAL GAS LINES** - Provide natural lines or electrical outlets to backyards to encourage use of natural gas or electric barbecues.

* **WATER HEATERS** - Provide low oxides of nitrogen ($NO_x$) emitting and high efficiency water heaters or solar water heaters. (Required by KCAPCD Rule 424)

# ATTACHMENT

# D-1 & D-2

Airport Flight Zone Overlay Maps




AECOM

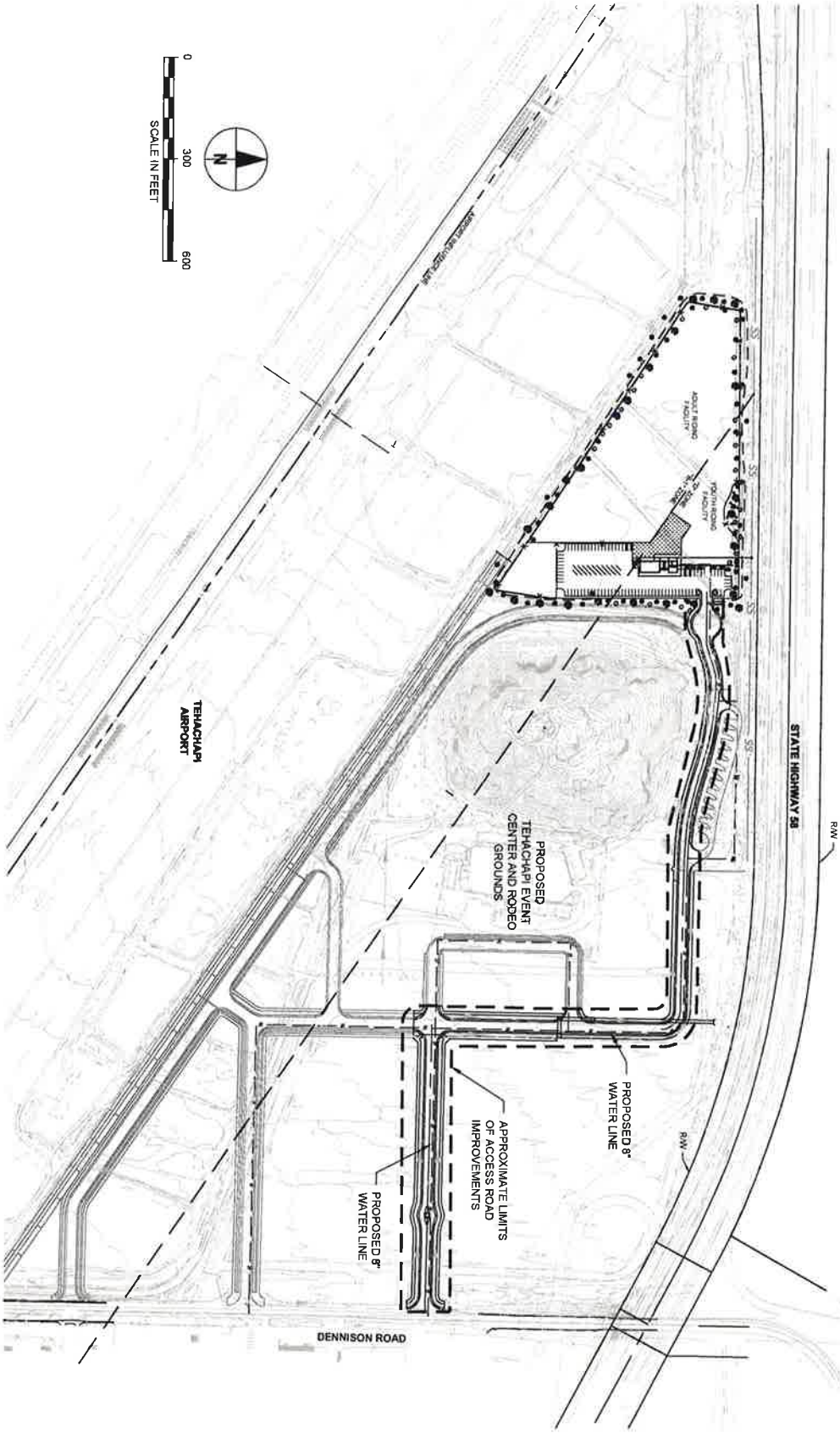
FIG 2

PROPOSED OFF HIGHWAY VEHICLE PARK PROJECT

FACILITY PLAN

TEHACHAPI

60309567 - 2014-05-01




CITY OF TEHACHAPI CALIFORNIA

**PROPOSED OFF HIGHWAY VEHICLE PARK PROJECT**

AECOM

PROJECT SITE PLAN

60309567 - 2014-05-01

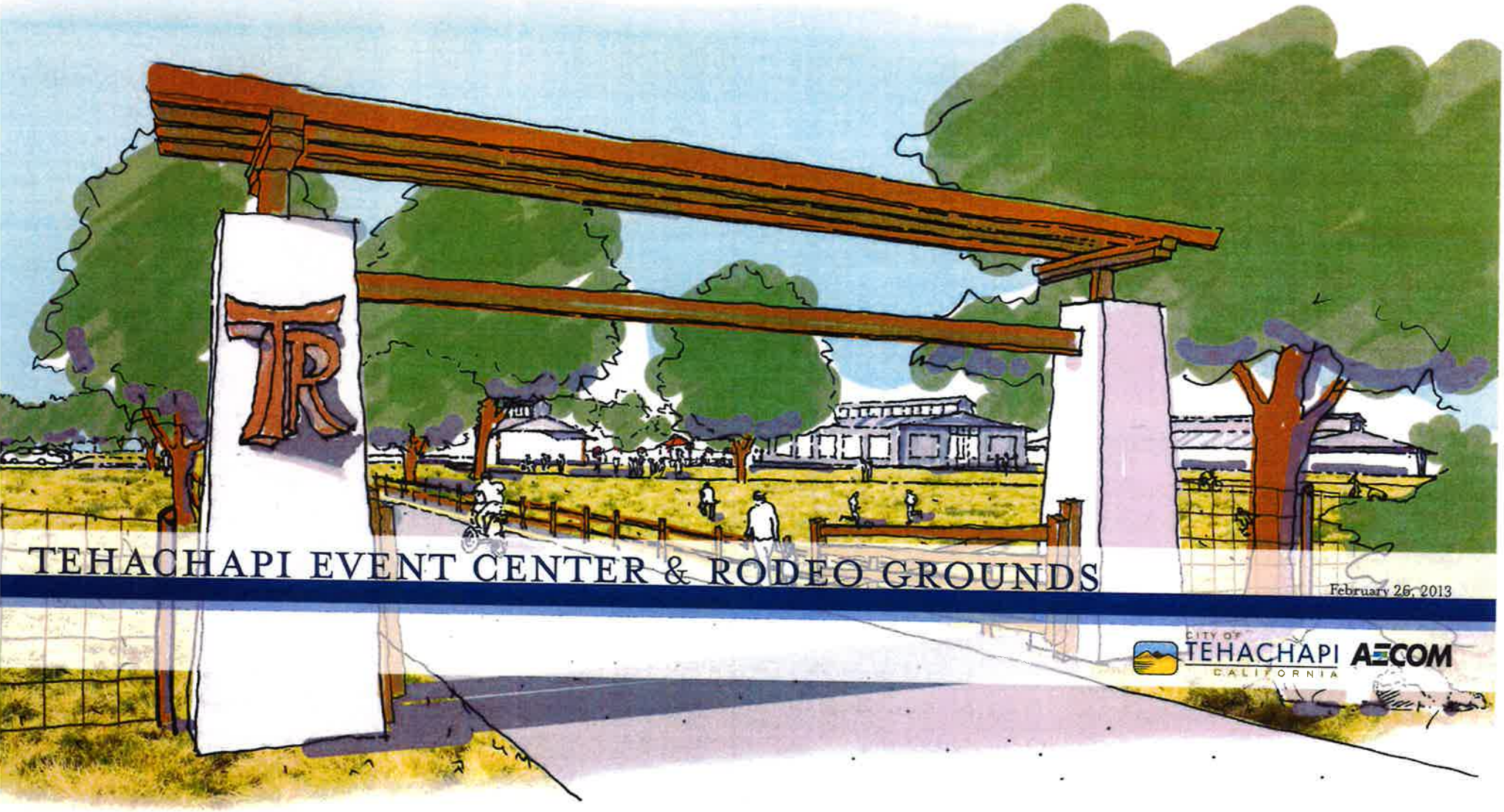
FIG 1

# APPENDICES

| | |
|---|---|
| APPENDIX A | TEHACHAPI EVENT CENTER AND RODEO GROUNDS MASTER PLAN |
| APPENDIX B | TRAFFIC STUDY |
| APPENDIX C | NOISE STUDY |
| APPENDIX D | CULTURAL RESOURCES SURVEY |
| APPENDIX E | BIOLOGICAL CONSTRAINTS REVIEW |
| APPENDIX F | BOTANICAL SURVEY |
| APPENDIX G | EVENT CENTER INFRASTRUCTURE DESIGN |

# APPENDIX A

Tehachapi Event Center and Rodeo Grounds Master Plan




# TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

CITY OF TEHACHAPI CALIFORNIA

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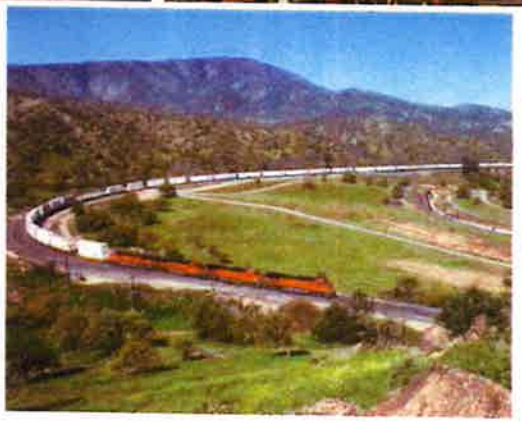
# IDENTITY

The rich tradition, history, and community of Tehachapi continues to evolve over time. From humble beginnings as a railroad depot to a region of ranches and orchards to today's working wind farms and local attractions. This mountain community is poised to become an even richer recreation destination.



50TH TMRA 50 YEARS N STILL BUCKIN STRONG

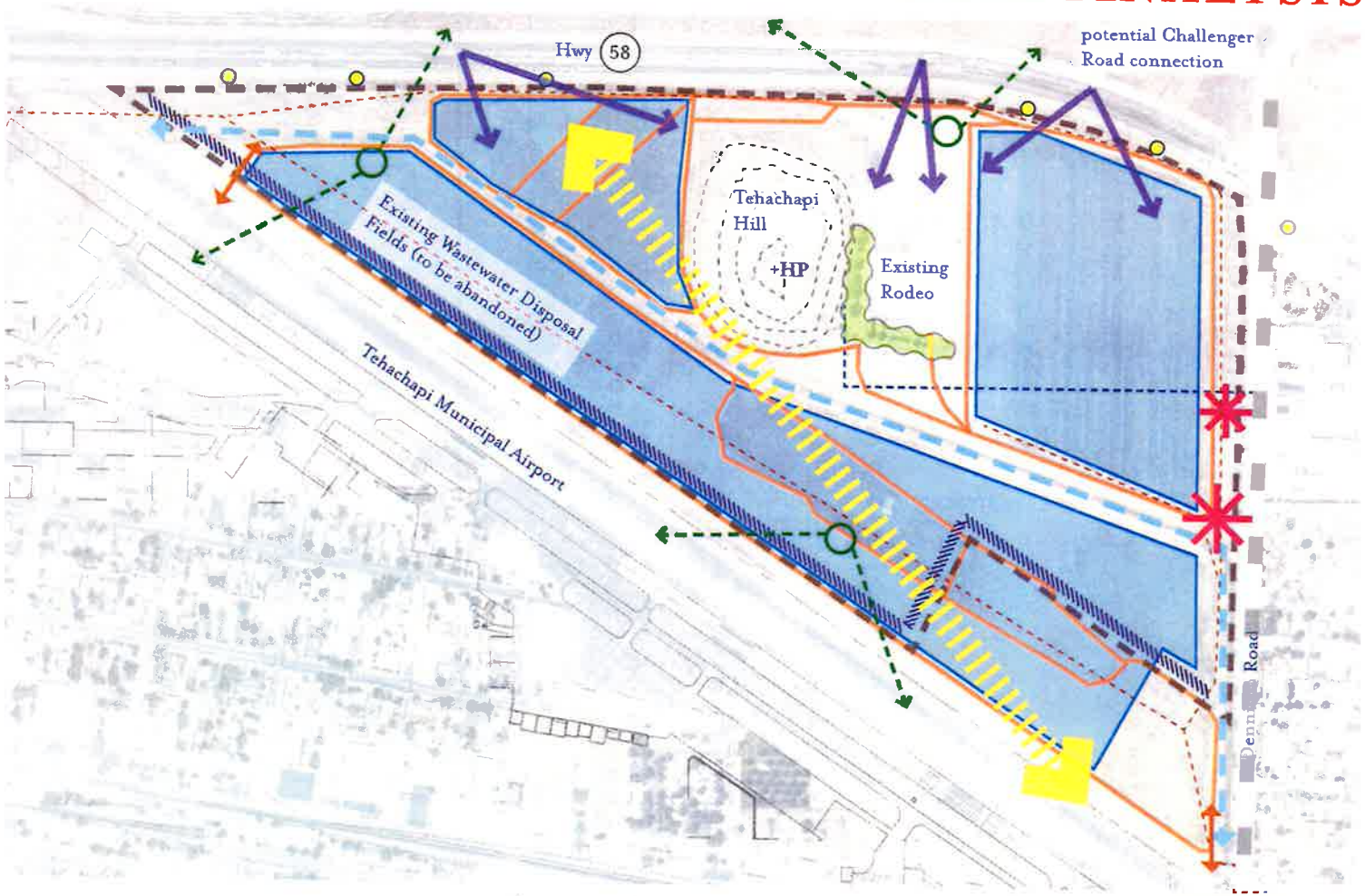
CITY OF TEHACHAPI CALIFORNIA

# Site Analysis

## 107 acres

### Legend

- Project Boundary
- Main Access Roadways
- Views to Mountains
- Views into the Site
- Existing Roads/Paths
- Existing Airport Access Roads
- Primary Wind Direction
- Required Fence / Barrier
- Existing Project Entries
- Existing Wastewater Disposal Fields (to be abandoned)
- Existing Tree Canopy
- Existing Billboards
- Existing Water Line
- Existing Sewer Line
- Existing Storm Drain Channel




TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

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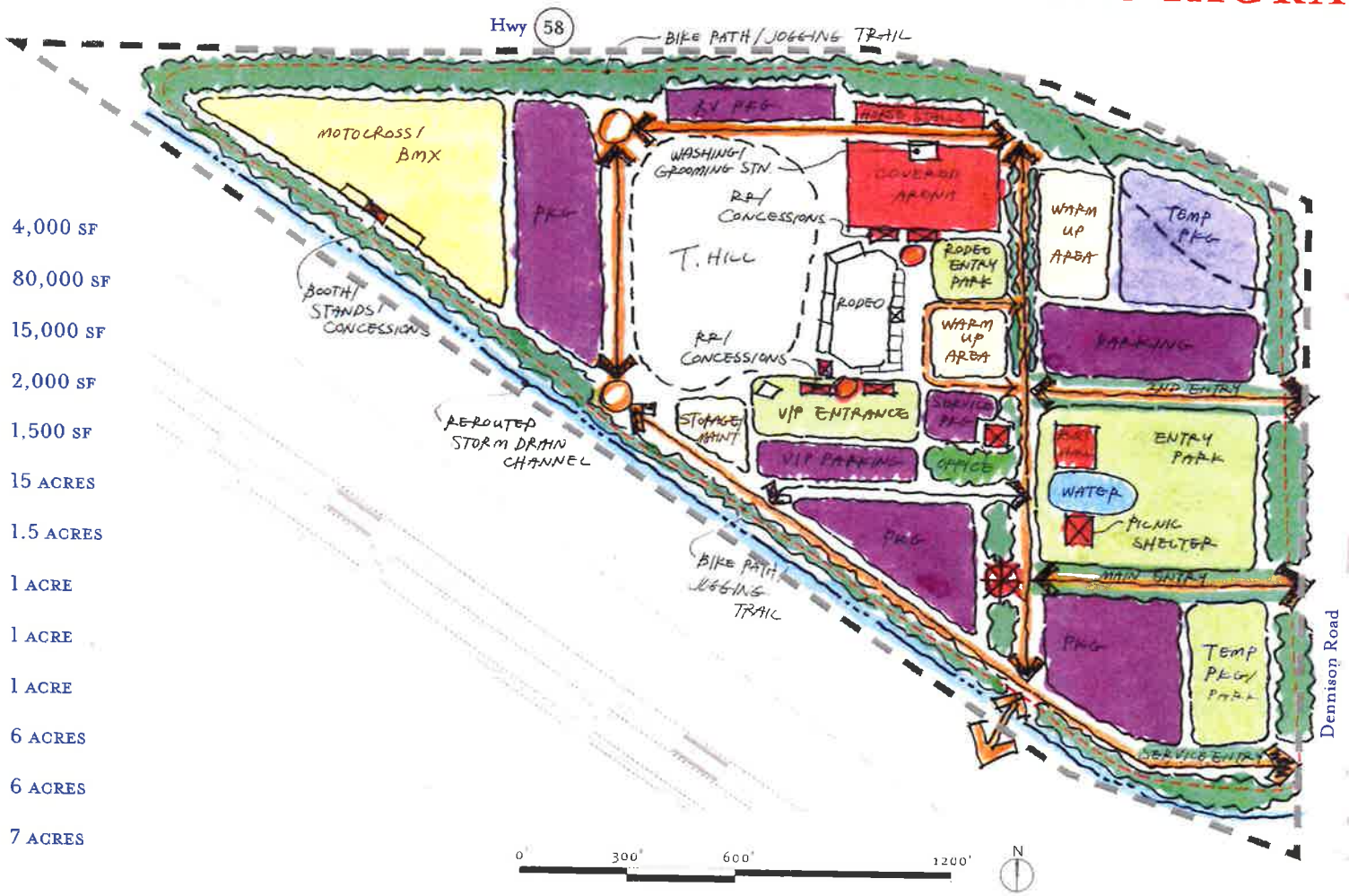
# Program Diagram

## 77 acres

| | |
|---|---|
| Picnic Shelter | 4,000 sf |
| Covered Arena | 80,000 sf |
| Banquent Hall | 15,000 sf |
| Office/Green Room | 2,000 sf |
| Restrooms/Concessions | 1,500 sf |
| Parking (1000 spaces) | 15 acres |
| VIP Parking (100 spaces) | 1.5 acres |
| RV Parking (24 sites) | 1 acre |
| Horse Stalls (24 stalls) | 1 acre |
| Horse Warm Up Area | 1 acre |
| Parks/Open Space | 6 acres |
| Green Buffer/Planting | 6 acres |
| Motocross/BMX Track | 7 acres |




TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

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# Master Plan

## Legend

1. Existing Rodeo Area
2. Picnic Shelter
3. Covered Arena
4. Banquent Hall
5. Restrooms/Concessions
6. Parking
7. VIP Parking
8. RV Parking
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20. Site Fencing
21. Entertainment Parking
22. VIP Entry/Area
23. Water Feature
24. Maintenance/Storage Area

## TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

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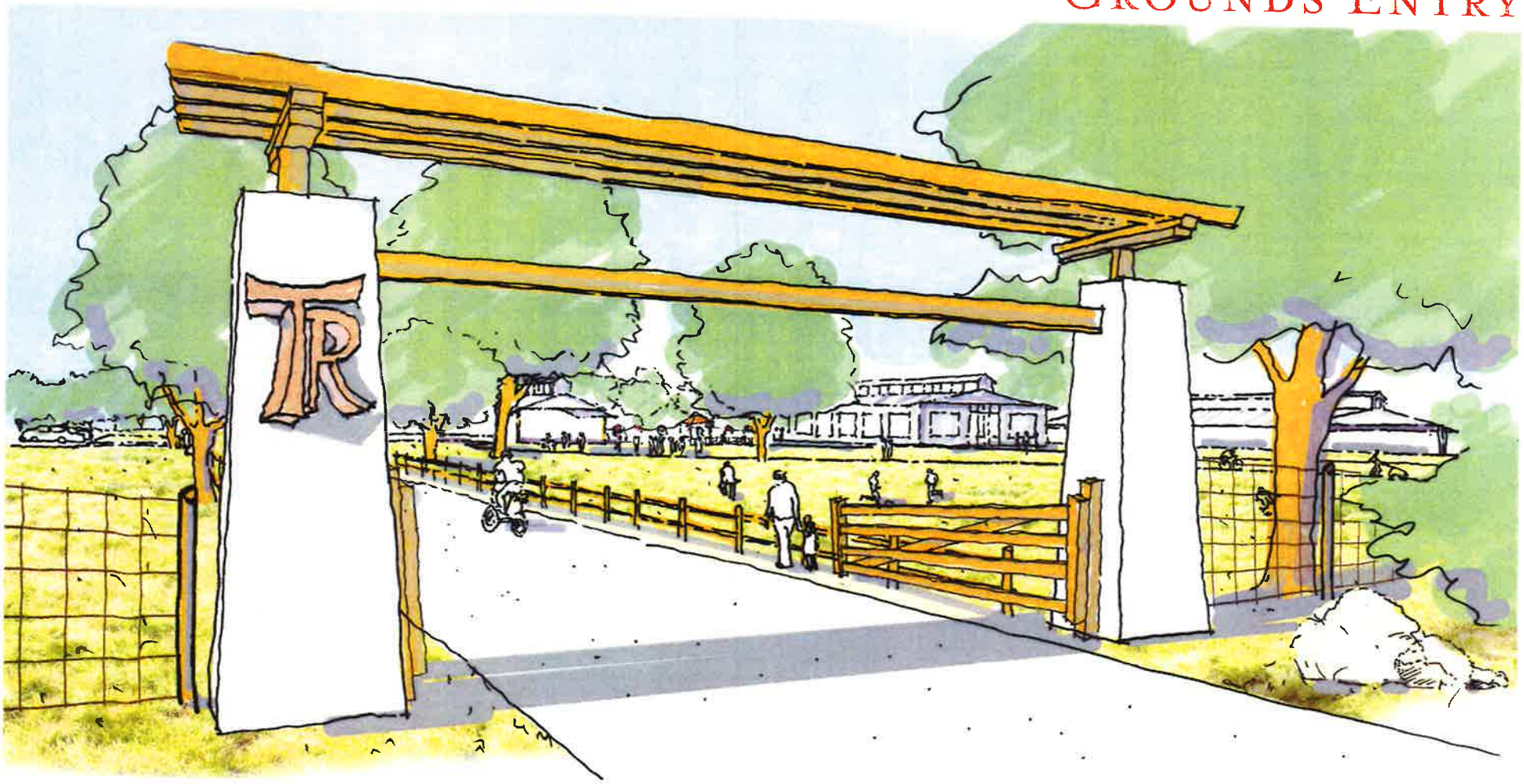
# Grounds Entry




TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

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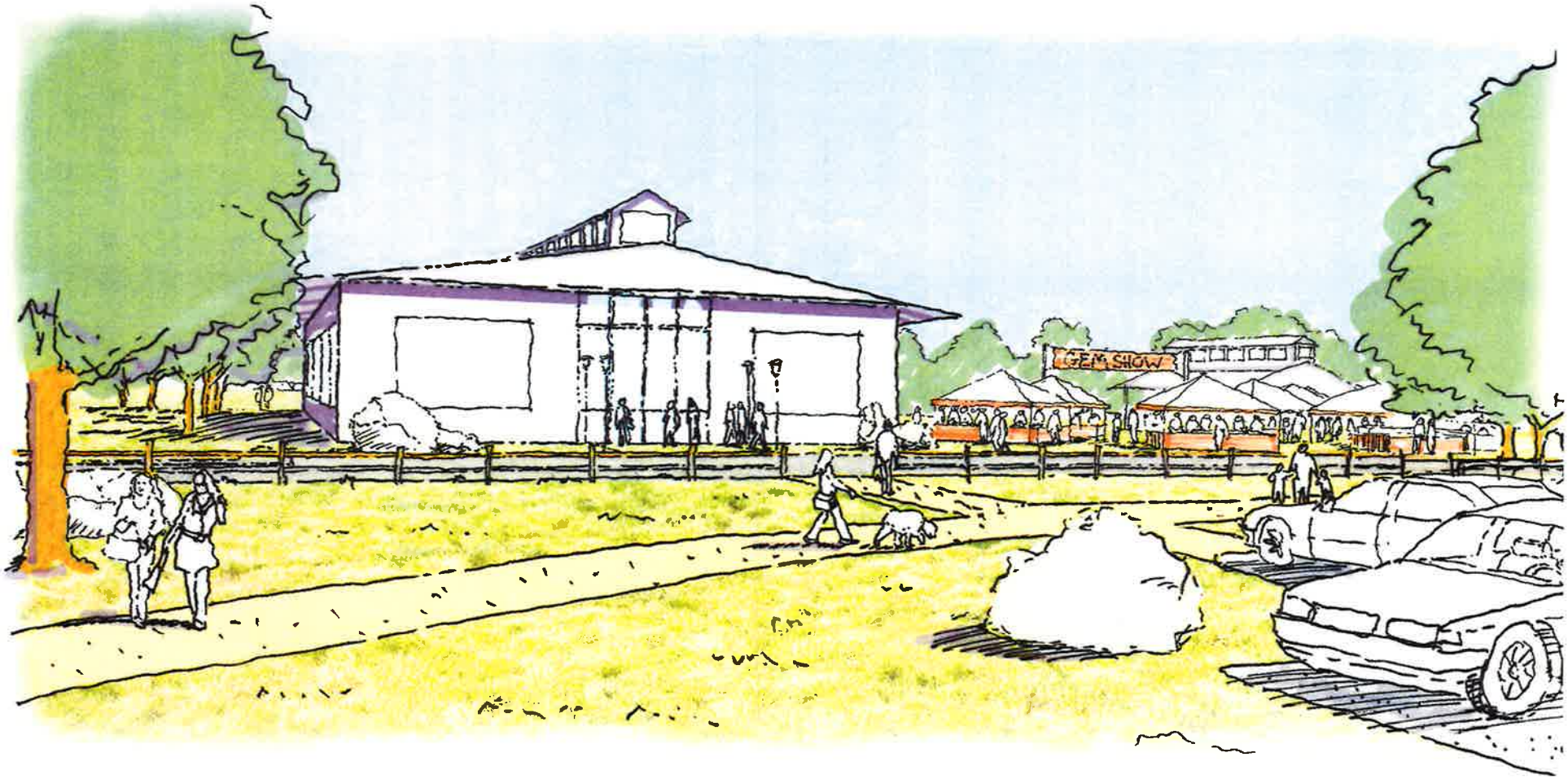
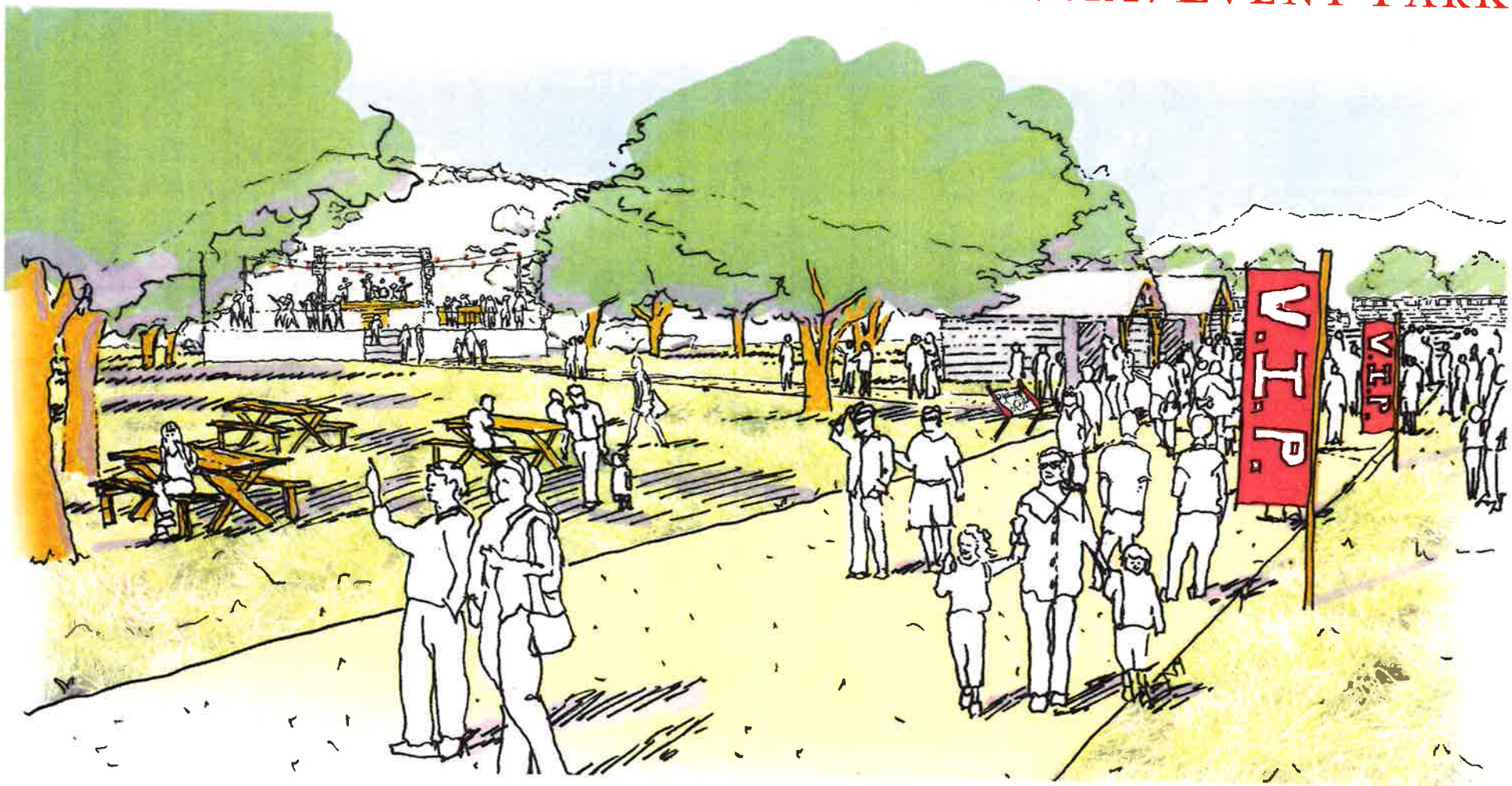
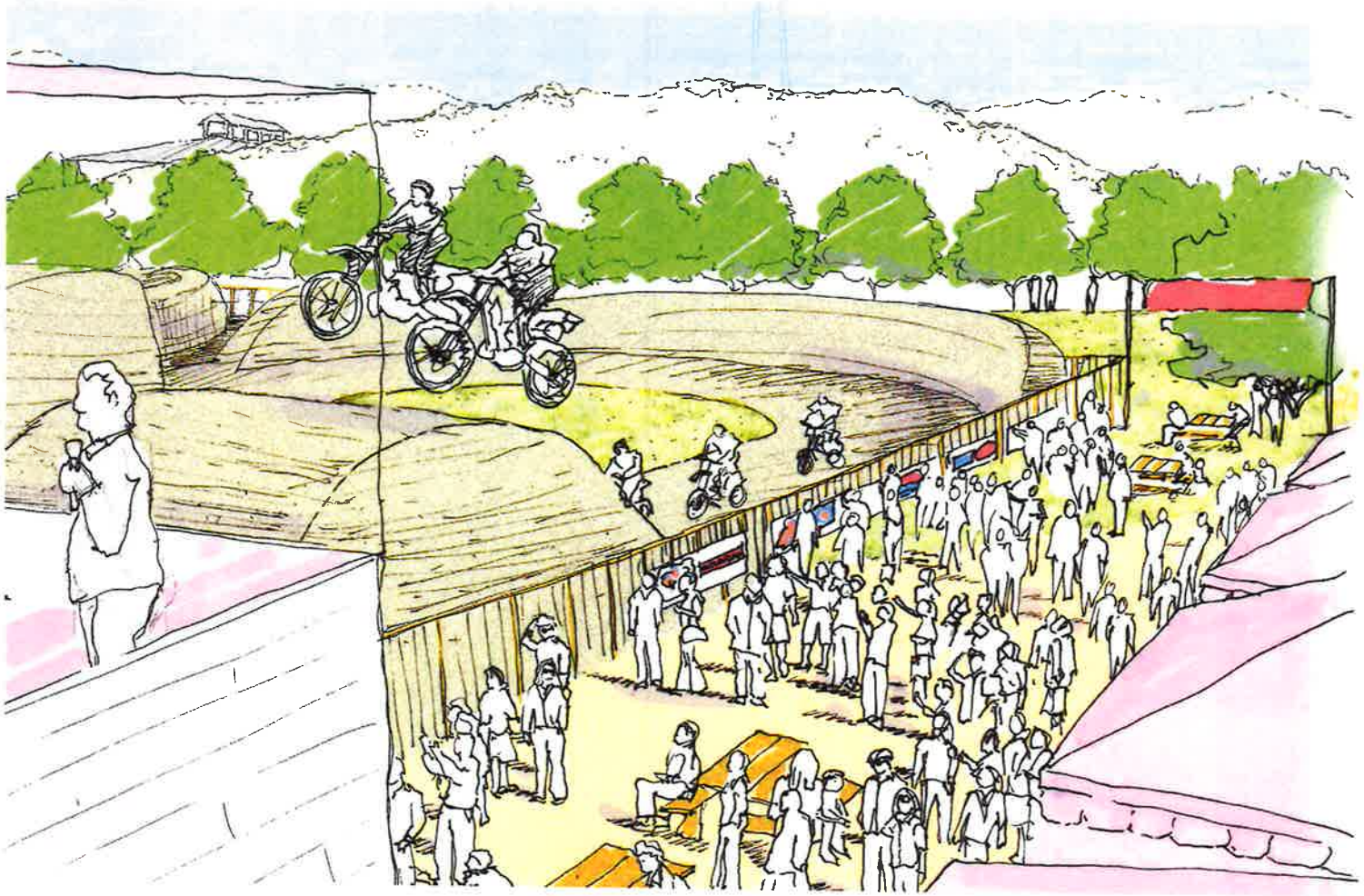
# Banquet Hall



# VIP Entry/Event Park

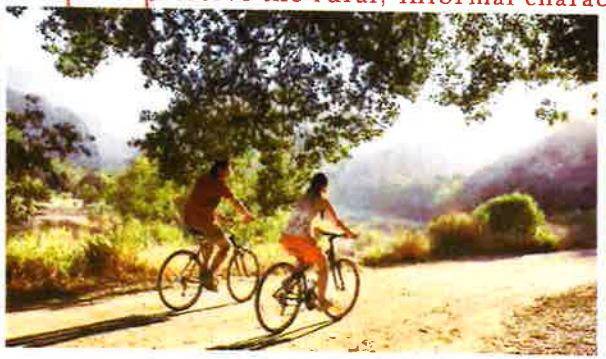


# BMX/Motocross



# Character Images

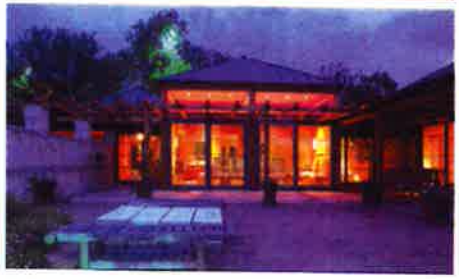
**Roads and Paths** Gravel roads and paths preserve the rural, informal character of the site.



**Green Spaces** Open grassy areas framed with trees will provide picnic and flexible event space. The strategic placement of fencing, hedges and trees will frame site areas, providing defined use areas and year-round green space.

**Parking** Parking areas are located to allow logical and strategic access to various events that will occur on site. Framed with trees and green space, the gravel lots can also be designed to infiltrate stormwater. Overflow lots can be planted with turf and used as temporary lots, allowing for alternative uses like sports.

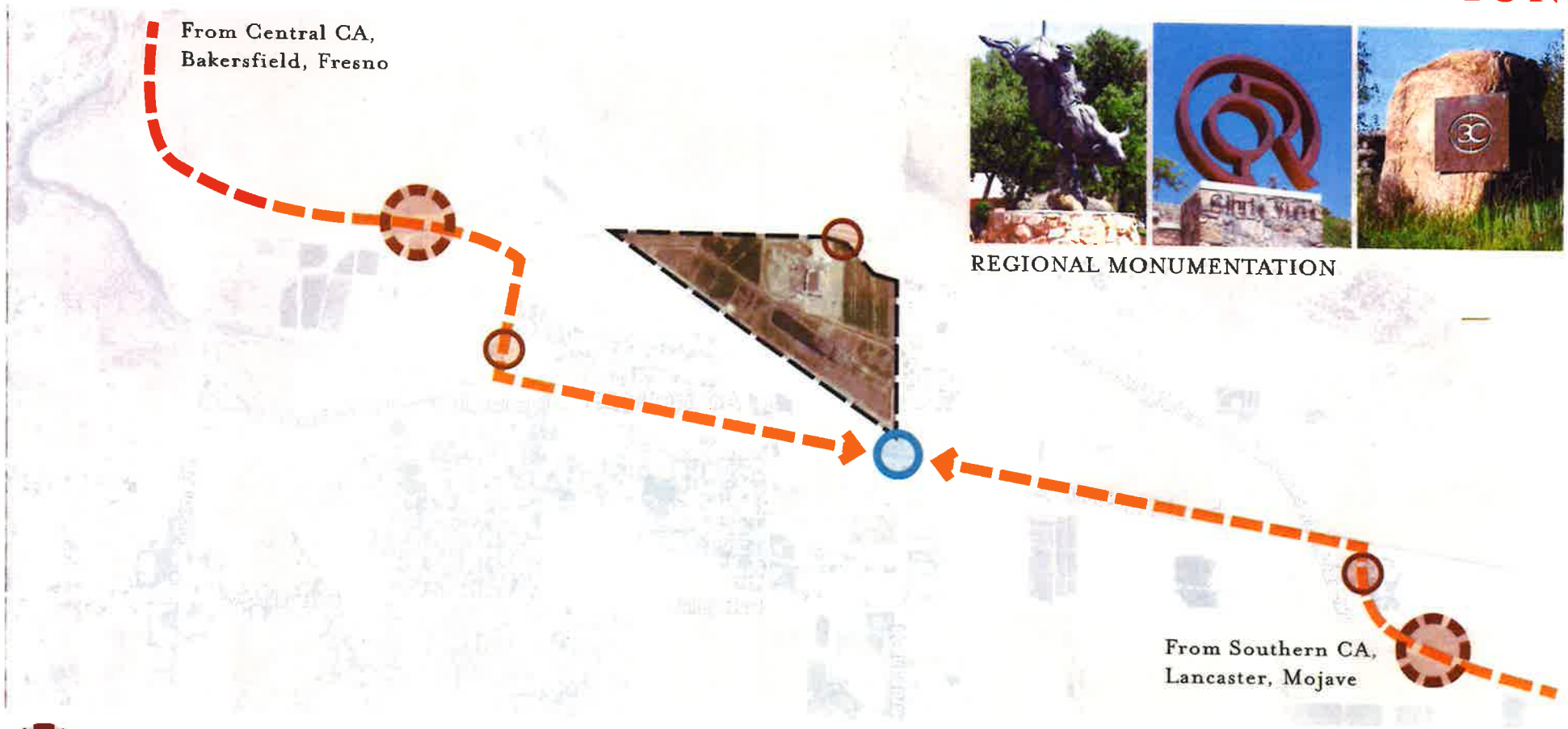
# Character Images



**Structures** Structures should be symbolic of the agricultural heritage of Tehachapi and provide shade and year round event uses.

**Events** Events on site should be expanded to a year-round schedule. From gem and mineral shows to bmx competitions and concerts, organization picnics or private events, the site is designed to handle multiple events concurrently.

# Regional Monumentation






REGIONAL MONUMENTATION

Regional Monumentation

Directional Wayfinding Sign

Primary Site Monument

TEHACHAPI EVENT CENTER & RODEO GROUNDS

February 26, 2013

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# Site Monumentation

Primary Site Monument

Site Directional Wayfinding Sign

# Costing and Phasing Diagram

## Short Term

### Phase 1

1. Entry identity, billboard
2. Planting, irrigation (rodeo adjacent and main entry streetscapes)
3. Utilities (water, sewer, electrical, drainage)
4. Site layout/grading
5. RV parking
6. Permanent restrooms (4)
7. Concessions (6)
8. Monument entryway (before July 1)
9. General conditions/ contractor overhead/ profit / fee, contingency

Sponsorship outreach

## Mid Term

### Phase 2

1. Banquet hall
2. Horse stalls/pens
3. Additional signage/ wayfinding
4. Site improvements* (road/pathways, seating, fencing, parking)
5. Planting/irrigation
6. Office/green room
7. Multi-use trail
8. Cover for future arena
9. Water feature
10. General conditions/ contractor overhead/ profit/fee, contingency

Sponsorship outreach

## Long Term

### Phase 3

1. Arena under existing cover
2. Picnic shelter
3. BMX/motocross
4. BMX/motocross parking
5. Addt'l concessions
6. General conditions/ contractor over head/profit/fee, contingency

* Assumes no site lighting

# APPENDIX B

Traffic Study

# CITY OF TEHACHAPI EVENT CENTER & RODEO GROUNDS

## Traffic/Circulation Study

AECOM Project No: 60332785

Prepared For:
City of Tehachapi

February 2, 2015

AECOM

# Event Center & Rodeo Grounds

# Traffic/Circulation Study

AECOM Project No: 60332785

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Prepared For:

City of Tehachapi

115 S. Robinson Street
Tehachapi, CA 93516

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# 1.0 INTRODUCTION

The City of Tehachapi has requested a project-specific traffic analysis of the proposed Event Center & Rodeo Grounds development on the southwest corner of Dennison Road and State Route 58 (SR-58) in Kern County, California. The project site currently hosts rodeos, junior rodeos, and explorer competitions. The project proposes to develop the Event Center Master Plan to add larger scale rodeos and concerts (up to 4,000 attendees) and smaller scale events such as motocross races, horse, dog, lama/alpaca, and gem/mineral shows (up to 400 attendees).

Aside from the existing and proposed land uses, the Event Center proposes to include a covered arena with concessions, banquet halls and picnic shelters, general offices, on-site parking lot (RV, VIP, and General Parking areas), horse stalls and warm-up area, parks and open space, and a motocross track. Figure 1 illustrates the proposed site plan.

The traffic analysis presented herein evaluates the potential impacts of the build-out of the Event Center Master Plan on the localized circulation system and identifies any measures required to reduce impacts.

## 1.1 Project Study Area

Understanding that trips to and from the proposed development would be a mix of regional and local traffic, the following nine study area intersections were selected (in consultation with City staff):

Study Area Intersections

1. Dennison Road/E Tehachapi Boulevard
2. Dennison Road/Valley Boulevard
3. SR-58 Eastbound Ramps/E Tehachapi Boulevard
4. SR-58 Westbound Ramps/E Tehachapi Boulevard
5. Mill Street/SR-58 Westbound Ramps
6. Mill Street/SR-58 Eastbound Ramps
7. Tucker Road/E Tehachapi Boulevard
8. Tucker Road/Valley Boulevard
9. Curry Road/Tehachapi Boulevard

Direct access to the project site will be available on Dennison Road between the SR-58 and Tehachapi Boulevard. It should be noted that the City has programmed and approved the Challenger Street Extension Project, which now connects Challenger Drive to Dennison Road north of the project site. The new Challenger Drive/Dennison Road intersection was not included in the analysis due to count data not being available at the time of the study. The intersection is designed to accommodate the anticipated event traffic. The project area is illustrated in Figure 2.

## 1.2 Analysis Study Periods and Scenarios

Analysis Study Periods

Traffic operations for the study area intersections were evaluated for the following three time periods that correspond to the anticipated arrival/departure patterns of patrons to and from the proposed events (based on information provided by the City):

- Weekday night peak hour (Friday 6:00 PM to 7:00 PM)
- Weekend midday peak hour (Saturday 10:00 AM to 11:00 AM)
- Weekend night peak hour (Saturday 7:00 PM to 8:00 PM)

# Master Plan

## Legend

1. Existing Rodeo Area
2. Picnic Shelter
3. Covered Arena
4. Banquent Hall
5. Restrooms/Concessions
6. Parking
7. VIP Parking
8. RV Parking
9. Horse Stalls
10. Horse Warm Up Area
11. Central Park/Park Areas
12. Green Buffer
13. Motocross/BMX Track
14. Multi-use Trail
15. Temporary Parking/Multi-use Fields
16. Performance Area
17. Identity/Wayfinding Signage
18. Office/Green Room
19. Employee Parking
20. Site Fencing
21. Entertainment Parking
22. VIP Entry/Area
23. Water Feature
24. Maintenance/Storage Area

TEHACHAPI EVENT CENTER & RODEO GROUNDS

AECOM

February 26, 2013

Figure 1: Proposed Site Plan

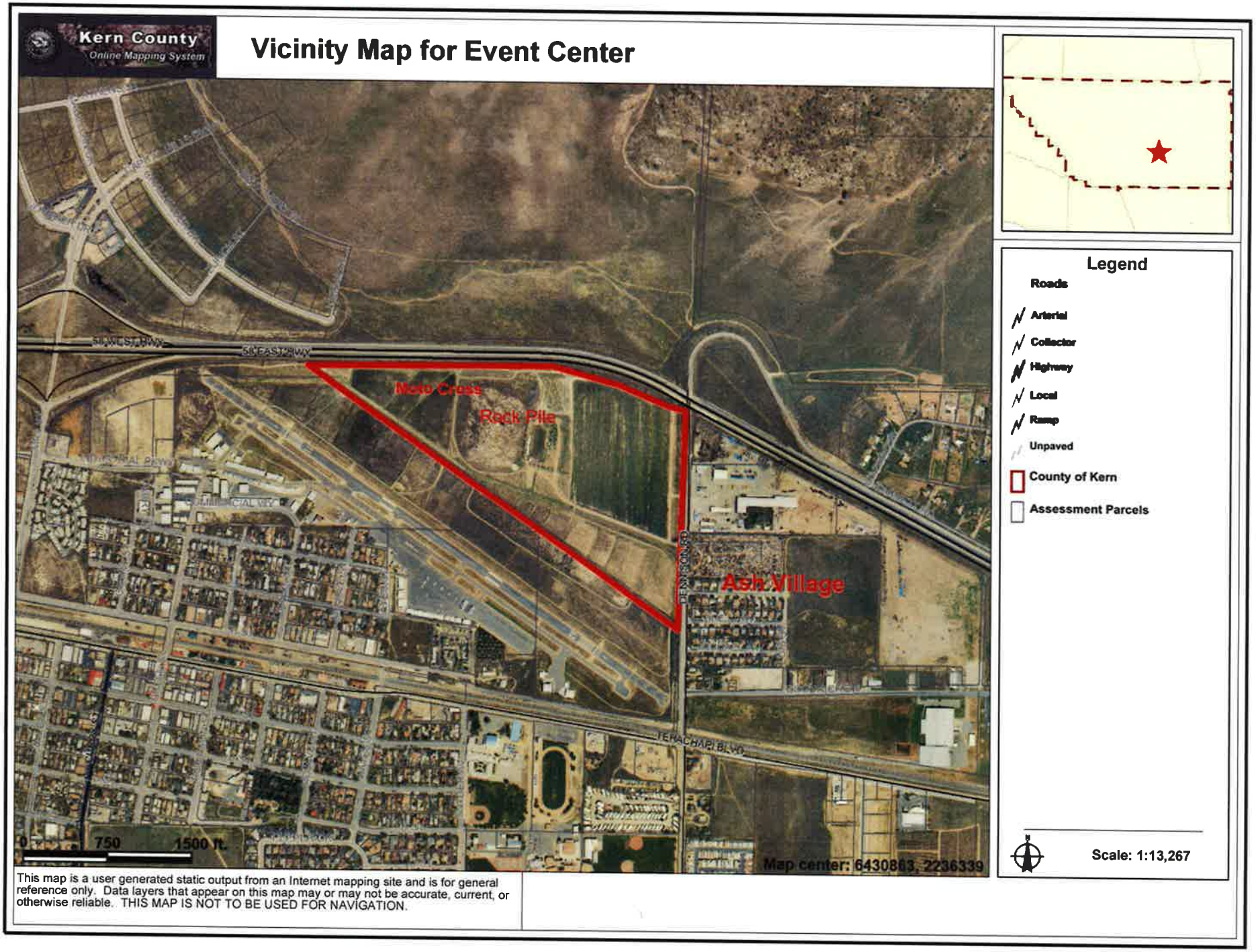



Figure 2: Project Study Area

Analysis Scenarios

Peak hour traffic operations for the study area intersections were analyzed for each of the following scenarios:

- Short-Term (2018) No Project
- Long-Term (2035) No Project
- Short-Term (2018) Plus Project
- Long-Term (2035) Plus Project

It should be noted that the Short-Term (2018) No Project scenario was used in lieu of an Existing Conditions scenario, based on direction of City staff. Roadway improvements to Challenger Drive north of the project site (specifically providing a connection for access to and from the project site) are both funded and scheduled for construction prior to the short-term analysis year (2018). These improvements will be detailed in the subsequent Short-Term discussion.

## 1.3 Analysis Methodology

This section presents the methodology used to perform the traffic analysis, consistent with the *City of Tehachapi General Plan Circulation Element,* the Kern Council of Governments' (KCOG) *Greater Tehachapi Area Circulation Study,* and the Caltrans *Guide for the Preparation of Traffic Impact Studies.* The methodology used to assess the operation of intersections in Kern County is the 2000 *Highway Capacity Manual* (HCM) method.

### 1.3.1 Intersection Operations Analysis

The computer software program Traffix (Version 8.0 R1) was used to calculate the intersection delay and resulting levels of service (LOS). Traffix is a traffic signal analysis software tool that is capable of performing intersection delay analyses using various methodologies, including the HCM method.

The HCM methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The application of the six qualitative categories of LOS that have been defined in the HCM to signalized intersections are presented in Table 1 below:

Table 1: Categories of LOS for Signalized Intersections

| LOS | Description |
|---|---|
| A | No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation. |
| B | This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles. |
| C | This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. |
| D | This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups. |
| E | Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand. |
| F | This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero. |

Source: Highway Capacity Manual (2000)

LOS criteria for traffic signals are stated in terms of the average control delay per vehicle (expressed in seconds). The two types of unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC). The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM methodology estimates the delay based on the worst approach at unsignalized intersections. Table 2 includes the LOS ranges for both intersection types.

Table 2: Levels of Service for Intersections

| Level of Service | Signalized Intersection Control Delay (seconds) | Unsignalized Intersection Control Delay (seconds) |
|---|---|---|
| A | 0 -10 | 0 – 10 |
| B | 10 – 20 | 10 – 15 |
| C | 20 – 35 | 15 – 25 |
| D | 35 – 55 | 25 – 35 |
| E | 55 – 80 | 35 – 50 |
| F | 80 or more | 50 or more |

Source: Highway Capacity Manual (2000)

### 1.3.2 Standard of Significance

The City has designated LOS C as the minimum acceptable LOS standard for intersections. Therefore, intersections operating at LOS D, E, or F are considered deficient. For Caltrans facilities (e.g., SR-58 Eastbound and Westbound Ramps), the LOS standard is the transition between LOS C and D in rural areas and LOS D and E in urban areas. As such, the upper limit of LOS C and the lower limit of LOS D would be acceptable per Caltrans guidelines. For purposes of this analysis, the LOS standard for Caltrans facilities is LOS C to remain consistent with City thresholds.

Generally, the City's threshold for an impact is when a project or physical modification would cause a study area intersection to degrade from acceptable LOS (LOS C or better) to unacceptable LOS (LOS D or worse). As part of this traffic study, the goal was either to maintain acceptable operations for all intersections or to improve deficient locations to an acceptable operation. At intersections already operating at an unacceptable LOS, any addition to the delay would be considered an impact and mitigation would be required to improve LOS to at least the pre-project condition. At impacted locations, the City's participation in the Greater Tehachapi Transportation Mitigation Fee program would satisfy any recommended mitigation measures or improvements.

### 1.3.3 Signal Warrant Analysis

Traffic signal warrant analyses were performed (where applicable) according to the guidelines described in the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) (Caltrans, 2012). In the CA MUTCD, there are 11 warrants to help determine if the intersection should be signalized that relate to factors such as volume of vehicular and pedestrian traffic, accident frequency, and school locations. The CA MUTCD indicates that a traffic signal may need to be installed if one or more of the signal warrants are met.

This study uses the peak hour volume warrant (Warrant 3) as the appropriate representative traffic signal warrant analysis. The peak hour warrant is appropriate to use in locations where the minor-street traffic suffers undue delay for a minimum of one hour of an average day when attempting to cross the major street. Traffic signal warrant analyses were performed for each of the unsignalized study area intersections.

A signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is justified. In addition, signal warrants do not always correlate with LOS. For example, an intersection may satisfy a signal warrant and operate at or above LOS C, or operate worse than LOS C and not meet a signal warrant.

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of other signal warrants may yield different results.

## 2.0 SHORT-TERM (2018) NO PROJECT CONDITIONS

This section presents an overview of the roadway system within the study area, and the methodology used to determine Short-Term (2018) background traffic volumes.

### 2.1.1 Short-Term (2018) Roadway System and Geometric Assumptions

Key roadway facilities within the City that provide access to and from the project site are described below. The classifications of all roadways are based on the City's *General Plan Circulation Element.*

- State Route 58 (SR-58): Locally, SR-58 provides the main access to the City of Tehachapi with its ramps to and from Tehachapi Boulevard. SR-58 also includes an interchange at North Mill Street to the west of the project site. The SR-58 is an east-west, four-lane divided freeway and provides regional access to all of southeast Kern County.
- Dennison Road: Dennison Road serves as the primary access route into and out of the project site via three driveways between the SR-58 and East Tehachapi Boulevard. It provides four lanes immediately adjacent to the project site and is designated as a north-south Major Arterial per the City's Circulation Element.
- Challenger Drive: Currently, Challenger Drive is an east-west, four-lane roadway located north of the project site and is accessed via the Mill Street interchange with the SR-58. It is designated as a Minor Arterial (collector) per the City's Circulation Element. Under Short-Term (2018) conditions, Challenger Drive has been extended to connect to Dennison Road via a t-intersection. The Challenger Drive Extension plans are provided in Appendix A.
- East Tehachapi Boulevard: E Tehachapi Boulevard is an east-west, two-lane roadway south of the project site and is designated as a Major Arterial per the City's Circulation Element. E Tehachapi Boulevard provides regional access to the project site via its interchange with the SR-58 east of the project site. Locally, E Tehachapi Boulevard serves as the main east-west artery within the City to connect to Dennison Road.
- Curry Street: Curry Street is a north-south, two lane roadway west of the project site and is designated as a Minor Arterial (collector) per the City's Circulation Element. Curry Street serves as the primary artery for local traffic within the City.
- Valley Boulevard: Valley Boulevard is an east-west, two-lane roadway south of the project site and is designated as a Major Arterial per the City's Circulation Element. Valley Boulevard provides local access to the project site via its intersection with Curry Street and with Dennison Road.
- Tucker Road: Tucker Road is a north-south, four-lane roadway west of the project site and is designated as a Major Arterial per the City's Circulation Element. Tucker Road provides local access to the project site via its intersections with Tehachapi Boulevard and Valley Boulevard.

Caltrans has plans to improve the intersection of SR-58 westbound ramps/Tehachapi Boulevard 2015. These improvements include widening the northbound approach to provide a separate channelized right-turn lane, restriping the westbound approach to include a left-turn pocket, and widening the south side (eastbound direction) of Tehachapi Boulevard to provide two travel lanes (for a total of three travel lanes) east of the SR-58 westbound ramp. This configuration has been included in the short-term intersection analysis.

### 2.1.2 Short-Term (2018) No Project Traffic Volumes

The methodology used to develop the background traffic forecasts for short-term (2018) conditions are described below.

Short-Term (2018) Traffic Volumes

The Short-Term (2018) background traffic is composed of existing traffic (based on the count data), background growth per year derived from the local transportation model (KCOG Travel Demand Model), and traffic from planned developments (i.e., cumulative projects).

Existing Traffic Volumes

Vehicle turning movement counts were collected at the study area intersections on Friday, August 15, 2014 (6:00 PM to 7:00 PM) and on Saturday, August 16, 2014 (10:00 AM to 11:00 AM and 7:00 PM to 8:00 PM) by National Data & Surveying Associates. As discussed previously, the count times correspond to the anticipated arrival and departure patterns for patrons of the proposed project provided by the City. Existing count data is provided in Appendix B.

Background Growth

Traffic forecasts for the Short-Term (2018) conditions were developed using the KCOG's Travel Demand Model. The model accounts for general area-wide growth in both population and employment. A linear yearly growth rate was defined by comparing the future year (2035) KCOG model traffic volumes to the baseline (2006) KCOG traffic volumes. Based on this calculation, an ambient growth rate of 2.4 percent per year (for a total of four years or 9.6 percent) was applied to the existing (2014) counts to forecast Short-Term (2018) No Project conditions. This growth rate was confirmed by Kern County staff.

Cumulative Projects

All cumulative projects anticipated to be operational by 2018 are captured in the *City of Tehachapi City-Wide Static Traffic Model* (AECOM, October 2011). Traffic identified from these cumulative projects was applied to the study area intersections. Subsequent to the traffic model, the City identified three additional cumulative projects that would be constructed within the Short-Term (2018) conditions near the project site.

- The Barn Restaurant – approximately 3,135 square feet (sf) convenience center comprised of two fast-food restaurants attached to existing Chevron gas station, located on the southeast corner of Steuber Road/Tehachapi Boulevard.
- The 58 Restaurant – approximately 7,618 sf of restaurant use, also located on the southeast corner of Steuber Road/Tehachapi Boulevard.
- Commercial Uses – although detailed plans of these planned commercial uses are not available, the City's Community Development Department requested to analyze approximately 42,471 sf of commercial uses south of the La Quinta Inn (southeast corner of Steuber Road/Tehachapi Boulevard.

The analysis assumes that all of these cumulative projects will be developed and fully operational during Short-Term (2018) conditions. Trips were generated for each cumulative project using the Institute of Transportation Engineers (ITE) *Trip Generation* (9$^{th}$ Edition). Table 3 presents the resultant weekday daily and AM and PM peak hour trip generation for the three projects.

As shown in Table 3, the cumulative projects are forecast to add approximately 7,105 weekday daily trips, with 314 occurring during the AM peak hour and 513 occurring during the PM peak hour. These trips were distributed throughout the study area based on KCOG model origin and destination pairs. Overall, approximately 8 percent of the trips were assigned west along Tehachapi Boulevard, 2 percent were assigned south on Steuber Road, 40 percent were assigned to the SR-58 eastbound ramp, 40 percent were assigned to the SR-58 westbound ramp, and 10 percent were assigned east along Tehachapi Boulevard. The resultant Short-Term (2018) intersection turning movement volumes are presented in Appendix C.

Table 3: Short-Term (2018) Cumulative Projects Trip Generation Summary

| | | | | A.M. Peak Hour | | | P.M. Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | Size | Units | Daily | In | Out | Total | In | Out | Total |
| Trip Rates[1] | | | | | | | | | |
| Shopping Center (Land use code 820) | | TSF | | | ITE Regression Equation[2] | | | | |
| High-Turnover Sit-Down Restaurant (Land use code 932 | | TSF | 127.15 | 5.95 | 4.86 | 10.81 | 5.91 | 3.94 | 9.85 |
| Fast-Food Restaurant without Drive-Through Window (Land use code 933) | | TSF | 716 | 26.32 | 17.55 | 43.87 | 13.34 | 12.81 | 26.15 |
| Cumulative Trip Generation | | | | | | | | | |
| Commercial Uses south of La Quinta Inn[3] | 42.471 | TSF | 3,892 | 57 | 37 | 94 | 171 | 185 | 356 |
| The Barn Convenience Center[4] | 3.135 | TSF | 2,244 | 83 | 55 | 138 | 42 | 40 | 82 |
| The 58 Restaurant[5] | 7.618 | TSF | 969 | 45 | 37 | 82 | 45 | 30 | 75 |
| Short-Term (2018) Cumulative Trip Total | | | 7,105 | 185 | 129 | 314 | 258 | 255 | 513 |

Source: Tehachapi Localized Traffic Study, AECOM, 2013.
Notes:
TSF = Thousand Square Feet
[1]Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition (2012).
Land Use Code 820 - Shopping Center;932 - High-Turnover (Sit-Down) Restaurant; 933 - Fast-Food Restaurant without Drive-Through Window
[2]ADT: Ln(T) = 0.65 Ln(X) + 5.83; AM: Ln(T) = 0.60 Ln(X) + 2.29; PM: Ln(T) = 0.66 Ln(X) +3.40
[3] Per the City's Community Development Director, commercial land uses will be developed south of the La Quinta Inn within a 5 year period. Therefore, trips associated with this use were added to both Short-Term (2018) and Long-Term (2035) conditions
[4] Convenience center (two fast-food restaurants) will be paired with existing Chevron gas station during Short-Term (2018) conditions and will also be included under Long-Term (2035) conditions. Includes two fast-food restaurants with no drive-through window.
[5] Restaurant use will be developed south of La Quinta Inn during Short-Term (2018) conditions and will also be included under Long-Term (2035) conditions.

Short-Term (2018) No Project Intersection LOS

A level of service analysis was conducted to evaluate Short-Term (2018) intersection operating conditions during the weekday and weekend peak hours. Table 4 summarizes the Short-Term (2018) level of service at the study area intersections. Level of service calculation worksheets are included in Appendix D.

Table 4: Short-Term (2018) No Project Intersection LOS

| ID | Intersection | Traffic Control | Peak Hour | Delay[1] | LOS |
|---|---|---|---|---|---|
| 1 | Dennison Rd/Tehachapi Blvd | AWSC | FRI PM | 14.2 | B |
| | | | SAT MID | 8.9 | A |
| | | | SAT PM | 8.6 | A |
| 2 | Dennison Rd/Valley Blvd | AWSC | FRI PM | 8.9 | A |
| | | | SAT MID | 8.0 | A |
| | | | SAT PM | 7.9 | A |
| 3 | SR-58 EB Ramps/Tehachapi Blvd | TWSC | FRI PM | 11.5 | B |
| | | | SAT MID | 10.3 | B |
| | | | SAT PM | 9.3 | A |
| 4 | SR-58 WB Ramps/Tehachapi Blvd[2] | TWSC | FRI PM | 18.2 | C |
| | | | SAT MID | 13.8 | B |
| | | | SAT PM | 10.4 | B |
| 5 | Mill St/SR-58 WB Ramps | TWSC | FRI PM | 12.3 | B |
| | | | SAT MID | 11.2 | B |
| | | | SAT PM | 9.4 | A |
| 6 | Mill St/SR-58 EB Ramps | TWSC | FRI PM | 11.0 | B |
| | | | SAT MID | 9.9 | A |
| | | | SAT PM | 9.0 | A |
| 7 | Tucker Rd/Tehachapi Blvd | Signal | FRI PM | 32.5 | C |
| | | | SAT MID | 26.5 | C |
| | | | SAT PM | 23.9 | C |
| 8 | Tucker Rd/Valley Blvd | Signal | FRI PM | 30.1 | C |
| | | | SAT MID | 25.9 | C |
| | | | SAT PM | 21.8 | C |
| 9 | Curry Rd/Tehachapi Blvd | ASWC | FRI PM | 17.9 | C |
| | | | SAT MID | 11.0 | B |
| | | | SAT PM | 8.6 | A |

Source: AECOM, 2014.
Notes: Bold and Shaded– unacceptable LOS; TWSC – two-way stop control; AWSC – all-way stop control
[1] Delay for unsignalized intersections is reported as the worst approach.
[2] Includes Caltrans' planned improvements.

As shown in Table 4, all study area intersections would operate at acceptable levels of service during Short-Term (2018) No Project conditions. Based on the signal warrant analysis (Warrant 3, Peak Hour, CA MUTCD, 2012), the intersection of Curry Road/Tehachapi Boulevard would meet the signal warrant criteria under Short-Term (2018) No Project Friday PM peak hour. The signal warrant analysis is contained in Appendix E.

# 3.0 LONG-TERM (2035) NO PROJECT CONDITIONS

The methodology used to develop the background traffic forecasts for long-term (2035) conditions is described below.

### 3.1.1 Long-Term (2035) No Project Traffic Volumes

The long-term (2035) background traffic is composed of existing traffic (based on the count data), background growth per year derived from the local transportation model (KCOG Travel Demand Model), and traffic from planned developments (i.e., cumulative projects).

Background Growth

Traffic forecasts for the long-term (2035) conditions were developed using the KCOG's Travel Demand Model. The model accounts for general area-wide growth in both population and employment. A linear yearly growth rate was defined by comparing the future year (2035) KCOG model data to the baseline (2006) KCOG model data. Based on this calculation, an ambient growth rate of 2.4 percent per year (for a total of 21 years) was applied to the existing (2014) counts to forecast a long-term (2035) condition. This growth rate was confirmed Kern County staff.

Cumulative Projects

In addition to the three cumulative projects identified under Short-Term (2018) conditions, the City included one additional cumulative project to be analyzed as part of the long-term (2035) conditions (that were not included as part of the background model growth):

- Commercial Uses – although the detailed plans of these planned commercial uses are not available, the City's Community Development Department requested to analyze approximately 54,450 sf of commercial uses south and adjacent to the Love's Travel Center

The analysis assumes that all of these cumulative projects will be developed and fully operational during long-term (2035). Trips were generated for each cumulative project using ITE *Trip Generation* (9$^{th}$ Edition). Table 5 on the following page presents the resultant daily and AM and PM peak hour trip generation for each project.

As shown in Table 5, the cumulative projects are forecast to add approximately 11,680 weekday daily trips, with 422 occurring during the AM peak hour and 932 occurring during the PM peak hour. These trips were distributed throughout the study area similar to the previously discussed Short-Term (2018) cumulative projects trip distribution. The resultant Long-Term (2035) intersection turning movement volumes are presented in Appendix C.

### 3.1.2 Long-Term (2035) Geometric Assumptions

The Caltrans planned improvements to the intersection of SR-58 westbound ramps/Tehachapi Boulevard by 2015 were included under long-term (2035) conditions, consistent with the assumptions under Short-Term (2018) conditions. The City also has a planned improvement at the intersection of Tucker Road/Tehachapi Boulevard, which is included in the *Tehachapi Region Transportation Impact Fee Program Facilities List.* This improvement calls for widening of Tehachapi Boulevard to provide a second westbound left-turn lane, installation of a southbound right-turn overlap phase on Tucker Road, and modification of the existing signal timing. All remaining study area intersection and roadway segment configurations are assumed to be the same as existing conditions.

Table 5: Long-Term (2035) Cumulative Projects Trip Generation Summary

| | | | | A.M. Peak Hour | | | P.M. Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | Size | Units | ADT | In | Out | Total | In | Out | Total |
| Trip Rates[1] | | | | | | | | | |
| Shopping Center (820) | | TSF | | | ITE Regression Equation[2] | | | | |
| High-Turnover Sit-Down Restaurant (Land use code 932 | | TSF | 127.15 | 5.95 | 4.86 | 10.81 | 5.91 | 3.94 | 9.85 |
| Fast-Food Restaurant with No Drive-Through Window (933) | | TSF | 716 | 26.32 | 17.55 | 43.87 | 13.34 | 12.81 | 26.15 |
| Cumulative Trip Generation | | | | | | | | | |
| Commercial Uses south of Love's Travel[3] | 54.450 | TSF | 4,574 | 66 | 42 | 109 | 201 | 218 | 419 |
| Commercial Uses south of La Quinta Inn[4] | 42.471 | TSF | 3,892 | 57 | 37 | 94 | 171 | 185 | 356 |
| The Barn Convenience Center[5] | 3.135 | TSF | 2,245 | 83 | 55 | 138 | 42 | 40 | 82 |
| The 58 Restaurant[5] | 7.618 | TSF | 969 | 45 | 37 | 82 | 45 | 30 | 75 |
| Short-Term (2018) Cumulative Trip Total[6] | | | 7,105 | 185 | 129 | 314 | 258 | 255 | 513 |
| Long-Term (2035) Cumulative Trip Total[7] | | | 11,680 | 251 | 171 | 422 | 459 | 473 | 932 |

Source: Tehachapi East Localized Traffic Study, AECOM, 2013.
Notes:
TSF = Thousand Square Feet
[1]Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition (2012).
Land Use Code 820 - Shopping Center and 933 - Fast-Food Restaurant with No Drive-Through Window Restaurant
[2]ADT: Ln(T) = 0.65 Ln(X) + 5.83; AM: Ln(T) = 0.60 Ln(X) + 2.29; PM: Ln(T) = 0.66 Ln(X) +3.40
[3] Per the City's Community Development Director, commercial land uses will be developed south of the Love's Travel Center within a 10-year period. Therefore, trips associated with this use were added only to Long-Term (2035) conditions
[4] Per the City's Community Development Director, commercial land uses will be developed south of the La Quinta Inn within a 5-year period. Therefore, trips associated with this use were added to both Short-Term (2018) and Long-Term (2035) conditions
[5] The Barn convenience center (two fast-food restaurants) will be paired with existing Chevron gas station and The 58 restaurant will be located south of La Quinta Inn, both during Short-Term (2018) conditions and will also be included under Long-Term (2035) conditions.
[6]Includes only commercial uses south of La Quinta Inn, The Barn, and The 58 Restaurant.
[7]Includes all cumulative projects (commercial uses south of Love's Travel Center and La Quinta Inn, The Barn, and The 58 Restaurant.

### 3.1.3 Long-Term (2035) No Project Intersection LOS

A level of service analysis was conducted to evaluate Long-Term (2035) intersection operating conditions during the weekday and weekend peak hours. Table 6 summarizes the Long-Term (2035) level of service at the study area intersections. Level of service calculation worksheets are included in Appendix D.

Table 6: Long-Term (2035) No Project Intersection LOS

| ID | Intersection | Traffic Control | Peak Hour | Delay[1] | LOS |
|---|---|---|---|---|---|
| 1 | Dennison Rd/Tehachapi Blvd | AWSC | FRI PM | 25.0 | C |
| | | | SAT MID | 12.1 | B |
| | | | SAT PM | 11.0 | B |
| 2 | Dennison Rd/Valley Blvd | AWSC | FRI PM | 9.3 | A |
| | | | SAT MID | 8.7 | A |
| | | | SAT PM | 8.4 | A |
| 3 | SR-58 EB Ramps/Tehachapi Blvd | TWSC | FRI PM | 13.2 | B |
| | | | SAT MID | 12.4 | B |
| | | | SAT PM | 10.1 | B |
| 4 | SR-58 WB Ramps/Tehachapi Blvd[2] | TWSC | FRI PM | 36.5 | E |
| | | | SAT MID | 24.6 | C |
| | | | SAT PM | 11.8 | B |
| 5 | Mill St/SR-58 WB Ramps | TWSC | FRI PM | 13.5 | B |
| | | | SAT MID | 15.9 | C |
| | | | SAT PM | 11.6 | B |
| 6 | Mill St/SR-58 EB Ramps | TWSC | FRI PM | 11.5 | B |
| | | | SAT MID | 12.6 | B |
| | | | SAT PM | 11.0 | B |
| 7 | Tucker Rd/Tehachapi Blvd[3] | Signal | FRI PM | 53.2 | D |
| | | | SAT MID | 58.9 | E |
| | | | SAT PM | 28.1 | C |
| 8 | Tucker Rd/Valley Blvd | Signal | FRI PM | 47.5 | D |
| | | | SAT MID | 52.7 | D |
| | | | SAT PM | 27.6 | C |
| 9 | Curry Rd/Tehachapi Blvd | ASWC | FRI PM | 31.1 | D |
| | | | SAT MID | 19.4 | C |
| | | | SAT PM | 11.7 | B |

Source: AECOM, 2014.
Notes:
Bold and Shaded– unacceptable LOS; TWSC – two-way stop control; AWSC – all-way stop control
[1] Delay for unsignalized intersections is reported as the worst approach.
[2] Includes Caltrans' planned improvements.
[3] Includes City's planned/programmed improvements

As shown in Table 6, the following four intersections are anticipated to operate at unacceptable LOS (LOS D or worse) under Long-Term (2035) conditions:

- SR-58 WB Ramps/Tehachapi Boulevard (Friday PM Peak Hour)
- Tucker Road/Tehachapi Boulevard (Friday PM and Saturday Midday Peak Hours)
- Tucker Road/Valley Boulevard (Friday PM and Saturday Midday Peak Hours)
- Curry Road/Tehachapi Boulevard (Friday PM Peak Hour)

Based on the signal warrant analysis (Warrant 3, Peak Hour, CA MUTCD, 2012), the intersection of Curry Road/Tehachapi Boulevard would meet the peak hour signal warrant criteria under the Short-Term (2018) No Project Friday PM and Saturday Midday peak hours. The intersection of Dennison Road/Tehachapi Boulevard would meet the signal warrant criteria under Friday PM peak hour conditions. The signal warrant analysis is included in Appendix E.

# 4.0 PROJECT IMPACT ASSESSMENT

In order to evaluate potential impacts of the Project on the surrounding circulation system, the travel demand (or trip generation) associated with the planned uses of the Project must be accurately defined. This section summarizes the trip generation calculations conducted for the Project, based on a three-step process that involves estimating travel demand, trip distribution, and trip assignment.

## 4.1.1 Project Trip Generation

The project site currently hosts rodeos, junior rodeos, and explorer competitions. The project proposes to develop the Event Center Master Plan, which would add the following uses:

- Large Events: Concerts and Rodeos with the capacity for up to 4,000 attendees;
- Standard Events: Motocross Races, Horse/Dog/Lama/Alpaca/Gem/Mineral Shows with a capacity of up to 400 attendees;
- Ancillary Uses: Covered area with concessions, banquet halls and picnic shelters, general offices, RV/VIP/General Parking areas, horse stalls with warm-up area, and parks/open space

Per City direction, it is assumed that no two events would occur simultaneously (i.e., the rodeo will not occur at the same time as the gem show). However, some of the ancillary uses such as banquet halls could occur at the same time as a large or standard event. The trip generation represents one event occurring with associated ancillary uses.

Due to the unique nature of the proposed project Friday PM, Saturday Midday, and Saturday PM peak hour trip generation was developed using a combination of trip rates contained in the Institute of Transportation Engineers (ITE) *Trip Generation* (8$^{th}$ Edition) and similar studies for each of the proposed land uses. Tables 7 through 9 summarize the trip generation during each of the analysis periods. Each time period would have slightly different trip generation characteristics such as arrival patterns and average vehicle occupancy (AVO).

Table 7: Friday PM Peak Hour Inbound Trip Generation

| Friday PM Peak Hour (6:00 PM to 7:00 PM) | |
|---|---|
| Large Event (Rodeo or Concert) | |
| Attendance[1] | 4,000 persons |
| Average Vehicle Occupancy (AVO)[2] | 2.7 persons/vehicle |
| Directional Split (%)[3] | 90 inbound/10 outbound |
| Percent Arrival During Peak Hour (%)[3] | 80 |
| Total Friday PM Peak Hour Inbound Trips | 1067 |
| Standard Event (Motocross/Dog/Gem/Mineral Show) | |
| Attendance[1] | 400 |
| Average Vehicle Occupancy[4] | 2.2 persons/vehicle |
| Directional Split (%)[4] | 88 inbound/12 outbound |
| Percent Arrival During Peak Hour (%)[4] | 90 |
| Total Friday PM Peak Hour Inbound Trips | 144 |
| Ancillary Uses (Banquet Hall/Park/Open Space) | |
| Picnic Shelter (4,000 sf)[5] | 1 |
| Banquet Hall (15,000 sf)[6] | 87 |
| Office (2,000 sf)[7] | 3 |
| Parks/Open Space (6 acres)[5] | 4 |
| Total Friday PM Peak Hour Inbound Trips | 95 |
| Large Event + Ancillary Uses Inbound Trip Generation | 1162 |
| Small Event + Ancillary Uses Inbound Trip Generation | 239 |

Notes:

[1] Attendance levels based on maximum number of seating provided per event

[2] AVO based on US Department of Transportation National Household Travel Survey (2011).

[3] Directional Split and arrival percentage based on research of similar events in similar areas.

[4] Based on the Riverside Motorsports Master Plan DEIR (EDAW, 2005).

[5] Per ITE *Trip Generation* (9th Edition) Land Use Code 412: County Park

[6] Per ITE *Trip Generation* (9th Edition) Land Use Code 435: Recreational Facility

[7] Per ITE *Trip Generation* (9th Edition) Land Use Code 710: General Office Building

Friday evening events are anticipated to begin at 7:00 PM, with gates open up to two hours prior to the scheduled event time.

Table 8: Saturday Midday Peak Hour Inbound Trip Generation

| Saturday Midday Peak Hour (10:00 AM to 11:00 AM) | |
|---|---|
| Large Event (Rodeo or Concert) | |
| Attendance | 4,000 persons |
| Average Vehicle Occupancy | 3.0 persons/vehicle |
| Directional Split (%) | 90 inbound/10 outbound |
| Percent Arrival During Peak Hour (%) | 66 |
| Total Friday PM Peak Hour Inbound Trips | 792 |
| Standard Event (Motocross/Dog/Gem/Mineral Show) | |
| Attendance | 400 |
| Average Vehicle Occupancy | 2.5 persons/vehicle |
| Directional Split (%) | 88 inbound/12 outbound |
| Percent Arrival During Peak Hour (%) | 80 |
| Total Friday PM Peak Hour Inbound Trips | 113 |
| Ancillary Uses (Banquet Hall/Park/Open Space) | |
| Picnic Shelter (4,000 sf) | 1 |
| Banquet Hall (15,000 sf) | 184 |
| Office (2,000 sf) | 1 |
| Parks/Open Space (6 acres) | 13 |
| Total Friday PM Peak Hour Inbound Trips | 199 |
| Large Event + Ancillary Uses Inbound Trip Generation | 991 |
| Small Event + Ancillary Uses Inbound Trip Generation | 312 |

Notes:

[1] Attendance levels based on maximum number of seating provided per event

[2] AVO based on US Department of Transportation National Household Travel Survey (2011).

[3] Directional Split and arrival percentage based on research of similar events in similar areas.

[4] Based on the Riverside Motorsports Master Plan DEIR (EDAW, 2005).

[5] Per ITE *Trip Generation* (9th Edition) Land Use Code 412: County Park

[6] Per ITE *Trip Generation* (9th Edition) Land Use Code 435: Recreational Facility

[7] Per ITE *Trip Generation* (9th Edition) Land Use Code 710: General Office Building

Saturday midday events are anticipated to begin at 11:00 AM, with gates open up to two hours in advance of the scheduled event time.

Table 9: Saturday PM Peak Hour Outbound Trip Generation

| Saturday PM Peak Hour (7:00 PM to 8:00 PM) | |
|---|---|
| Large Event (Rodeo or Concert) | |
| Attendance | 4,000 persons |
| Average Vehicle Occupancy | 3.0 persons/vehicle |
| Directional Split (%) | 10 inbound/90 outbound |
| Percent Departing During Peak Hour (%) | 80 |
| Total Friday PM Peak Hour Outbound Trips | 960 |
| Standard Event (Motocross/Dog/Gem/Mineral Show) | |
| Attendance | 400 |
| Average Vehicle Occupancy | 2.5 persons/vehicle |
| Directional Split (%) | 12 inbound/88 outbound |
| Percent Departing During Peak Hour (%) | 80 |
| Total Friday PM Peak Hour Outbound Trips | 113 |
| Ancillary Uses (Banquet Hall/Park/Open Space) | |
| Picnic Shelter (4,000 sf) | 1 |
| Banquet Hall (15,000 sf) | 184 |
| Office (2,000 sf) | 1 |
| Parks/Open Space (6 acres) | 13 |
| Total Friday PM Peak Hour Outbound Trips | 199 |
| Large Event + Ancillary Uses Outbound Trip Generation | 1159 |
| Small Event + Ancillary Uses Outbound Trip Generation | 312 |

Notes:

[1] Attendance levels based on maximum number of seating provided per event

[2] AVO based on US Department of Transportation National Household Travel Survey (2011).

[3] Directional Split and arrival percentage based on research of similar events in similar areas.

[4] Based on the Riverside Motorsports Master Plan DEIR (EDAW, 2005).

[5] Per ITE *Trip Generation* (9th Edition) Land Use Code 412: County Park

[6] Per ITE *Trip Generation* (9th Edition) Land Use Code 435: Recreational Facility

[7] Per ITE *Trip Generation* (9th Edition) Land Use Code 710: General Office Building

The trip generation for Saturday night events reflects patrons leaving the project site (Saturday events scheduled to end at 6:00 PM).

For the assessment of project-related impacts, the estimated trips associated with the existing uses on-site (rodeo, junior rodeos, and explorer shows) was not credited to determine the number of net new trips (i.e., trip generation of the existing uses was not subtracted from the trip generation of the proposed project). As a result, the full trip generation of the Project at each of the study area intersections was utilized.

### 4.1.2 Project Trip Distribution and Assignment

Trip distribution is the process of assigning the direction of travel from which traffic will travel to and from the project site. Trip distribution patterns (origins and destinations) for the proposed project was developed in accordance with previous traffic analysis in the adjacent area and was referenced from the *City of Tehachapi City-Wide Static Traffic Model* (AECOM, 2013). The trip distribution is summarized in Table 10 below.

Table 10: Trip Distribution Percentages

| Origin/Destination | % |
|---|---|
| *Regional* | |
| East via SR-58 | 20% |
| East via Tehachapi Boulevard | 10% |
| West via SR-58 | 30% |
| West via Valley Boulevard | 15% |
| *Local* | |
| South via Tucker/Curry/Dennison Road | 25% |

Notes:
Percentages based on previous traffic studies in the adjacent area and reflects both regional and local distribution patterns

## 5.0 SHORT-TERM (2018) PLUS PROJECT CONDITIONS

In order to identify potential significant impacts to study area intersections implementation of the Project, project-related traffic (based on the trip generation, distribution and assignment detailed above) was added to the baseline Short-Term (2018) traffic volumes, resulting in a Short-Term (2018) plus Project scenario. The intersection geometries are assumed to remain unchanged from those included in the Short-Term No Project condition.

Key Event Assumptions for Short-Term plus Project Conditions

According to City staff, only a standard event would be fully operational within the short-term analysis year (2018). The City has received a grant to construct the motocross portion of the proposed project within this time frame. The project would also have the capability to host other standard events such as dog, mineral and gems shows. To provide a conservative analysis, it is also assumed that the associated ancillary uses of the project would also be operational by 2018. As such, the Short-Term (2018) plus Project scenario analyzes the potential impacts of the trips generated by a standard event (up to 400 attendees) with associated ancillary uses.

### 5.1.1 Short-Term (2018) plus Project Intersection LOS

Table 11 summarizes the results of the intersection analysis of the nine study area intersections during Short-Term plus Project conditions. The results were compared to the Short-Term (2018) No Project conditions to determine impacts based on the previously discussed City impact criteria. The Short-Term plus Project traffic volumes are provided in Appendix C. The Short-Term plus Project level of service calculation worksheets are provided in Appendix D

Table 11: Short-Term (2018) plus Project Intersection LOS and Impact Summary

| ID | Intersection | Traffic Control | Peak Hour | 2018 No Project | | 2018 Plus Project | | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | | Delay[1] | LOS | Delay[1] | LOS | |
| 1 | Dennison Rd/Tehachapi Blvd | AWSC | FRI PM | 14.2 | B | 21.7 | C | N |
| | | | SAT MID | 8.9 | A | 11.2 | B | N |
| | | | SAT PM | 8.6 | A | 10.5 | B | N |
| 2 | Dennison Rd/Valley Blvd | AWSC | FRI PM | 8.9 | A | 9.3 | A | N |
| | | | SAT MID | 8.0 | A | 8.5 | A | N |
| | | | SAT PM | 7.9 | A | 8.4 | A | N |
| 3 | SR-58 EB Ramps/Tehachapi Blvd | TWSC | FRI PM | 11.5 | B | 11.9 | B | N |
| | | | SAT MID | 10.3 | B | 10.5 | B | N |
| | | | SAT PM | 9.3 | A | 9.4 | A | N |
| 4 | SR-58 WB Ramps/Tehachapi Blvd[2] | TWSC | FRI PM | 18.2 | C | 23.5 | C | N |
| | | | SAT MID | 13.8 | B | 17.2 | B | N |
| | | | SAT PM | 10.4 | B | 11.6 | B | N |
| 5 | Mill St/SR-58 WB Ramps | TWSC | FRI PM | 12.3 | B | 12.7 | B | N |
| | | | SAT MID | 11.2 | B | 11.7 | B | N |
| | | | SAT PM | 9.4 | A | 9.7 | A | N |
| 6 | Mill St/SR-58 EB Ramps | TWSC | FRI PM | 11.0 | B | 11.6 | B | N |
| | | | SAT MID | 9.9 | A | 10.4 | B | N |
| | | | SAT PM | 9.0 | A | 9.3 | A | N |
| 7 | Tucker Rd/Tehachapi Blvd | Signal | FRI PM | 32.5 | C | 34.8 | C | N |
| | | | SAT MID | 26.5 | C | 27.8 | C | N |
| | | | SAT PM | 23.9 | C | 24.3 | C | N |
| 8 | Tucker Rd/Valley Blvd | Signal | FRI PM | 30.1 | C | 30.9 | C | N |
| | | | SAT MID | 25.9 | C | 26.4 | C | N |
| | | | SAT PM | 21.8 | C | 22.0 | C | N |
| 9 | Curry Rd/Tehachapi Blvd | ASWC | FRI PM | 17.9 | C | 19.7 | C | N |
| | | | SAT MID | 11.0 | B | 11.7 | B | N |
| | | | SAT PM | 8.6 | A | 8.9 | A | N |

Source: AECOM, 2014.
Notes: Bold – unacceptable LOS; TWSC – two-way stop control; AWSC – all-way stop control
[1] Delay for unsignalized intersections is reported as the worst approach in seconds.
[2] Includes Caltrans' planned improvements.

As shown in Table 11, all nine study area intersections are forecast to continue to operate at an acceptable LOS (LOS C or better) with implementation of the proposed project (standard event with ancillary uses).

# 6.0 LONG-TERM (2035) PLUS PROJECT CONDITIONS

Similar to the Short-Term plus Project scenario, project-related traffic (based on the trip generation, distribution and assignment detailed above) was added to the baseline Long-Term (2035) traffic volumes, resulting in a Long-Term (2035) plus Project scenario. The intersection geometries are assumed to remain unchanged from those included in the Long-Term No Project condition.

Key Event Assumptions for Long-Term plus Project Conditions

The analysis for Long-Term (2035) conditions include implementation of the full project (i.e., large event rodeo or concert with up to 4,000 attendees with associated ancillary uses). This would represent the worst-case scenario in terms of trips generated to and from the project site. The trip distribution for the large event would be consistent with the travel patterns discussed previously for the standard event.

## 6.1.1 Long-Term (2035) plus Project Intersection LOS

Table 12 below summarizes the results of the intersection analysis of the nine study area intersections during Long-Term plus Project conditions. The results were compared to the Long-Term (2035) No Project conditions to determine impacts based on the previously discussed City impact criteria. The Long-Term plus Project traffic volumes are provided in Appendix C. The Long-Term plus Project level of service calculation worksheets are provided in Appendix D.

Table 12: Long-Term (2035) plus Project Intersection LOS and Impact Summary

| ID | Intersection | Traffic Control | Peak Hour | 2035 No Project | | 2035 Plus Project | | Significant Impact? |
|---|---|---|---|---|---|---|---|---|
| | | | | Delay[1] | LOS | Delay[1] | LOS | |
| 1 | Dennison Rd/Tehachapi Blvd | AWSC | FRI PM | 25.0 | C | >50.0 | F | Y |
| | | | SAT MID | 12.1 | B | >50.0 | F | Y |
| | | | SAT PM | 11.0 | B | >50.0 | F | Y |
| 2 | Dennison Rd/Valley Blvd | AWSC | FRI PM | 9.3 | A | 13.3 | B | N |
| | | | SAT MID | 8.7 | A | 11.7 | B | N |
| | | | SAT PM | 8.4 | A | 9.8 | A | N |
| 3 | SR-58 EB Ramps/Tehachapi Blvd | TWSC | FRI PM | 13.2 | B | 18.1 | C | N |
| | | | SAT MID | 12.4 | B | 15.6 | C | N |
| | | | SAT PM | 10.1 | B | 12.5 | B | N |
| 4 | SR-58 WB Ramps/Tehachapi Blvd[2] | TWSC | FRI PM | 36.5 | E | >50.0 | F | Y |
| | | | SAT MID | 24.6 | C | >50.0 | F | Y |
| | | | SAT PM | 11.8 | B | 33.9 | D | Y |
| 5 | Mill St/SR-58 WB Ramps | TWSC | FRI PM | 13.5 | B | 16.5 | C | N |
| | | | SAT MID | 15.9 | C | 19.9 | C | N |
| | | | SAT PM | 11.6 | B | 13.9 | B | N |
| 6 | Mill St/SR-58 EB Ramps | TWSC | FRI PM | 11.5 | B | 15.8 | C | N |
| | | | SAT MID | 12.6 | B | 18.9 | C | N |
| | | | SAT PM | 11.0 | B | 11.2 | B | N |
| 7 | Tucker Rd/Tehachapi Blvd | Signal | FRI PM | 53.2 | D | 54.8 | D | Y |
| | | | SAT MID | 58.9 | E | 59.1 | E | Y |
| | | | SAT PM | 28.1 | C | 31.3 | C | N |
| 8 | Tucker Rd/Valley Blvd | Signal | FRI PM | 47.5 | D | 57.5 | E | Y |
| | | | SAT MID | 52.7 | D | 59.9 | E | Y |
| | | | SAT PM | 27.6 | C | 32.2 | C | N |
| 9 | Curry Rd/Tehachapi Blvd | ASWC | FRI PM | 31.1 | D | >50.0 | F | Y |
| | | | SAT MID | 19.4 | C | 37.7 | E | Y |
| | | | SAT PM | 11.7 | B | 17.5 | C | N |

Source: AECOM, 2014.
Notes: Bold – unacceptable LOS; TWSC – two-way stop control; AWSC – all-way stop control
[1] Delay for unsignalized intersections is reported as the worst approach in seconds.
[2] Includes Caltrans' planned improvements.

As shown in Table 12, the following five study area intersections are forecast to be impacted with implementation of the proposed project (large event with ancillary uses):

- Dennison Road/Tehachapi Boulevard (All peak hours)
- SR-58 WB Ramps/Tehachapi Boulevard (all peak hours)
- Tucker Road/Tehachapi Boulevard (Friday PM and Saturday Midday Peak Hours)
- Tucker Road/Valley Boulevard (Friday PM and Saturday Midday Peak Hours)
- Curry Road/Tehachapi Boulevard (Friday PM and Saturday Midday Peak Hours)

Based on the signal warrant analysis (Warrant 3, Peak Hour, CA MUTCD, 2012), the intersections of Dennison Road/Tehachapi Boulevard, SR-58 WB Ramps/Tehachapi Boulevard, and Curry Road/Tehachapi Boulevard would meet the peak hour signal warrant criteria under each of the impacted peak hours. The signal warrant analysis is included in Appendix E.

# 7.0 MITIGATION MEASURES

The purpose of this section is to provide recommended improvements for the impacted locations. Improvements for any impacted locations were determined by utilizing the minimum requirements to achieve acceptable LOS. As such, the most cost-effective and simple improvements were considered first, such as restriping of lane configurations and traffic control modifications. Large-scale improvements, such as installation of a new traffic signal or any lane additions (which may or may not require additional right-of-way), were recommended where necessary to achieve acceptable LOS. As previously noted, the City's participation in the Greater Tehachapi Transportation Mitigation Fee program would satisfy any mitigation requirements.

## 7.1.1 Short-Term (2018) plus Project Impacts

As shown in Table 11, all study area intersections would continue to operate at acceptable LOS (LOS C or better) with implementation of the proposed project (standard event with ancillary uses). As such, there no impacts have been identified for Short-Term (2018) plus Project conditions.

## 7.1.2 Long-Term (2035) plus Project Impacts

As shown in Table 12, five of the nine study area intersections would be impacted with implementation of the proposed project (large event with ancillary uses). The project would either cause the intersection to go from acceptable LOS to unacceptable or cause to delay at intersections already operating at unacceptable levels to increase. The following mitigation measures are recommended either to achieve acceptable LOS or to achieve at least the pre-project LOS.

TRA-1 Dennison Road/Tehachapi Boulevard: Implementation of the project would cause this location to degrade from acceptable LOS to unacceptable LOS during all study peak hours. Since this intersection is not anticipated to operate at unacceptable LOS under the Long-Term No Project scenario, a permanent mitigation measure is not recommended. Instead, event-day temporary traffic controls should be deployed for at least two hours prior and one hour after each large event. Traffic Control Officers (TCO's) are recommended at the stop-controlled intersection

of Dennison Road/Tehachapi Boulevard to increase capacity and minimize delays for vehicles destined to the project site, which would operate similarly to a traffic signal.

TRA-2 SR-58 WB Ramps/Tehachapi Boulevard: Implementation of the project would cause this location to degrade from acceptable LOS to unacceptable LOS or add delay during all study peak hours. Since this intersection is anticipated to operate at unacceptable LOS under the Long-Term No Project scenario (Friday PM peak hour) and has been identified as impacted per other studies (*Tehachapi Localized Traffic Study,* AECOM June 2013) in 2035 conditions, a permanent mitigation measure is recommended.

As part of the *Tehachapi Localized Traffic Study,* installation of a traffic signal was recommended for the SR-58 WB Ramps/Tehachapi Boulevard intersection. Applying the same mitigation measure to the Long-Term (2035) plus Project scenario would mitigate the impact at this location, as shown in Table 13 below:

Table 13: SR-58 WB Ramps/Tehachapi Boulevard Mitigated LOS

| | Intersection | Peak Hour | Long-Term No Project | | Long-Term With Project | | Long-Term Mitigation | | Significant Impact Remaining? |
|---|---|---|---|---|---|---|---|---|---|
| 4 | SR-58 WB Ramps/ Tehachapi Blvd | FRI PM | 36.5 | E | 312.5 | F | 18.0 | B | N |
| | | SAT MID | 24.6 | C | 194.2 | F | 17.0 | B | N |
| | | SAT PM | 11.8 | B | 33.9 | D | 15.1 | B | N |

Source: AECOM, 2014

TRA-3 Tucker Road/Tehachapi Boulevard: Implementation of the project would cause the delay to increase slightly during Friday PM and Saturday Midday peak hours. Since this intersection is anticipated to operate at unacceptable LOS under the Long-Term No Project scenario (Friday PM and Saturday Midday peak hour) and has been identified as impacted per other studies (*Tehachapi City-Wide Traffic Model Improvement Program,* AECOM December 2011) in 2021 conditions, a permanent mitigation measure is recommended.

As part of the *Tehachapi City-Wide Traffic Model Improvement Program,* the traffic signal was recommended to be modified to provide a northbound right-turn overlap phase at the Tucker Road/Tehachapi Boulevard intersection. Applying the same mitigation measure to the Long-Term (2035) plus Project scenario would mitigate the impact at this location, as shown in Table 14 below:

Table 14: Tucker Road/Tehachapi Boulevard Mitigated LOS

| | Intersection | Peak Hour | Long-Term No Project | | Long-Term With Project | | Long-Term Mitigation | | Significant Impact Remaining? |
|---|---|---|---|---|---|---|---|---|---|
| 7 | Tucker Road/ Tehachapi Blvd | FRI PM | 53.2 | D | 54.8 | D | 40.2 | D | N |
| | | SAT MID | 58.9 | E | 59.1 | E | 40.4 | D | N |
| | | SAT PM | 28.1 | C | 31.3 | C | - | - | - |

Source: AECOM, 2014

TRA-4 Tucker Road/Valley Boulevard: Implementation of the project would cause the delay to increase slightly during Friday PM and Saturday Midday peak hours. Since this intersection is anticipated to operate at unacceptable LOS under the Long-Term No Project scenario (Friday PM and Saturday Midday peak hour) and has been identified as impacted per other studies (*Tehachapi City-Wide Traffic Model Improvement Program,* AECOM December 2011) in 2021 conditions, a permanent mitigation measure is recommended.

As part of the *Tehachapi City-Wide Traffic Model Improvement Program,* it was recommended that the southbound outside lane be formally striped as an exclusive right-turn lane (vehicles currently utilize the 10-foot wide outside (curb) lane to conduct right-turns although not formally striped) at the Tucker Road/Tehachapi Boulevard intersection. Restriping of the eastbound and westbound approaches on Valley Boulevard to provide one left-turn lane, one through lane, and one shared-through right-turn lane (the current configuration is one left, one through, and one right) along with signal timing modifications were also recommended. Applying the same mitigation measure to the Long-Term (2035) plus Project scenario would mitigate the impact at this location, as shown in Table 15 below:

Table 15: Tucker Road/Tehachapi Boulevard Mitigated LOS

| | Intersection | Peak Hour | Long-Term No Project | | Long-Term With Project | | Long-Term Mitigation | | Significant Impact Remaining? |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Tucker Road/ Valley Blvd | FRI PM | 47.5 | D | 57.5 | E | 46.2 | D | N |
| | | SAT MID | 52.7 | D | 59.9 | E | 49.4 | D | N |
| | | SAT PM | 27.6 | C | 32.2 | C | - | - | - |

Source: AECOM, 2014

TRA-5 Curry Road/Tehachapi Boulevard: Implementation of the project would more than double the delay during the Friday PM peak hour and would cause the intersection to go from acceptable LOS C to unacceptable LOS E during the Saturday Midday peak hour. Considering that a signal is warranted during both Short-Term and Long-Term No Project conditions, installation of a traffic signal is recommended. The resulting LOS from the mitigation measure is presented in Table 16 below.

Table 16: Curry Road/Tehachapi Boulevard Mitigated LOS

| | Intersection | Peak Hour | Long-Term No Project | | Long-Term With Project | | Long-Term Mitigation | | Significant Impact Remaining? |
|---|---|---|---|---|---|---|---|---|---|
| 9 | Curry Road/ Tehachapi Blvd | FRI PM | 31.1 | D | 78.1 | F | 12.1 | B | N |
| | | SAT MID | 19.4 | C | 37.7 | E | 11.5 | B | N |
| | | SAT PM | 11.7 | B | 17.5 | C | - | - | - |

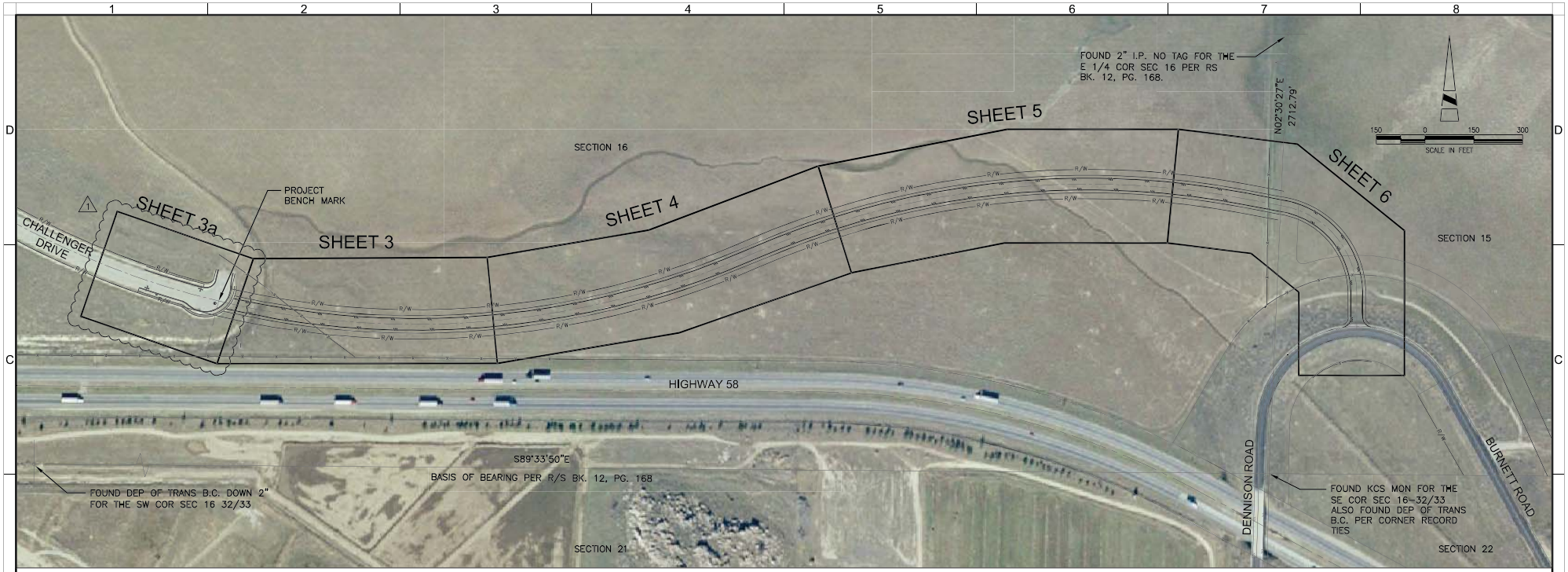
Source: AECOM, 2014

# 8.0 CONCLUSIONS

Based on the results of the level of service analysis, and with the proposed mitigation measures, the proposed Event Center & Rodeo Grounds project can be both constructed and implemented without significantly impacting any of the study area intersections under Short-Term (2018) and Long-Term (2035) conditions.

# APPENDIX A

# CHALLENGER DRIVE EXTENSION PLANS




## GENERAL NOTES

1. WORK SHALL BE PERFORMED ACCORDING TO THE LATEST EDITION OF THE CITY OF TEHACHAPI SUBDIVISION AND DEVELOPMENT STANDARDS (CTSDS) AND ANY SPECIAL PERMITTING REQUIREMENTS.
2. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 2 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
3. ALL WORK WITHIN CITY STREETS SHALL BE EXECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND THE PUBLIC.
4. ALL MATERIALS SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE PRIOR TO BEING USED FOR CONSTRUCTION. THE OWNER'S REPRESENTATIVE HAS THE AUTHORITY TO REJECT THE USE OF MATERIALS WHICH ARE DAMAGED OR NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS.
5. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES AND TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES AND IMPROVEMENTS FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.
6. ALL UTILITIES FRAMES AND COVERS, INCLUDING SEWER AND STORM DRAIN MANHOLES AND WATER VALVES ARE TO BE ADJUSTED FLUSH WITH NEW FINISH GRADE PER CTSDS, SHEET NO. 3.7
7. THE CONTRACTOR SHALL ADHERE TO ALL GRADES, LINES AND LEVELS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WITH SERVICES IN THE AREA PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES AND SHALL COORDINATE WITH THE UTILITY FACILITIES AFFECTED BY THE CONSTRUCTION.
9. SURVEY MONUMENTS SHALL BE PROTECTED IN PLACE BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REPLACEMENT OF DAMAGED OR DISPLACED SURVEY MONUMENTS AND SHALL NOTIFY THE CITY FIVE (5) WORKING DAYS PRIOR TO RESTORING MONUMENTS. MONUMENTS SHALL BE RESET BY A CALIFORNIA LICENSED LAND SURVEYOR.
10. CONTRACTOR SHALL RELOCATE ALL STREET DESIGNATION SIGNS BEHIND HANDICAP RAMP PER CTSDS SHEET NO. 5.12
11. THE CONTRACTOR AGREES UPON SUBMISSION OF HIS/HER BID THAT HE/SHE HAS VISITED THE SITE AND IS AWARE OF ANY OBSTRUCTIONS THAT AFFECT THE PROJECT COST. AND THAT HIS/HER BID IS SUFFICIENT TO COVER RELEVANT EXPENSES.
12. CONTRACTOR SHALL REPLACE IN KIND ANY AND ALL STRIPING AND SIGNAGE DAMAGED OR REMOVED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

## BENCH MARK USED:

THE BENCH MARK USED FOR THIS PROJECT IS THE TOP OF MONUMENT AT THE INTERSECTION OF CHALLENGER DRIVE AND VIENNA STREET, ELEV. 3960.03

## GRADING QUANTITIES (BASE BID):

ALL QUANTITIES WERE CALCULATED BASED ON A 3-INCH LOSS DUE TO CLEARING AND GRUBBING OF SITE.

| | |
|---|---|
| CUT | 7,035 cy |
| OVER-EXCAVATION | 11,424 cy |
| FILL* (INCLUDES OVER-EX.) | 17,177 cy |
| IMPORT* | 2,978 cy |
| COMPACTION FACTOR | 130% |
| GROSS GRADING AREA | 6.26 AC |

* FILL QUANTITIES ARE "COMPACTED IN-PLACE" VOLUMES.

NOTE:
QUANTITIES CALCULATED USING PAVEMENT STRUCTURAL SECTIONS SHOWN ON SHEET C-07.

## BASIS OF BEARING:

THE BEARING OF S89°33'50"E AS SHOWN ON R/S BK 12, PG 168 FOR THE SOUTH LINE OF SECTION 16 T. 32 S., R. 33 E., WAS USED AS THE BASIS OF BEARING FOR THIS MAP.

## GRADING QUANTITIES (WITH LIME TREATMENT):

| | |
|---|---|
| CUT | 4,120 cy |
| OVER-EXCAVATION | 11,424 cy |
| FILL* (INCLUDES OVER-EX.) | 18,164 cy |
| IMPORT* | 6,207 cy |

## LEGEND:

- R/W — RIGHT-OF-WAY
- FENCE
- EDGE OF PAVEMENT
- SWALE CENTERLINE
- MBGR

| REV | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | 1/9/14 | REVISED SHEET | |

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
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DESIGNED BY: DSC
DRAWN BY: DTG
CHECKED BY: JHS
DATE: APRIL 2011
PROJECT ENGINEER: DANIEL S. CRONQUIST
REG NUMBER: 73077 EXP DATE: 12-31-12
PROJECT NUMBER: 60147430
CADD STANDARDS: AECOM

REGISTERED PROFESSIONAL ENGINEER DANIEL S. CRONQUIST No. 73077 Exp. 12/31/12 CIVIL STATE OF CALIFORNIA

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CHALLENGER DRIVE EXTENSION PROJECT

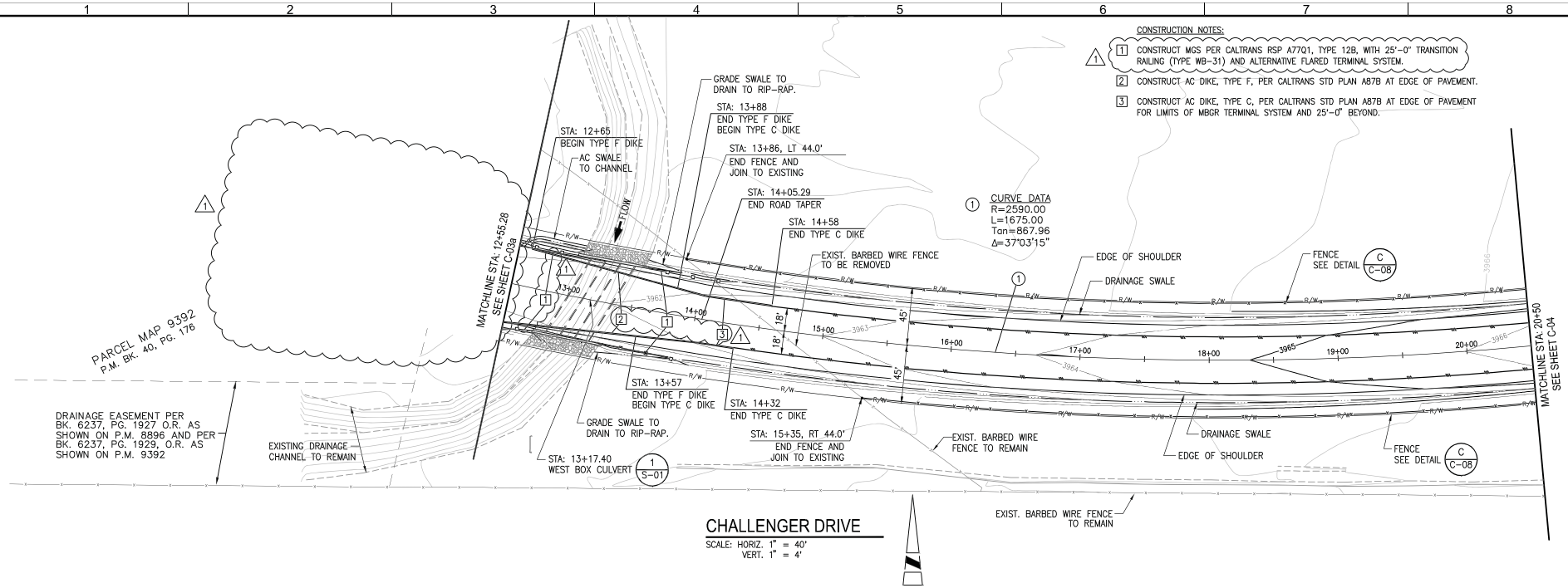
SHEET INDEX AND GENERAL NOTES

DRAWING C-02
SHEET 2 OF 12 SHEETS
S-2441

DWG: S:\TCM\60194903 Challenger Final Design\CAD\LEO\dwg\C-02.dwg Layout Name: C-02 - Plotted by: Ghilarducci, David Date: 1/27/2014 - 11:38 AM
XREFS: C-BB XAREF: Aerial-adjusted - TEHACHAPI TEAL.png -

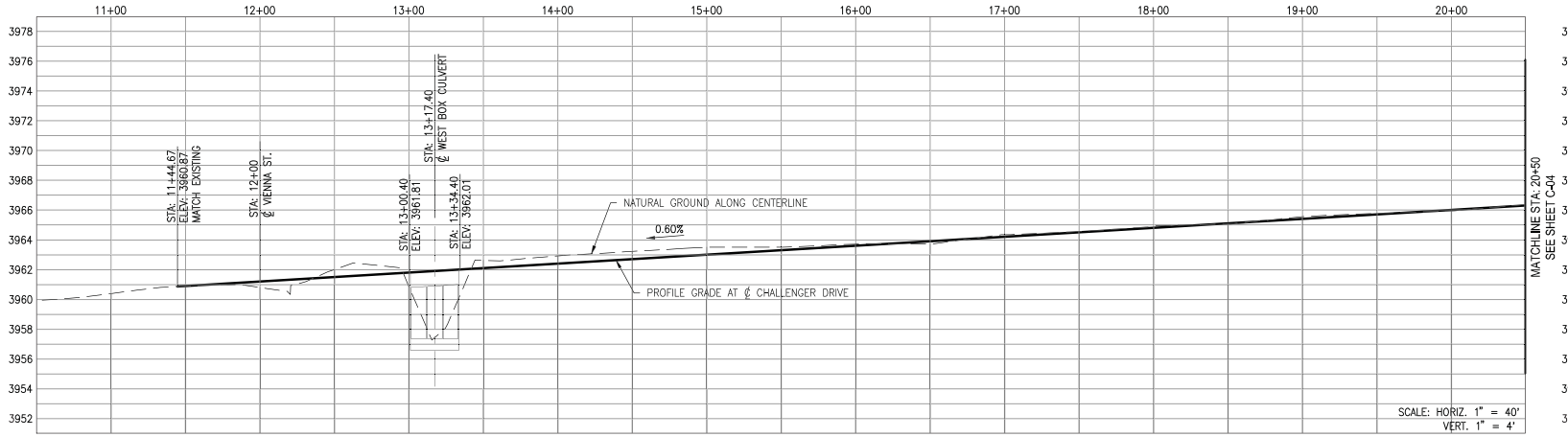
CONSTRUCTION NOTES:

1. CONSTRUCT MGS PER CALTRANS RSP A77Q1, TYPE 12B, WITH 25'-0" TRANSITION RAILING (TYPE WB-31) AND ALTERNATIVE FLARED TERMINAL SYSTEM.
2. CONSTRUCT AC DIKE, TYPE F, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT.
3. CONSTRUCT AC DIKE, TYPE C, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT FOR LIMITS OF MBGR TERMINAL SYSTEM AND 25'-0" BEYOND.




## CHALLENGER DRIVE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'




| REV | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | 1/9/14 | REVISED INTERSECTION | |

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CHECKED BY: JHS
DATE: APRIL 2011

PROJECT ENGINEER: DANIEL S. CRONQUIST
REG NUMBER: 73077
EXP DATE: 12-31-12
PROJECT NUMBER: 60147430
CADD STANDARDS: AECOM

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PLAN AND PROFILE
STA. 12+55.28 TO STA. 20+50

DRAWING: C-03
SHEET 3 OF 12 SHEETS
S-2441

DWG: S:\T08\60194903 Challenger Final Design\CAD\LEDS\dwg\C-03 - C-07.dwg Layout Name: C-03 - Plotted by: Ghilarducci, David Date: 1/27/2014 - 11:40 AM
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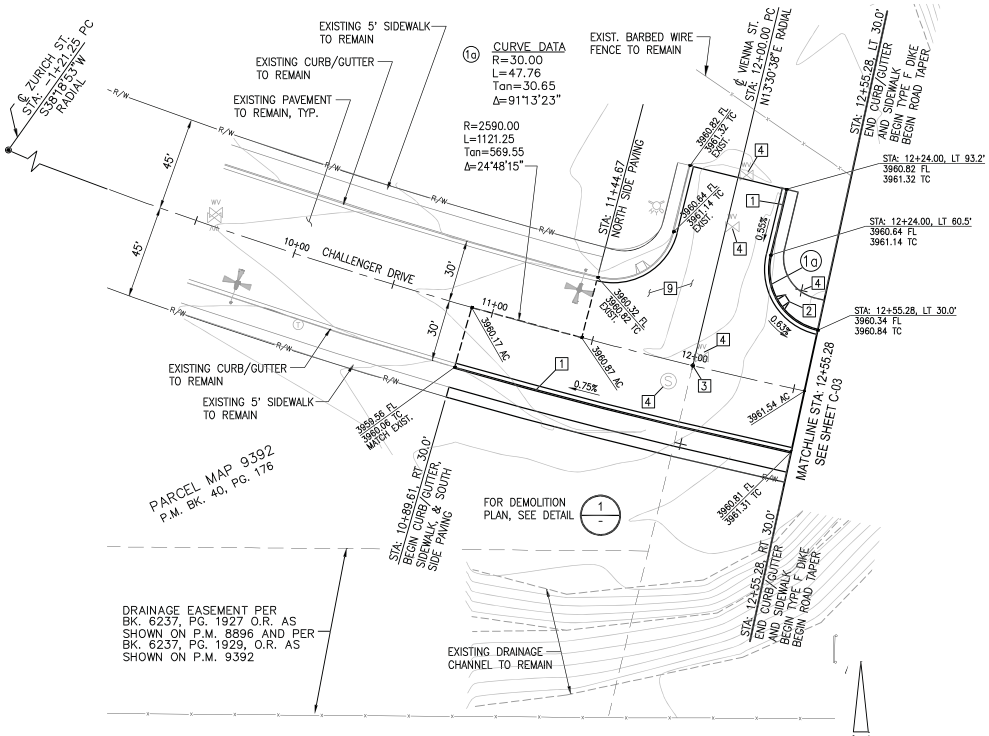
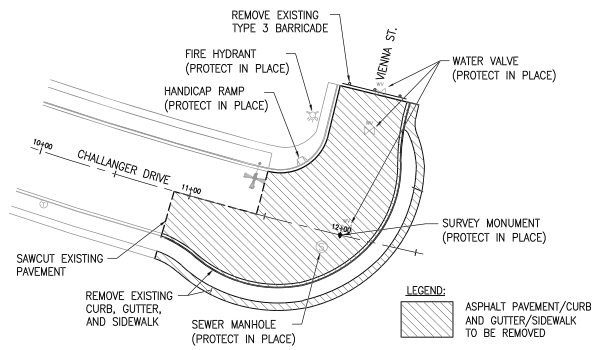


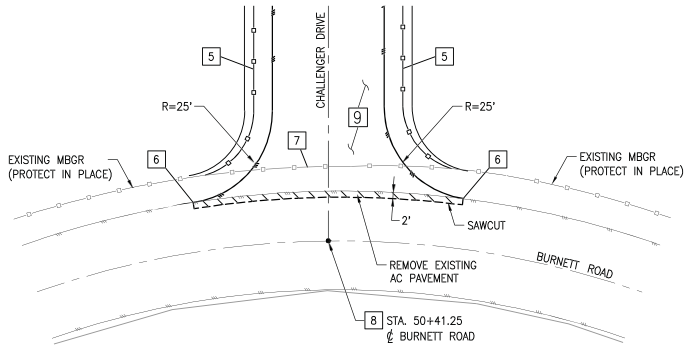

## CHALLENGER DRIVE

SCALE: 1" = 30'




## DEMOLITION PLAN

SCALE: 1" = 40'




## PAVING DETAIL

SCALE: 1" = 20'

### CONSTRUCTION NOTES:

1. CONSTRUCT CONCRETE CURB, GUTTER, AND SIDEWALK PER CTSDS SHEET 5.6A
2. CONSTRUCT HANDICAP RAMP PER CTSDS SHEET 5.19
3. RAISE EXISTING MONUMENT WELL TO GRADE. PROTECT EXISTING SURVEY MONUMENT IN PLACE. TIE-OUT MONUMENT PRIOR TO STARTING CONSTRUCTION.
4. RAISE EXISTING VALVE OR MANHOLE COVER TO GRADE.
5. CONSTRUCT MGS PER CALTRANS RSP A77P1, TYPE 11B, WITH ALTERNATIVE FLARED TERMINAL SYSTEM.
6. JOIN NEW MGS TO EXISTING MBGR PER CALTRANS STANDARD PLANS AND SPECIFICATIONS.
7. REMOVE EXISTING MGS WITHIN LIMITS OF CHALLENGER DRIVE.
8. CONSTRUCT SURVEY MONUMENT PER CTSDS SHEET 5.11
9. CONSTRUCT PAVEMENT STRUCTURAL SECTION PER SHEET C-07

| REV | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | 1/9/14 | SHEET ADDED | |

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DATE: APRIL 2011
PROJECT ENGINEER: DANIEL S. CRONQUIST
REG. NUMBER: 73077
EXP. DATE: 12-31-14
PROJECT NUMBER: 60147430
CADD STANDARDS: AECOM

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PLAN
STA. 10+89 TO 12+55
AND DETAILS

DRAWING: C-03a
SHEET: 3a OF 12 SHEETS
S-2441

DWG: S:\T08\60194903 Challenger Final Design\CAD\LEDD\dwg\C-03a detail.dwg Layout Name: C-03 detail - Plotted by: Ghilarducci, David Date: 1/27/2014 - 1:16 PM
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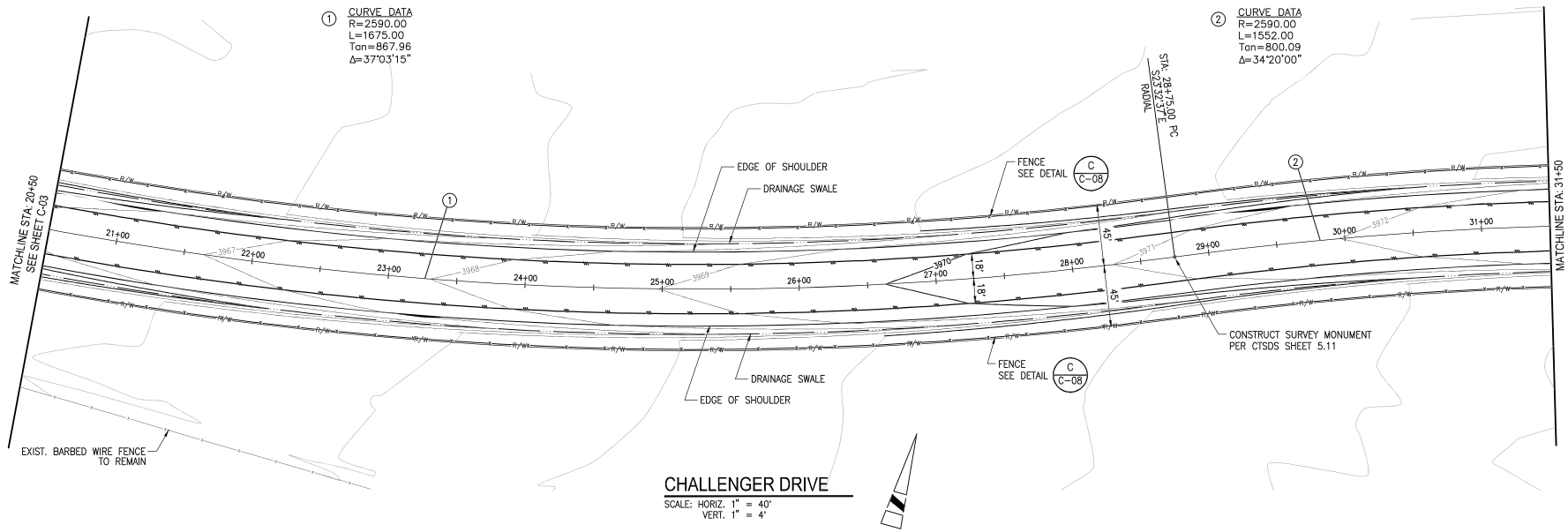


## CHALLENGER DRIVE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'

| REV. | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | | | |
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| CHECKED BY | JHS |
| DATE | APRIL 2011 |
| PROJECT ENGINEER | DANIEL S. CRONQUIST |
| REG. NUMBER | 73077 |
| EXP. DATE | 12-31-12 |
| PROJECT NUMBER | 60147430 |
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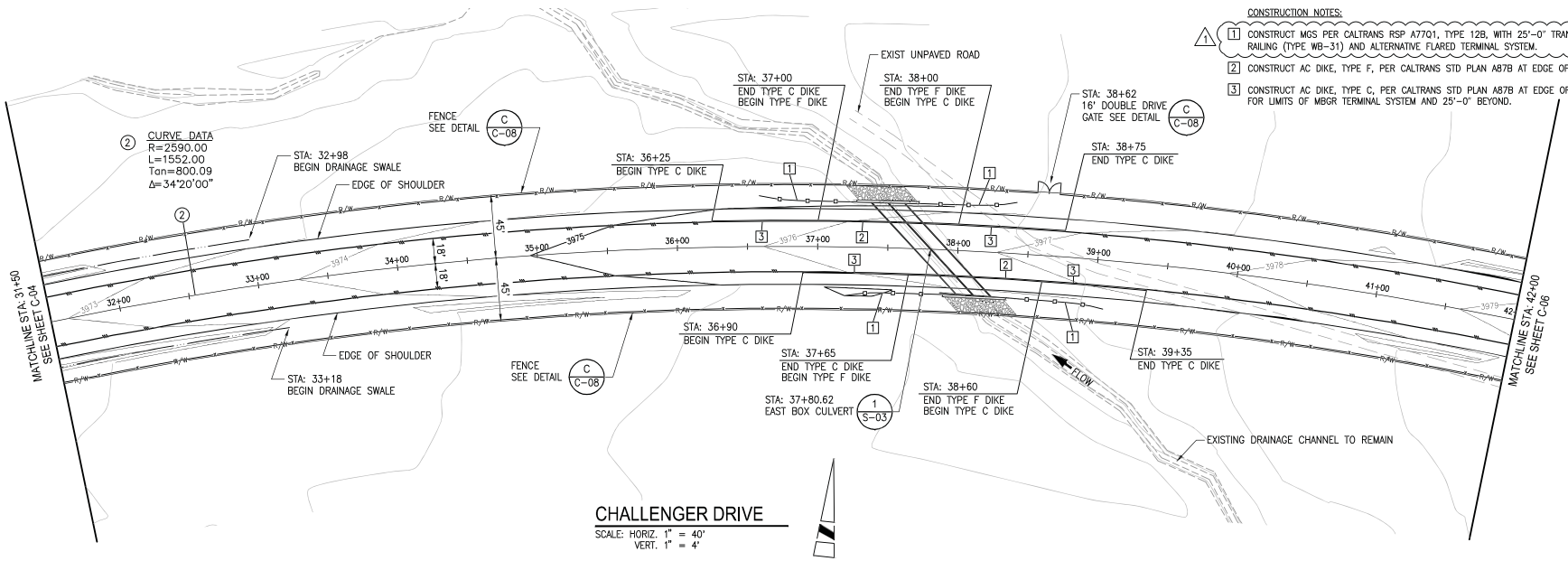
DRAWING C-04
SHEET 4 OF 12 SHEETS
S-2441

DWG: S:\T285\60194903 Challenger Final Design\CAD\LEDS\dwg\C-03 - C-07.dwg Layout Name: C-04 - Plotted by: Ghilarducci, David Date: 1/27/2014 - 11:40 AM
AREA: 1-AB MAGES: TEHACHAPI SIGLong -

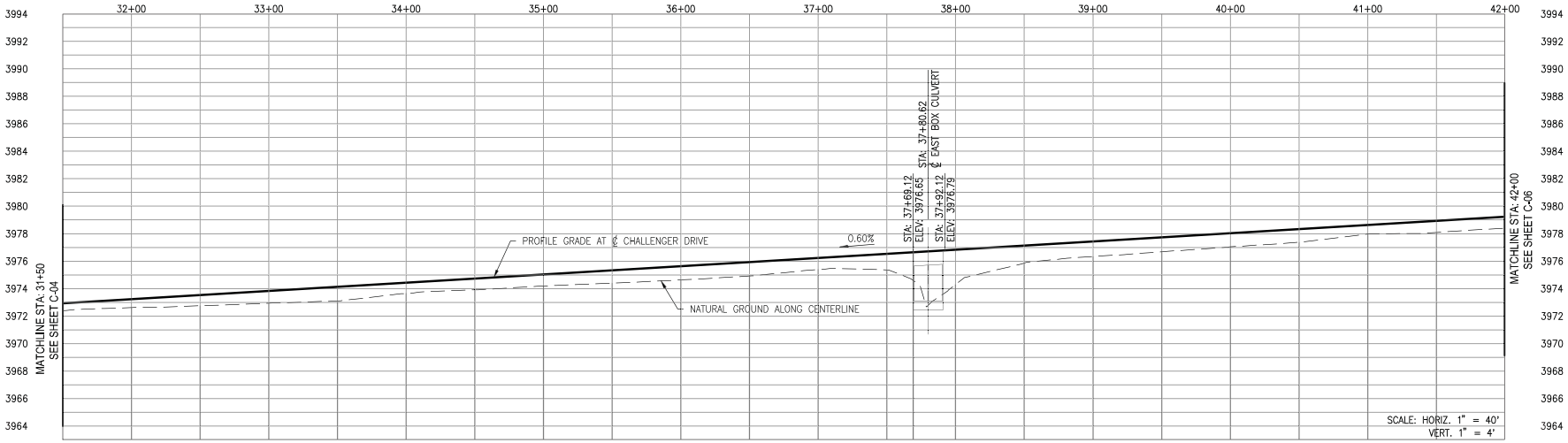
CONSTRUCTION NOTES:

1. CONSTRUCT MGS PER CALTRANS RSP A77Q1, TYPE 12B, WITH 25'-0" TRANSITION RAILING (TYPE WB-31) AND ALTERNATIVE FLARED TERMINAL SYSTEM.
2. CONSTRUCT AC DIKE, TYPE F, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT.
3. CONSTRUCT AC DIKE, TYPE C, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT FOR LIMITS OF MBGR TERMINAL SYSTEM AND 25'-0" BEYOND.




## CHALLENGER DRIVE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'




| REV | DATE | DESCRIPTION | APPR |
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| 1 | 1/9/14 | REVISED SHEET | |

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| DESIGNED BY | DSC |
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| CHECKED BY | JHS |
| DATE | APRIL 2011 |
| PROJECT ENGINEER | DANIEL S. CRONQUIST |
| REG NUMBER | 73077 |
| EXP DATE | 12-31-12 |
| PROJECT NUMBER | 60147430 |
| CADD STANDARDS | AECOM |

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DRAWING C-05
SHEET 5 OF 12 SHEETS
S-2441


DWG: S:\T08\60194903 Challenger (Final Design)\CAD\LEDI\dwg\C-03 - C-07.dwg Layout Name: C-05 - Plotted by: Ghilantucci, David Date: 1/27/2014 - 11:40 AM
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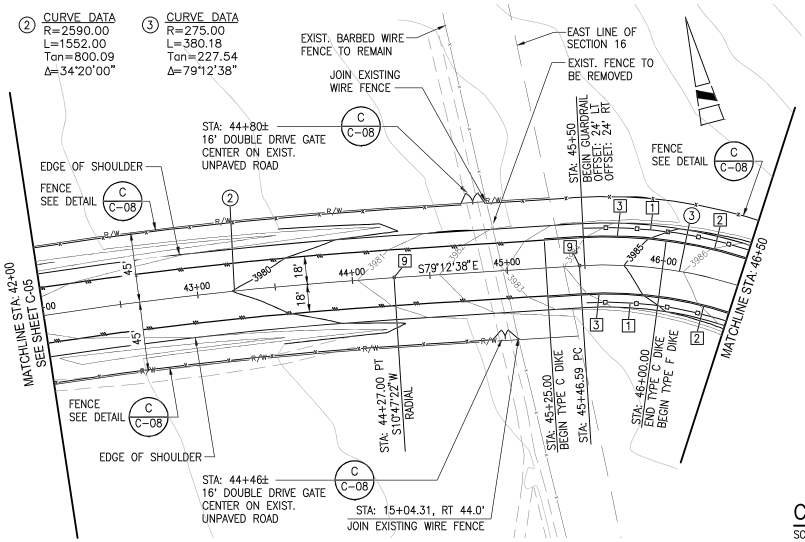
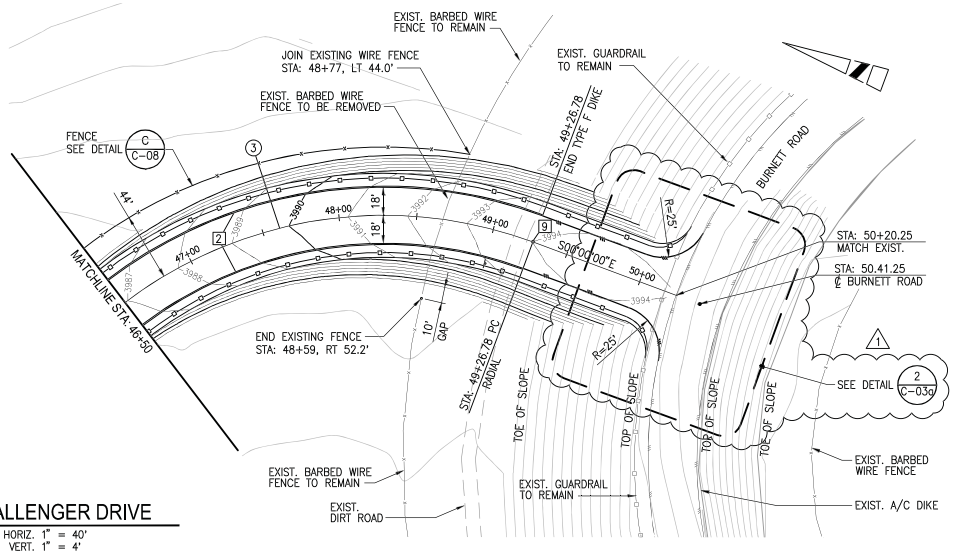
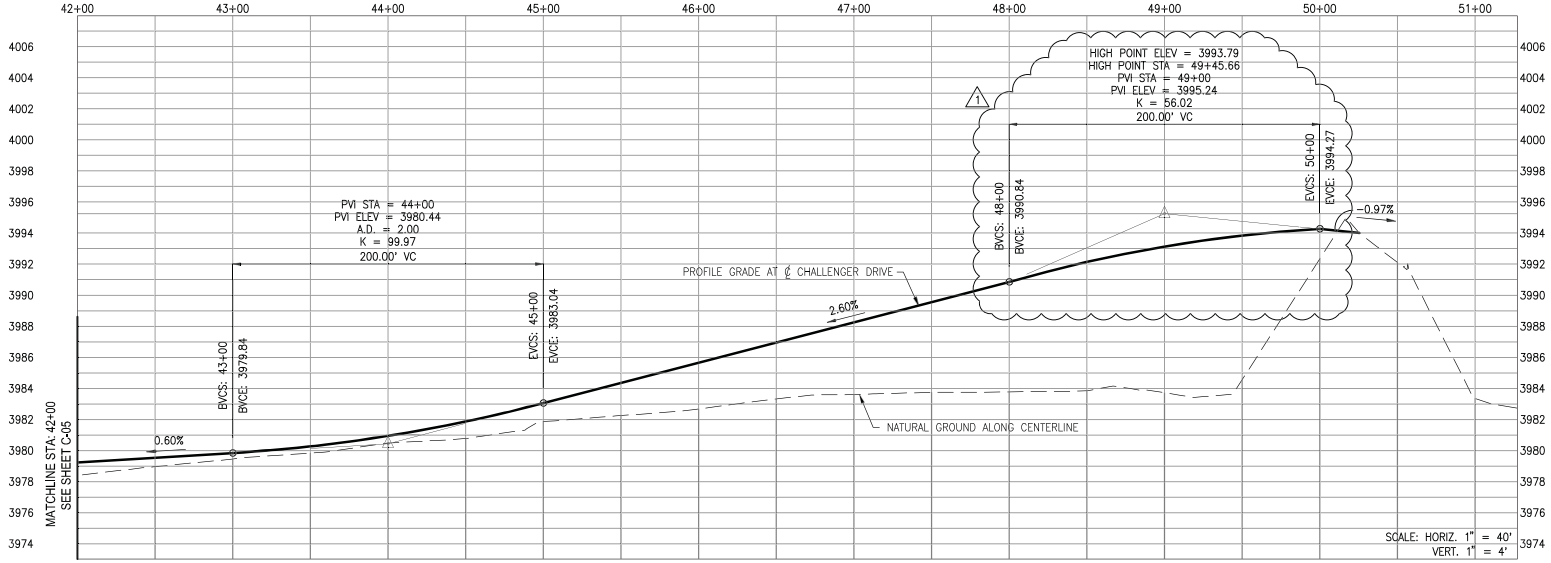



## CHALLENGER DRIVE

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'




CONSTRUCTION NOTES:

1. CONSTRUCT MGS PER CALTRANS RSP A77P1, TYPE 11B, WITH ALTERNATIVE FLARED TERMINAL SYSTEM.
2. CONSTRUCT AC DIKE, TYPE F, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT.
3. CONSTRUCT AC DIKE, TYPE C, PER CALTRANS STD PLAN A87B AT EDGE OF PAVEMENT FOR LIMITS OF MGS TERMINAL SYSTEM AND 25'-0" BEYOND.

| REV. | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | 1/9/14 | REVISED SHEET | |

VERIFY SCALES
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| DESIGNED BY | DSC |
| DRAWN BY | DTG |
| CHECKED BY | JHS |
| DATE | APRIL 2011 |
| PROJECT ENGINEER | DANIEL S. CRONQUIST |
| REG NUMBER | 73077 |
| EXP DATE | 12-31-12 |
| PROJECT NUMBER | 60147430 |
| CADD STANDARDS | AECOM |

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DRAWING C-06
SHEET 6 OF 12 SHEETS
S-2441

DWG: S:\CDS\60194903 Challenger Final Design\CAD\LEDS\dwg\C-03 - C-07.dwg Layout Name: C-06 - Plotted by: Ghilarducci, David Date: 1/27/2014 - 11:39 AM
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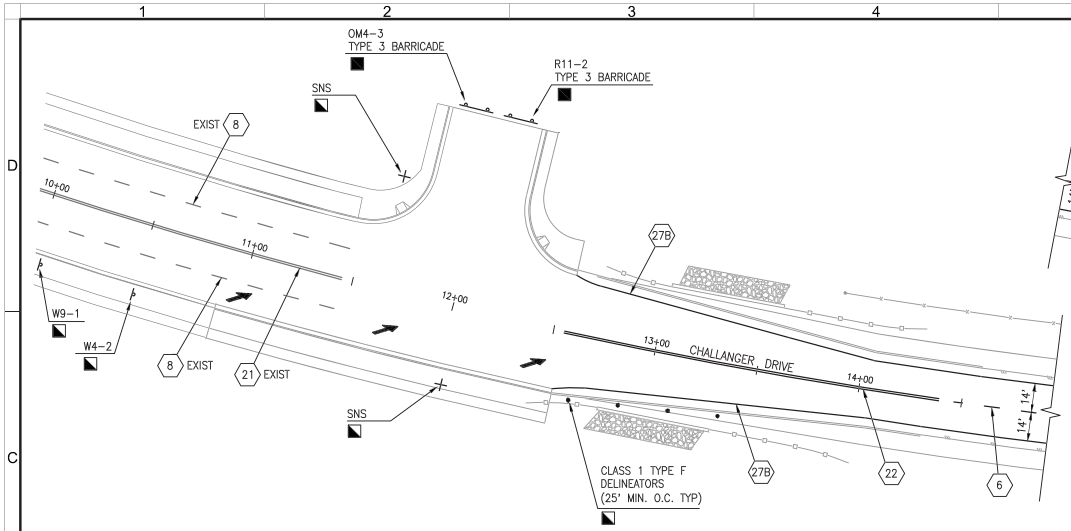


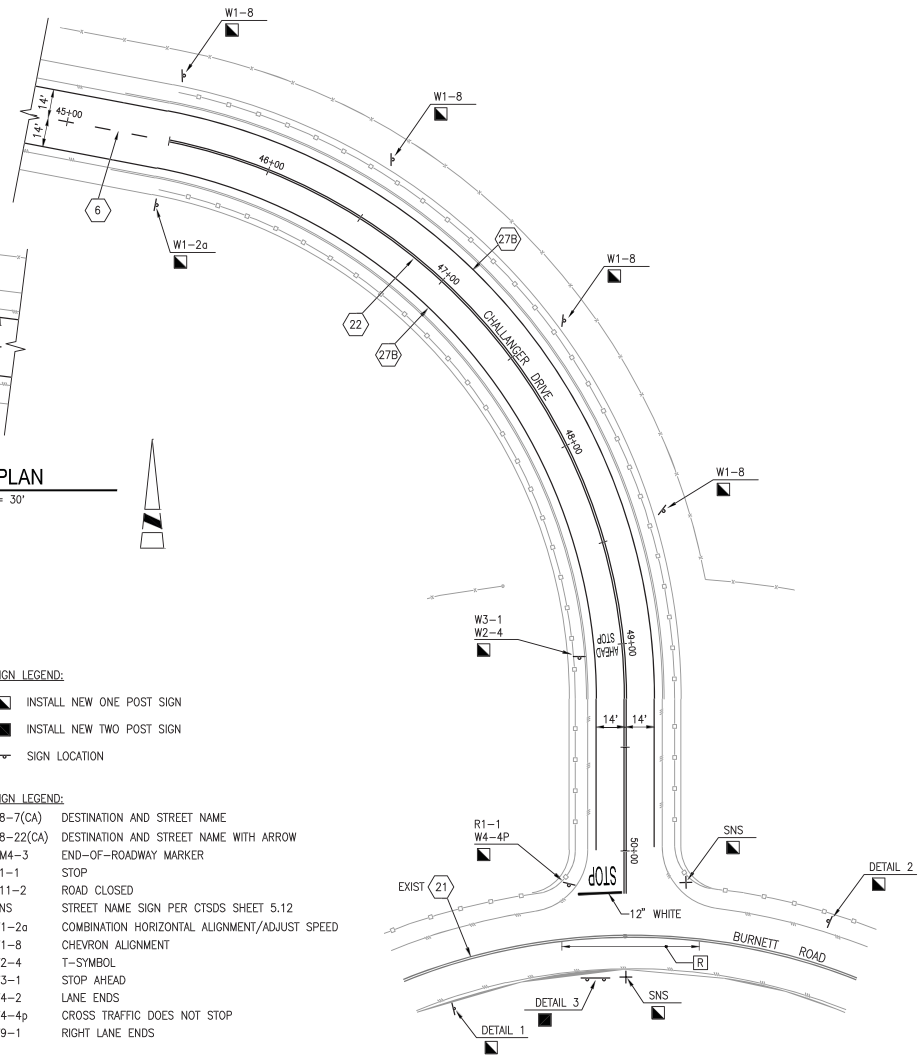


## STRIPING PLAN

SCALE: HORIZ. 1" = 30'

G8-22(CA)

DETAIL 1

G8-22(CA)

DETAIL 2

G8-7(CA)

DETAIL 3

NOTES:

1. WORD PAVEMENT MARKING SHALL BE PER CALTRANS STD PLAN A24D.

PAVEMENT DELINEATION LEGEND:

(XX) INSTALL TRAFFIC STRIPE PER CALTRANS STANDARD PLAN NO.S A20A, A20B, AND A20D. NUMBER IN ⬡ INDICATES DETAIL NO. OR STANDARD PLAN.

[R] REMOVE ALL EXISTING PAVEMENT MARKINGS AND/OR TRAFFIC STRIPING IN CONFLICT WITH NEW CONSTRUCTION. (TYP). EXISTING STRIPING SHALL BE REMOVED BY GRINDING

STOP INSTALL PAVEMENT MARKING "STOP"

INSTALL PAVEMENT ARROW (TYPE VI)

SIGN LEGEND:

INSTALL NEW ONE POST SIGN

INSTALL NEW TWO POST SIGN

SIGN LOCATION

SIGN LEGEND:

| | |
|---|---|
| G8-7(CA) | DESTINATION AND STREET NAME |
| G8-22(CA) | DESTINATION AND STREET NAME WITH ARROW |
| OM4-3 | END-OF-ROADWAY MARKER |
| R1-1 | STOP |
| R11-2 | ROAD CLOSED |
| SNS | STREET NAME SIGN PER CTSDS SHEET 5.12 |
| W1-2a | COMBINATION HORIZONTAL ALIGNMENT/ADJUST SPEED |
| W1-8 | CHEVRON ALIGNMENT |
| W2-4 | T-SYMBOL |
| W3-1 | STOP AHEAD |
| W4-2 | LANE ENDS |
| W4-4p | CROSS TRAFFIC DOES NOT STOP |
| W9-1 | RIGHT LANE ENDS |

| REV. | DATE | DESCRIPTION | APPR |
|---|---|---|---|
| 1 | 1/9/14 | SHEET ADDED | |

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DESIGNED BY DSC
DRAWN BY DTG
CHECKED BY JHS
DATE APRIL 2011

PROJECT ENGINEER DANIEL S. CRONQUIST
REG NUMBER 73077 EXP DATE 12-31-14
PROJECT NUMBER 60147430
CADD STANDARDS AECOM

REGISTERED PROFESSIONAL ENGINEER DANIEL S. CRONQUIST No. 73077 CIVIL STATE OF CALIFORNIA

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STRIPING PLAN

DRAWING C-06a
SHEET 6a OF 12 SHEETS
S-2441

DWG: S:\TDR\60194903 Challenger Final Design\CAD\LCD\Layout\C-06a.dwg Layout Name: C-06a - Plotted by: Chiarotacci, David Date: 1/27/2014 - 1:17 PM
PAGES: 1-48 MAGES: TEHACHAPI SEALLong -

# APPENDIX B

# EXISTING TRAFFIC COUNT DATA

Friday PM Peak Hour NDS/ATD Job # 14-8102

60 Minute Counts

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Dennison/Valley | 15 | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 48 | 0 | 100 | 0 | 0 | 0 | 0 | 73 | 45 | 74 | 164 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 91 | 0 | 68 | 0 | 0 | 0 | 0 | 154 | 19 | 91 | 146 | 0 |
| Mill/SR-58 WB Ramps | 1 | 54 | 49 | 0 | 0 | 39 | 38 | 0 | 0 | 0 | 22 | 4 | 13 |
| Mill/SR-58 EB Ramps | 2 | 0 | 77 | 14 | 12 | 49 | 0 | 27 | 1 | 90 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Tucker/Valley | 8 | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Curry/Tehachapi | 5 | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Dennison/Valley | 15 | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 36 | 0 | 92 | 0 | 0 | 0 | 0 | 89 | 61 | 64 | 139 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 63 | 0 | 72 | 0 | 0 | 0 | 0 | 162 | 18 | 109 | 140 | 0 |
| Mill/SR-58 WB Ramps | 1 | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 27 | 2 | 19 |
| Mill/SR-58 EB Ramps | 2 | 0 | 130 | 25 | 18 | 73 | 0 | 67 | 1 | 121 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Tucker/Valley | 8 | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Curry/Tehachapi | 5 | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Dennison/Valley | 15 | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| SR-58 EB Ramps/Tehach | 17 | 13 | 0 | 74 | 0 | 0 | 0 | 0 | 58 | 49 | 41 | 73 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 31 | 0 | 35 | 0 | 0 | 0 | 0 | 115 | 16 | 46 | 84 | 0 |
| Mill/SR-58 WB Ramps | 1 | 48 | 38 | 0 | 0 | 29 | 10 | 0 | 0 | 0 | 12 | 0 | 7 |
| Mill/SR-58 EB Ramps | 2 | 0 | 69 | 10 | 11 | 31 | 0 | 18 | 2 | 42 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Tucker/Valley | 8 | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Curry/Tehachapi | 5 | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |

# APPENDIX C

# VOLUME DEVELOPMENT WORKSHEETS

# EXISTING VOLUMES

Friday PM Peak Hour NDS/ATD Job # 14-8102

60 Minute Counts

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Dennison/Valley | 15 | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 48 | 0 | 100 | 0 | 0 | 0 | 0 | 73 | 45 | 74 | 164 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 91 | 0 | 68 | 0 | 0 | 0 | 0 | 154 | 19 | 91 | 146 | 0 |
| Mill/SR-58 WB Ramps | 1 | 54 | 49 | 0 | 0 | 39 | 38 | 0 | 0 | 0 | 22 | 4 | 13 |
| Mill/SR-58 EB Ramps | 2 | 0 | 77 | 14 | 12 | 49 | 0 | 27 | 1 | 90 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Tucker/Valley | 8 | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Curry/Tehachapi | 5 | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Dennison/Valley | 15 | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 36 | 0 | 92 | 0 | 0 | 0 | 0 | 89 | 61 | 64 | 139 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 63 | 0 | 72 | 0 | 0 | 0 | 0 | 162 | 18 | 109 | 140 | 0 |
| Mill/SR-58 WB Ramps | 1 | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 27 | 2 | 19 |
| Mill/SR-58 EB Ramps | 2 | 0 | 130 | 25 | 18 | 73 | 0 | 67 | 1 | 121 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Tucker/Valley | 8 | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Curry/Tehachapi | 5 | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Dennison/Valley | 15 | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| SR-58 EB Ramps/Tehach | 17 | 13 | 0 | 74 | 0 | 0 | 0 | 0 | 58 | 49 | 41 | 73 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 31 | 0 | 35 | 0 | 0 | 0 | 0 | 115 | 16 | 46 | 84 | 0 |
| Mill/SR-58 WB Ramps | 1 | 48 | 38 | 0 | 0 | 29 | 10 | 0 | 0 | 0 | 12 | 0 | 7 |
| Mill/SR-58 EB Ramps | 2 | 0 | 69 | 10 | 11 | 31 | 0 | 18 | 2 | 42 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Tucker/Valley | 8 | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Curry/Tehachapi | 5 | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |

# SHORT-TERM 2018 NO PROJECT VOLUMES

Friday PM Peak Hour
2018 NO PROJECT

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 40 | 77 | 61 | 12 | 15 | 42 | 192 | 114 | 51 | 110 | 212 | 60 |
| Dennison/Valley | 15 | 67 | 76 | 0 | 20 | 51 | 116 | 88 | 21 | 34 | 0 | 23 | 14 |
| SR-58 EB Ramps/Tehach | 17 | 60 | 0 | 110 | 0 | 0 | 0 | 0 | 107 | 104 | 81 | 241 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 161 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 160 | 0 |
| Mill/SR-58 WB Ramps | 1 | 76 | 125 | 0 | 0 | 221 | 73 | 0 | 0 | 0 | 33 | 4 | 26 |
| Mill/SR-58 EB Ramps | 2 | 0 | 159 | 30 | 44 | 210 | 0 | 42 | 1 | 119 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 162 | 345 | 270 | 188 | 510 | 142 | 122 | 291 | 155 | 301 | 310 | 90 |
| Tucker/Valley | 8 | 170 | 321 | 93 | 258 | 367 | 297 | 286 | 273 | 80 | 92 | 227 | 139 |
| Curry/Tehachapi | 5 | 87 | 0 | 154 | 1 | 2 | 0 | 1 | 538 | 103 | 148 | 500 | 2 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 45 | 19 | 36 | 12 | 24 | 52 | 34 | 101 | 75 | 28 | 139 | 5 |
| Dennison/Valley | 15 | 41 | 35 | 0 | 0 | 45 | 72 | 60 | 0 | 31 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 39 | 0 | 101 | 0 | 0 | 0 | 0 | 98 | 67 | 70 | 152 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 69 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 153 | 0 |
| Mill/SR-58 WB Ramps | 1 | 89 | 126 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 |
| Mill/SR-58 EB Ramps | 2 | 0 | 142 | 27 | 20 | 80 | 0 | 73 | 1 | 133 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 126 | 342 | 237 | 129 | 293 | 93 | 112 | 237 | 112 | 261 | 173 | 76 |
| Tucker/Valley | 8 | 155 | 221 | 72 | 171 | 187 | 230 | 287 | 227 | 59 | 75 | 147 | 132 |
| Curry/Tehachapi | 5 | 0 | 0 | 4 | 52 | 3 | 116 | 53 | 331 | 14 | 5 | 333 | 43 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 32 | 42 | 21 | 23 | 23 | 68 | 66 | 84 | 34 | 21 | 65 | 23 |
| Dennison/Valley | 15 | 35 | 37 | 0 | 0 | 32 | 39 | 55 | 0 | 27 | 0 | 0 | 1 |
| SR-58 EB Ramps/Tehach | 17 | 14 | 0 | 81 | 0 | 0 | 0 | 0 | 64 | 54 | 45 | 80 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 34 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 92 | 0 |
| Mill/SR-58 WB Ramps | 1 | 53 | 42 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 |
| Mill/SR-58 EB Ramps | 2 | 0 | 76 | 11 | 12 | 34 | 0 | 20 | 2 | 46 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 121 | 144 | 119 | 46 | 129 | 76 | 52 | 130 | 90 | 185 | 150 | 46 |
| Tucker/Valley | 8 | 85 | 145 | 101 | 127 | 151 | 123 | 142 | 142 | 31 | 88 | 133 | 92 |
| Curry/Tehachapi | 5 | 0 | 0 | 0 | 21 | 0 | 56 | 37 | 185 | 0 | 0 | 169 | 26 |

# LONG-TERM 2035 NO PROJECT VOLUMES

Friday PM Peak Hour
2305 NO PROJECT

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 51 | 105 | 72 | 17 | 21 | 57 | 263 | 149 | 66 | 123 | 261 | 83 |
| Dennison/Valley | 15 | 92 | 101 | 0 | 20 | 66 | 135 | 107 | 22 | 47 | 0 | 23 | 14 |
| SR-58 EB Ramps/Tehach | 17 | 79 | 0 | 150 | 0 | 0 | 0 | 0 | 137 | 123 | 111 | 308 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 198 | 0 | 102 | 0 | 0 | 0 | 0 | 232 | 29 | 137 | 220 | 0 |
| Mill/SR-58 WB Ramps | 1 | 98 | 145 | 0 | 0 | 237 | 88 | 0 | 0 | 0 | 42 | 6 | 32 |
| Mill/SR-58 EB Ramps | 2 | 0 | 191 | 36 | 49 | 230 | 0 | 53 | 2 | 155 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 218 | 422 | 342 | 239 | 627 | 196 | 152 | 375 | 199 | 375 | 393 | 105 |
| Tucker/Valley | 8 | 231 | 401 | 125 | 328 | 457 | 365 | 358 | 350 | 105 | 124 | 290 | 166 |
| Curry/Tehachapi | 5 | 111 | 0 | 197 | 2 | 3 | 0 | 2 | 694 | 132 | 177 | 612 | 3 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 67 | 26 | 94 | 17 | 33 | 71 | 47 | 209 | 107 | 49 | 207 | 8 |
| Dennison/Valley | 15 | 56 | 57 | 0 | 8 | 64 | 107 | 118 | 5 | 42 | 0 | 7 | 13 |
| SR-58 EB Ramps/Tehach | 17 | 81 | 0 | 138 | 0 | 0 | 0 | 0 | 140 | 101 | 96 | 237 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 123 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 27 | 164 | 211 | 0 |
| Mill/SR-58 WB Ramps | 1 | 132 | 312 | 0 | 0 | 140 | 124 | 0 | 0 | 0 | 49 | 3 | 54 |
| Mill/SR-58 EB Ramps | 2 | 0 | 320 | 46 | 35 | 155 | 0 | 126 | 2 | 191 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 177 | 513 | 376 | 211 | 474 | 128 | 163 | 407 | 163 | 408 | 266 | 134 |
| Tucker/Valley | 8 | 212 | 347 | 99 | 250 | 290 | 361 | 443 | 332 | 81 | 103 | 211 | 203 |
| Curry/Tehachapi | 5 | 18 | 0 | 41 | 71 | 5 | 159 | 72 | 593 | 31 | 23 | 543 | 59 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 53 | 57 | 41 | 32 | 32 | 93 | 90 | 135 | 56 | 73 | 158 | 32 |
| Dennison/Valley | 15 | 48 | 53 | 0 | 19 | 53 | 89 | 84 | 13 | 38 | 0 | 13 | 16 |
| SR-58 EB Ramps/Tehach | 17 | 27 | 0 | 111 | 0 | 0 | 0 | 0 | 114 | 102 | 62 | 120 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 57 | 0 | 53 | 0 | 0 | 0 | 0 | 173 | 24 | 69 | 126 | 0 |
| Mill/SR-58 WB Ramps | 1 | 83 | 128 | 0 | 0 | 222 | 46 | 0 | 0 | 0 | 27 | 0 | 23 |
| Mill/SR-58 EB Ramps | 2 | 0 | 173 | 26 | 48 | 203 | 0 | 39 | 3 | 74 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 177 | 304 | 240 | 114 | 321 | 104 | 113 | 243 | 157 | 354 | 294 | 114 |
| Tucker/Valley | 8 | 117 | 281 | 139 | 220 | 293 | 282 | 288 | 206 | 42 | 120 | 205 | 177 |
| Curry/Tehachapi | 5 | 25 | 0 | 21 | 29 | 0 | 77 | 51 | 376 | 25 | 42 | 431 | 36 |

# SHORT-TERM 2018 WITH PROJECT VOLUMES

Friday PM Peak Hour
2018 PLUS PROJECT

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 40 | 137 | 61 | 12 | 15 | 42 | 263 | 114 | 51 | 110 | 212 | 131 |
| Dennison/Valley | 15 | 67 | 100 | 0 | 20 | 51 | 116 | 124 | 21 | 34 | 0 | 23 | 14 |
| SR-58 EB Ramps/Tehach | 17 | 60 | 0 | 110 | 0 | 0 | 0 | 0 | 107 | 104 | 81 | 312 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 209 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 184 | 0 |
| Mill/SR-58 WB Ramps | 1 | 76 | 161 | 0 | 0 | 221 | 73 | 0 | 0 | 0 | 33 | 4 | 26 |
| Mill/SR-58 EB Ramps | 2 | 0 | 159 | 30 | 44 | 210 | 0 | 78 | 1 | 131 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 162 | 345 | 284 | 198 | 510 | 142 | 122 | 315 | 155 | 301 | 310 | 90 |
| Tucker/Valley | 8 | 170 | 333 | 93 | 258 | 367 | 297 | 298 | 297 | 80 | 92 | 227 | 139 |
| Curry/Tehachapi | 5 | 87 | 0 | 166 | 1 | 2 | 0 | 1 | 598 | 103 | 148 | 500 | 2 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 45 | 97 | 36 | 12 | 24 | 52 | 128 | 101 | 75 | 28 | 139 | 99 |
| Dennison/Valley | 15 | 41 | 66 | 0 | 0 | 45 | 72 | 107 | 0 | 31 | 0 | 0 | 0 |
| SR-58 EB Ramps/Tehach | 17 | 39 | 0 | 101 | 0 | 0 | 0 | 0 | 98 | 67 | 70 | 223 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 117 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 177 | 0 |
| Mill/SR-58 WB Ramps | 1 | 89 | 173 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 |
| Mill/SR-58 EB Ramps | 2 | 0 | 142 | 27 | 20 | 80 | 0 | 120 | 1 | 149 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 126 | 342 | 247 | 139 | 293 | 93 | 112 | 279 | 112 | 261 | 173 | 76 |
| Tucker/Valley | 8 | 155 | 237 | 72 | 171 | 187 | 230 | 303 | 258 | 59 | 75 | 147 | 132 |
| Curry/Tehachapi | 5 | 0 | 0 | 20 | 52 | 3 | 116 | 53 | 409 | 14 | 5 | 333 | 43 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 32 | 120 | 21 | 23 | 23 | 68 | 160 | 84 | 34 | 21 | 65 | 117 |
| Dennison/Valley | 15 | 35 | 68 | 0 | 0 | 32 | 39 | 102 | 0 | 27 | 0 | 0 | 1 |
| SR-58 EB Ramps/Tehach | 17 | 14 | 0 | 81 | 0 | 0 | 0 | 0 | 64 | 54 | 45 | 151 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 82 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 116 | 0 |
| Mill/SR-58 WB Ramps | 1 | 53 | 89 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 |
| Mill/SR-58 EB Ramps | 2 | 0 | 76 | 11 | 12 | 34 | 0 | 67 | 2 | 62 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 121 | 144 | 129 | 56 | 129 | 76 | 52 | 172 | 90 | 185 | 150 | 46 |
| Tucker/Valley | 8 | 85 | 161 | 101 | 127 | 151 | 123 | 158 | 173 | 31 | 88 | 133 | 92 |
| Curry/Tehachapi | 5 | 0 | 0 | 16 | 21 | 0 | 56 | 37 | 263 | 0 | 0 | 169 | 26 |

# LONG-TERM 2035 WITH PROJECT VOLUMES

Friday PM Peak Hour
2035 PLUS PROJECT

| DATE | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 51 | 395 | 72 | 17 | 21 | 57 | 611 | 149 | 66 | 123 | 261 | 431 |
| Dennison/Valley | 15 | 92 | 217 | 0 | 20 | 66 | 135 | 281 | 22 | 47 | 0 | 23 | 14 |
| SR-58 EB Ramps/Tehach | 17 | 79 | 0 | 150 | 0 | 0 | 0 | 0 | 137 | 123 | 111 | 656 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 430 | 0 | 102 | 0 | 0 | 0 | 0 | 232 | 29 | 137 | 336 | 0 |
| Mill/SR-58 WB Ramps | 1 | 98 | 319 | 0 | 0 | 237 | 88 | 0 | 0 | 0 | 42 | 6 | 32 |
| Mill/SR-58 EB Ramps | 2 | 0 | 191 | 36 | 49 | 230 | 0 | 227 | 2 | 213 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 218 | 422 | 392 | 289 | 627 | 196 | 152 | 507 | 199 | 375 | 393 | 105 |
| Tucker/Valley | 8 | 231 | 459 | 125 | 328 | 457 | 365 | 416 | 466 | 105 | 124 | 290 | 166 |
| Curry/Tehachapi | 5 | 111 | 0 | 255 | 2 | 3 | 0 | 2 | 984 | 132 | 177 | 612 | 3 |

Saturday Midday Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 73 | 274 | 102 | 17 | 33 | 71 | 344 | 209 | 109 | 52 | 207 | 305 |
| Dennison/Valley | 15 | 56 | 157 | 0 | 9 | 66 | 116 | 276 | 6 | 42 | 0 | 7 | 14 |
| SR-58 EB Ramps/Tehach | 17 | 81 | 0 | 138 | 0 | 0 | 0 | 0 | 140 | 109 | 96 | 537 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 324 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 27 | 164 | 310 | 0 |
| Mill/SR-58 WB Ramps | 1 | 137 | 461 | 0 | 0 | 140 | 124 | 0 | 0 | 0 | 49 | 3 | 54 |
| Mill/SR-58 EB Ramps | 2 | 0 | 326 | 46 | 35 | 155 | 0 | 275 | 2 | 243 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 177 | 515 | 426 | 261 | 474 | 128 | 163 | 505 | 163 | 408 | 266 | 134 |
| Tucker/Valley | 8 | 212 | 397 | 99 | 250 | 290 | 361 | 493 | 434 | 81 | 103 | 211 | 205 |
| Curry/Tehachapi | 5 | 18 | 0 | 91 | 71 | 5 | 159 | 72 | 841 | 31 | 23 | 543 | 59 |

Saturday PM Peak Hour

| DATE TIME | INTID | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison/Tehachapi | 16 | 57 | 57 | 46 | 380 | 322 | 441 | 90 | 135 | 60 | 83 | 158 | 32 |
| Dennison/Valley | 15 | 48 | 56 | 0 | 20 | 170 | 273 | 98 | 14 | 38 | 0 | 14 | 16 |
| SR-58 EB Ramps/Tehach | 17 | 27 | 0 | 111 | 0 | 0 | 0 | 0 | 230 | 340 | 62 | 129 | 0 |
| SR-58 WB Ramp/Tehach | 18 | 264 | 0 | 53 | 0 | 0 | 0 | 0 | 289 | 24 | 69 | 225 | 0 |
| Mill/SR-58 WB Ramps | 1 | 145 | 128 | 0 | 0 | 222 | 220 | 0 | 0 | 0 | 27 | 0 | 23 |
| Mill/SR-58 EB Ramps | 2 | 0 | 235 | 26 | 48 | 203 | 0 | 39 | 3 | 81 | 0 | 0 | 0 |
| Tucker/Tehachapi | 7 | 177 | 304 | 240 | 114 | 321 | 104 | 113 | 243 | 157 | 404 | 426 | 164 |
| Tucker/Valley | 8 | 117 | 281 | 139 | 220 | 351 | 340 | 288 | 219 | 42 | 120 | 328 | 177 |
| Curry/Tehachapi | 5 | 25 | 0 | 21 | 29 | 0 | 77 | 51 | 376 | 25 | 100 | 721 | 36 |

# APPENDIX D

# LOS WORKSHEETS

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.9 | 0.042 | B | 12.3 | 0.079 | + 2.337 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.2 | 0.106 | B | 11.0 | 0.158 | + 1.782 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 11.5 | 0.426 | C | 17.9 | 0.653 | + 0.226 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 25.3 | 0.615 | C | 32.5 | 0.852 | + 7.170 D/V |
| # 8 Tucker Road/Valley Blvd | C | 23.4 | 0.593 | C | 30.1 | 0.824 | + 6.658 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.1 | 0.109 | A | 8.9 | 0.199 | + 0.090 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | B | 10.8 | 0.487 | B | 14.2 | 0.618 | + 0.131 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 10.5 | 0.126 | B | 11.5 | 0.149 | + 1.013 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 14.7 | 0.243 | C | 18.2 | 0.392 | + 3.510 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.5  Worst Case Level Of Service: B[ 12.3]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 54 | 49 | 0 | 0 | 39 | 38 | 0 | 0 | 0 | 22 | 4 | 13 | | | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | | | | |
| Initial Bse: | 59 | 54 | 0 | 0 | 43 | 42 | 0 | 0 | 0 | 24 | 4 | 14 | | | | |
| Added Vol: | 17 | 71 | 0 | 0 | 178 | 31 | 0 | 0 | 0 | 9 | 0 | 12 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 76 | 125 | 0 | 0 | 221 | 73 | 0 | 0 | 0 | 33 | 4 | 26 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | |
| PHF Volume: | 83 | 136 | 0 | 0 | 240 | 79 | 0 | 0 | 0 | 36 | 5 | 29 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 83 | 136 | 0 | 0 | 240 | 79 | 0 | 0 | 0 | 36 | 5 | 29 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 319 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 581 | 620 | 136 | | | | |
| Potent Cap.: | 1252 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 480 | 407 | 919 | | | | |
| Move Cap.: | 1252 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 454 | 378 | 919 | | | | |
| Volume/Cap: | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.08 | 0.01 | 0.03 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 564 | xxxxx | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.4 | xxxxx | | | | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 12.3 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 12.3 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 3.5  Worst Case Level Of Service: B[ 11.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 0 1 0 0 0 | | | 0 1 0 1 0 | | | 0 0 0 0 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 77 | 14 | 12 | 49 | 0 | 27 | 1 | 90 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 84 | 15 | 13 | 54 | 0 | 30 | 1 | 99 | 0 | 0 | 0 |
| Added Vol: | 0 | 75 | 15 | 31 | 156 | 0 | 12 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 159 | 30 | 44 | 210 | 0 | 42 | 1 | 119 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 173 | 33 | 48 | 228 | 0 | 45 | 1 | 129 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 173 | 33 | 48 | 228 | 0 | 45 | 1 | 129 | 0 | 0 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 206 | xxxx | xxxxx | 514 | 530 | 228 | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx | 524 | 457 | 816 | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx | 510 | 441 | 816 | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.03 | xxxx | xxxx | 0.09 | 0.00 | 0.16 | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 7.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | A | * | * | * | * | * | * | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 508 | xxxx | 810 | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx | 0.3 | xxxx | 0.6 | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | 7.7 | xxxx | xxxxx | 12.8 | xxxx | 10.3 | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | A | * | * | B | * | B | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | 11.0 | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | B | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.653 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 17.9 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 62 | 0 | 116 | 1 | 2 | 0 | 1 | 416 | 78 | 78 | 300 | 2 |
| Added Vol: | 25 | 0 | 38 | 0 | 0 | 0 | 0 | 122 | 25 | 70 | 200 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 87 | 0 | 154 | 1 | 2 | 0 | 1 | 538 | 103 | 148 | 500 | 2 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 95 | 0 | 168 | 1 | 2 | 0 | 1 | 585 | 112 | 161 | 544 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 95 | 0 | 168 | 1 | 2 | 0 | 1 | 585 | 112 | 161 | 544 | 2 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 95 | 0 | 168 | 1 | 2 | 0 | 1 | 585 | 112 | 161 | 544 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.33 | 0.67 | 0.00 | 0.01 | 1.67 | 0.32 | 0.45 | 1.54 | 0.01 |
| Final Sat.: | 428 | 0 | 501 | 138 | 276 | 0 | 2 | 947 | 185 | 246 | 852 | 4 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.22 | xxxx | 0.33 | 0.01 | 0.01 | xxxx | 0.63 | 0.62 | 0.61 | 0.65 | 0.64 | 0.63 |
| Crit Moves: | | | **** | | **** | | **** | | | **** | | |
| Delay/Veh: | 12.8 | 0.0 | 12.6 | 11.1 | 11.1 | 0.0 | 18.8 | 18.3 | 17.5 | 20.3 | 19.4 | 18.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 12.8 | 0.0 | 12.6 | 11.1 | 11.1 | 0.0 | 18.8 | 18.3 | 17.5 | 20.3 | 19.4 | 18.8 |
| LOS by Move: | B | * | B | B | B | * | C | C | C | C | C | C |
| ApproachDel: | 12.7 | | | 11.1 | | | 18.2 | | | 19.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 12.7 | | | 11.1 | | | 18.2 | | | 19.6 | | |
| LOS by Appr: | B | | | B | | | C | | | C | | |
| AllWayAvgQ: | 0.3 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 1.5 | 1.4 | 1.4 | 1.7 | 1.5 | 1.5 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.852 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 32.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 150 | 206 | 194 | 137 | 312 | 142 | 80 | 227 | 121 | 201 | 222 | 38 |
| Added Vol: | 12 | 139 | 76 | 51 | 198 | 0 | 42 | 64 | 34 | 100 | 88 | 52 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 162 | 345 | 270 | 188 | 510 | 142 | 122 | 291 | 155 | 301 | 310 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 176 | 375 | 293 | 204 | 555 | 155 | 133 | 316 | 168 | 327 | 337 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 176 | 375 | 293 | 204 | 555 | 155 | 133 | 316 | 168 | 327 | 337 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 176 | 375 | 293 | 204 | 555 | 155 | 133 | 316 | 168 | 327 | 337 | 98 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.10 | 0.18 | 0.11 | 0.15 | 0.10 | 0.07 | 0.17 | 0.10 | 0.18 | 0.18 | 0.06 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.13 | 0.21 | 0.21 | 0.13 | 0.21 | 0.21 | 0.14 | 0.20 | 0.20 | 0.21 | 0.27 | 0.27 |
| Volume/Cap: | 0.73 | 0.49 | 0.85 | 0.85 | 0.73 | 0.45 | 0.53 | 0.85 | 0.53 | 0.85 | 0.66 | 0.23 |
| Delay/Veh: | 37.4 | 22.9 | 42.7 | 51.8 | 27.4 | 23.3 | 28.1 | 42.2 | 25.2 | 41.1 | 24.4 | 18.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.4 | 22.9 | 42.7 | 51.8 | 27.4 | 23.3 | 28.1 | 42.2 | 25.2 | 41.1 | 24.4 | 18.8 |
| LOS by Move: | D | C | D | D | C | C | C | D | C | D | C | B |
| HCM2kAvgQ: | 5 | 4 | 9 | 7 | 7 | 3 | 3 | 9 | 4 | 9 | 7 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.824 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 30.1 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 162 | 216 | 88 | 186 | 241 | 183 | 194 | 206 | 67 | 84 | 170 | 72 |
| Added Vol: | 8 | 105 | 5 | 72 | 126 | 114 | 92 | 67 | 13 | 8 | 57 | 67 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 170 | 321 | 93 | 258 | 367 | 297 | 286 | 273 | 80 | 92 | 227 | 139 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 185 | 349 | 101 | 281 | 399 | 323 | 311 | 297 | 87 | 100 | 247 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 185 | 349 | 101 | 281 | 399 | 323 | 311 | 297 | 87 | 100 | 247 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 185 | 349 | 101 | 281 | 399 | 323 | 311 | 297 | 87 | 100 | 247 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.10 | 0.06 | 0.16 | 0.11 | 0.20 | 0.17 | 0.16 | 0.05 | 0.06 | 0.13 | 0.09 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.12 | 0.17 | 0.17 | 0.19 | 0.24 | 0.24 | 0.21 | 0.25 | 0.25 | 0.12 | 0.17 | 0.17 |
| Volume/Cap: | 0.84 | 0.58 | 0.37 | 0.80 | 0.46 | 0.84 | 0.84 | 0.63 | 0.22 | 0.45 | 0.78 | 0.56 |
| Delay/Veh: | 49.3 | 24.5 | 23.1 | 35.3 | 19.9 | 36.6 | 38.2 | 22.8 | 18.2 | 25.8 | 35.6 | 25.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 49.3 | 24.5 | 23.1 | 35.3 | 19.9 | 36.6 | 38.2 | 22.8 | 18.2 | 25.8 | 35.6 | 25.7 |
| LOS by Move: | D | C | C | D | B | D | D | C | B | C | D | C |
| HCM2kAvgQ: | 6 | 4 | 2 | 7 | 4 | 9 | 8 | 6 | 1 | 2 | 7 | 4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.199 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 67 | 67 | 0 | 0 | 41 | 49 | 52 | 2 | 34 | 0 | 0 | 0 |
| Added Vol: | 0 | 9 | 0 | 20 | 10 | 67 | 36 | 19 | 0 | 0 | 23 | 14 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 67 | 76 | 0 | 20 | 51 | 116 | 88 | 21 | 34 | 0 | 23 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 73 | 82 | 0 | 22 | 55 | 126 | 95 | 23 | 37 | 0 | 25 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 73 | 82 | 0 | 22 | 55 | 126 | 95 | 23 | 37 | 0 | 25 | 15 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 73 | 82 | 0 | 22 | 55 | 126 | 95 | 23 | 37 | 0 | 25 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.81 | 0.19 | 1.00 | 0.00 | 0.62 | 0.38 |
| Final Sat.: | 607 | 663 | 0 | 588 | 641 | 734 | 477 | 116 | 723 | 0 | 394 | 240 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.12 | xxxx | 0.04 | 0.09 | 0.17 | 0.20 | 0.20 | 0.05 | xxxx | 0.06 | 0.06 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 9.2 | 8.6 | 0.0 | 8.8 | 8.6 | 8.4 | 9.9 | 9.9 | 7.7 | 0.0 | 8.7 | 8.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.2 | 8.6 | 0.0 | 8.8 | 8.6 | 8.4 | 9.9 | 9.9 | 7.7 | 0.0 | 8.7 | 8.7 |
| LOS by Move: | A | A | * | A | A | A | A | A | A | * | A | A |
| ApproachDel: | | 8.9 | | | 8.5 | | | 9.4 | | | 8.7 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.9 | | | 8.5 | | | 9.4 | | | 8.7 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.618 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 14.2 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 27 | 77 | 27 | 12 | 15 | 42 | 192 | 94 | 38 | 35 | 133 | 60 |
| Added Vol: | 13 | 0 | 34 | 0 | 0 | 0 | 0 | 20 | 13 | 75 | 79 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 40 | 77 | 61 | 12 | 15 | 42 | 192 | 114 | 51 | 110 | 212 | 60 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 44 | 83 | 67 | 13 | 17 | 45 | 208 | 124 | 56 | 120 | 230 | 66 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 44 | 83 | 67 | 13 | 17 | 45 | 208 | 124 | 56 | 120 | 230 | 66 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 44 | 83 | 67 | 13 | 17 | 45 | 208 | 124 | 56 | 120 | 230 | 66 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.23 | 0.43 | 0.34 | 0.17 | 0.22 | 0.61 | 0.54 | 0.32 | 0.14 | 0.29 | 0.55 | 0.16 |
| Final Sat.: | 127 | 240 | 192 | 89 | 114 | 309 | 354 | 211 | 95 | 194 | 372 | 106 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.35 | 0.35 | 0.35 | 0.15 | 0.15 | 0.15 | 0.59 | 0.59 | 0.59 | 0.62 | 0.62 | 0.62 |
| Crit Moves: | **** | | | **** | | | | **** | | | **** | |
| Delay/Veh: | 11.5 | 11.5 | 11.5 | 9.8 | 9.8 | 9.8 | 15.0 | 15.0 | 15.0 | 15.6 | 15.6 | 15.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.5 | 11.5 | 11.5 | 9.8 | 9.8 | 9.8 | 15.0 | 15.0 | 15.0 | 15.6 | 15.6 | 15.6 |
| LOS by Move: | B | B | B | A | A | A | C | C | C | C | C | C |
| ApproachDel: | 11.5 | | | 9.8 | | | 15.0 | | | 15.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 11.5 | | | 9.8 | | | 15.0 | | | 15.6 | | |
| LOS by Appr: | B | | | A | | | C | | | C | | |
| AllWayAvgQ: | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 1.2 | 1.2 | 1.2 | 1.4 | 1.4 | 1.4 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: B[ 11.5]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | 0 | 100 | | | 0 | 0 | 0 | | | 0 | 73 | 45 | | | 74 | 164 | 0 | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | | | 1.10 | 1.10 | 1.10 | | | 1.10 | 1.10 | 1.10 | | | 1.10 | 1.10 | 1.10 | | |
| Initial Bse: | 53 | 0 | 110 | | | 0 | 0 | 0 | | | 0 | 80 | 49 | | | 81 | 180 | 0 | | |
| Added Vol: | 7 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 27 | 55 | | | 0 | 61 | 0 | | |
| PasserByVol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| Initial Fut: | 60 | 0 | 110 | | | 0 | 0 | 0 | | | 0 | 107 | 104 | | | 81 | 241 | 0 | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | | 0.92 | 0.92 | 0.92 | | |
| PHF Volume: | 65 | 0 | 119 | | | 0 | 0 | 0 | | | 0 | 116 | 113 | | | 88 | 262 | 0 | | |
| Reduct Vol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| FinalVolume: | 65 | 0 | 119 | | | 0 | 0 | 0 | | | 0 | 116 | 113 | | | 88 | 262 | 0 | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 611 | xxxx | 173 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 230 | xxxx | xxxxx | | | | | | | |
| Potent Cap.: | 460 | xxxx | 876 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1350 | xxxx | xxxxx | | | | | | | |
| Move Cap.: | 436 | xxxx | 876 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1350 | xxxx | xxxxx | | | | | | | |
| Volume/Cap: | 0.15 | xxxx | 0.14 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.07 | xxxx | xxxx | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.5 | xxxx | 0.5 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | |
| Control Del: | 14.7 | xxxx | 9.8 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.9 | xxxx | xxxxx | | | | | | | |
| LOS by Move: | B | * | A | * | * | * | * | * | * | | A | * | * | | | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.9 | xxxx | xxxxx | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | | A | * | * | | | | | | | |
| ApproachDel: | 11.5 | | | xxxxxx | | | xxxxxx | | | | xxxxxx | | | | | | | | | |
| ApproachLOS: | B | | | * | | | * | | | | * | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 7.4  Worst Case Level Of Service: C[ 18.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 91 | 0 | 68 | 0 | 0 | 0 | 0 | 154 | 19 | 91 | 146 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 100 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 160 | 0 |
| Added Vol: | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 161 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 160 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 175 | 0 | 81 | 0 | 0 | 0 | 0 | 183 | 23 | 108 | 174 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 175 | 0 | 81 | 0 | 0 | 0 | 0 | 183 | 23 | 108 | 174 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 586 | 586 | 195 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 206 | xxxx | xxxxx |
| Potent Cap.: | 476 | 425 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx |
| Move Cap.: | 446 | 390 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx |
| Volume/Cap: | 0.39 | 0.00 | 0.10 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.08 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 525 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 2.6 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 18.2 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| Shared LOS: | * | C | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 18.2 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | C | | | * | | | * | | | * | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 11.2 | 0.068 | B | 11.2 | 0.068 | + 0.000 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.9 | 0.148 | A | 9.9 | 0.148 | + 0.000 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 11.0 | 0.348 | B | 11.0 | 0.348 | + 0.000 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 26.5 | 0.703 | C | 26.5 | 0.703 | + 0.000 D/V |
| # 8 Tucker Road/Valley Blvd | C | 25.9 | 0.695 | C | 25.9 | 0.695 | + 0.000 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.0 | 0.103 | A | 8.0 | 0.103 | + 0.000 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 8.9 | 0.291 | A | 8.9 | 0.291 | + 0.000 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 10.3 | 0.120 | B | 10.3 | 0.120 | + 0.000 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 13.8 | 0.181 | B | 13.8 | 0.181 | + 0.000 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
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Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: B[ 11.2]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 27 | 2 | 19 | | | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | | | | |
| Initial Bse: | 89 | 126 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 89 | 126 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | |
| PHF Volume: | 96 | 137 | 0 | 0 | 75 | 92 | 0 | 0 | 0 | 32 | 2 | 23 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 96 | 137 | 0 | 0 | 75 | 92 | 0 | 0 | 0 | 32 | 2 | 23 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 167 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 451 | 497 | 137 | | | | |
| Potent Cap.: | 1423 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 570 | 478 | 917 | | | | |
| Move Cap.: | 1423 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 539 | 443 | 917 | | | | |
| Volume/Cap: | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.06 | 0.01 | 0.02 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 7.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 637 | xxxxx | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.3 | xxxxx | | | | |
| Shrd ConDel: | 7.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 11.2 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 11.2 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: A[ 9.9]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 | 1 | 0 | 0 1 0 | 0 | 0 | 0 1 0 | 1 | 0 | 0 0 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 130 | 25 | 18 | 73 | 0 | 67 | 1 | 121 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 142 | 27 | 20 | 80 | 0 | 73 | 1 | 133 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 142 | 27 | 20 | 80 | 0 | 73 | 1 | 133 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 155 | 30 | 21 | 87 | 0 | 80 | 1 | 144 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 155 | 30 | 21 | 87 | 0 | 80 | 1 | 144 | 0 | 0 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 185 | xxxx | xxxxx | 300 | 315 | 87 | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1402 | xxxx | xxxxx | 696 | 604 | 977 | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 1402 | xxxx | xxxxx | 688 | 595 | 977 | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.02 | xxxx | xxxx | 0.12 | 0.00 | 0.15 | xxxx | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | A | * | * | * | * | * | * | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 686 | xxxx | 972 | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | 0.4 | xxxx | 0.5 | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx | 10.9 | xxxx | 9.4 | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | A | * | * | B | * | A | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | 9.9 | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | A | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.348 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 0 | 4 | 52 | 3 | 116 | 53 | 331 | 14 | 5 | 333 | 43 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 4 | 52 | 3 | 116 | 53 | 331 | 14 | 5 | 333 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 5 | 56 | 4 | 126 | 57 | 360 | 15 | 6 | 362 | 46 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 5 | 56 | 4 | 126 | 57 | 360 | 15 | 6 | 362 | 46 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 5 | 56 | 4 | 126 | 57 | 360 | 15 | 6 | 362 | 46 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 1.00 | 0.30 | 0.02 | 0.68 | 0.26 | 1.67 | 0.07 | 0.03 | 1.75 | 0.22 |
| Final Sat.: | 0 | 483 | 533 | 172 | 11 | 389 | 164 | 1053 | 46 | 18 | 1117 | 146 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.00 | 0.01 | 0.32 | 0.32 | 0.32 | 0.35 | 0.34 | 0.34 | 0.33 | 0.32 | 0.32 |
| Crit Moves: | | | **** | | **** | | **** | | | **** | | |
| Delay/Veh: | 0.0 | 0.0 | 8.8 | 11.6 | 11.6 | 11.6 | 11.3 | 11.0 | 10.8 | 10.9 | 10.7 | 10.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 8.8 | 11.6 | 11.6 | 11.6 | 11.3 | 11.0 | 10.8 | 10.9 | 10.7 | 10.5 |
| LOS by Move: | * | * | A | B | B | B | B | B | B | B | B | B |
| ApproachDel: | 8.8 | | | 11.6 | | | 11.1 | | | 10.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.8 | | | 11.6 | | | 11.1 | | | 10.7 | | |
| LOS by Appr: | A | | | B | | | B | | | B | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.703 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 126 | 342 | 237 | 129 | 293 | 93 | 112 | 237 | 112 | 261 | 173 | 76 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 126 | 342 | 237 | 129 | 293 | 93 | 112 | 237 | 112 | 261 | 173 | 76 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 137 | 372 | 257 | 141 | 318 | 101 | 122 | 257 | 122 | 284 | 188 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 137 | 372 | 257 | 141 | 318 | 101 | 122 | 257 | 122 | 284 | 188 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 137 | 372 | 257 | 141 | 318 | 101 | 122 | 257 | 122 | 284 | 188 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.10 | 0.16 | 0.08 | 0.09 | 0.06 | 0.07 | 0.14 | 0.08 | 0.16 | 0.10 | 0.05 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.17 | 0.23 | 0.23 | 0.11 | 0.17 | 0.17 | 0.20 | 0.19 | 0.19 | 0.22 | 0.22 | 0.22 |
| Volume/Cap: | 0.45 | 0.45 | 0.70 | 0.70 | 0.52 | 0.37 | 0.34 | 0.70 | 0.39 | 0.70 | 0.46 | 0.24 |
| Delay/Veh: | 25.4 | 22.1 | 29.2 | 38.6 | 25.4 | 24.8 | 22.8 | 30.5 | 23.7 | 28.8 | 23.0 | 21.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.4 | 22.1 | 29.2 | 38.6 | 25.4 | 24.8 | 22.8 | 30.5 | 23.7 | 28.8 | 23.0 | 21.4 |
| LOS by Move: | C | C | C | D | C | C | C | C | C | C | C | C |
| HCM2kAvgQ: | 3 | 4 | 6 | 4 | 4 | 2 | 2 | 6 | 3 | 7 | 4 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.695 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.9 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 155 | 221 | 72 | 171 | 187 | 230 | 287 | 227 | 59 | 75 | 147 | 132 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 155 | 221 | 72 | 171 | 187 | 230 | 287 | 227 | 59 | 75 | 147 | 132 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 168 | 241 | 79 | 186 | 204 | 250 | 312 | 247 | 64 | 81 | 160 | 143 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 168 | 241 | 79 | 186 | 204 | 250 | 312 | 247 | 64 | 81 | 160 | 143 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 168 | 241 | 79 | 186 | 204 | 250 | 312 | 247 | 64 | 81 | 160 | 143 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.07 | 0.05 | 0.10 | 0.06 | 0.15 | 0.17 | 0.13 | 0.04 | 0.04 | 0.08 | 0.09 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.13 | 0.19 | 0.19 | 0.15 | 0.21 | 0.21 | 0.23 | 0.27 | 0.27 | 0.13 | 0.17 | 0.17 |
| Volume/Cap: | 0.74 | 0.35 | 0.26 | 0.71 | 0.27 | 0.74 | 0.74 | 0.49 | 0.15 | 0.34 | 0.50 | 0.53 |
| Delay/Veh: | 37.8 | 21.5 | 21.2 | 33.0 | 20.1 | 30.8 | 28.3 | 19.3 | 17.0 | 24.4 | 24.0 | 24.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.8 | 21.5 | 21.2 | 33.0 | 20.1 | 30.8 | 28.3 | 19.3 | 17.0 | 24.4 | 24.0 | 24.9 |
| LOS by Move: | D | C | C | C | C | C | C | B | B | C | C | C |
| HCM2kAvgQ: | 5 | 2 | 1 | 5 | 2 | 6 | 7 | 4 | 1 | 2 | 3 | 3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.103 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.0 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 41 | 35 | 0 | 0 | 45 | 72 | 60 | 0 | 31 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 41 | 35 | 0 | 0 | 45 | 72 | 60 | 0 | 31 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 44 | 38 | 0 | 0 | 49 | 79 | 66 | 0 | 33 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 44 | 38 | 0 | 0 | 49 | 79 | 66 | 0 | 33 | 0 | 0 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 44 | 38 | 0 | 0 | 49 | 79 | 66 | 0 | 33 | 0 | 0 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 660 | 726 | 0 | 648 | 713 | 828 | 637 | 0 | 807 | 0 | 678 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.05 | xxxx | 0.00 | 0.07 | 0.10 | 0.10 | xxxx | 0.04 | xxxx | 0.00 | xxxx |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Delay/Veh: | 8.4 | 7.8 | 0.0 | 0.0 | 8.0 | 7.4 | 8.8 | 0.0 | 7.2 | 0.0 | 0.0 | 0.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.4 | 7.8 | 0.0 | 0.0 | 8.0 | 7.4 | 8.8 | 0.0 | 7.2 | 0.0 | 0.0 | 0.0 |
| LOS by Move: | A | A | * | * | A | A | A | * | A | * | * | * |
| ApproachDel: | 8.1 | | | 7.6 | | | 8.2 | | | xxxxxx | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | xxxxx | | |
| ApprAdjDel: | 8.1 | | | 7.6 | | | 8.2 | | | xxxxxx | | |
| LOS by Appr: | A | | | A | | | A | | | * | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.291 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 45 | 19 | 36 | 12 | 24 | 52 | 34 | 101 | 75 | 28 | 139 | 5 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 45 | 19 | 36 | 12 | 24 | 52 | 34 | 101 | 75 | 28 | 139 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 49 | 20 | 39 | 13 | 26 | 56 | 37 | 110 | 81 | 31 | 151 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 49 | 20 | 39 | 13 | 26 | 56 | 37 | 110 | 81 | 31 | 151 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 49 | 20 | 39 | 13 | 26 | 56 | 37 | 110 | 81 | 31 | 151 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.45 | 0.19 | 0.36 | 0.14 | 0.27 | 0.59 | 0.16 | 0.48 | 0.36 | 0.16 | 0.81 | 0.03 |
| Final Sat.: | 312 | 130 | 251 | 98 | 196 | 420 | 127 | 377 | 279 | 122 | 597 | 24 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | 0.16 | 0.13 | 0.13 | 0.13 | 0.29 | 0.29 | 0.29 | 0.25 | 0.25 | 0.25 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Delay/Veh: | 8.6 | 8.6 | 8.6 | 8.3 | 8.3 | 8.3 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.6 | 8.6 | 8.6 | 8.3 | 8.3 | 8.3 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | A | A | A |
| ApproachDel: | 8.6 | | | 8.3 | | | 9.1 | | | 9.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.6 | | | 8.3 | | | 9.1 | | | 9.1 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: B[ 10.3]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 36 | | 0 | | 92 | | 0 | | 0 | | 0 | | 0 | | 89 | | 61 | | 64 | | 139 | | 0 | |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 |
| Initial Bse: | 39 | | 0 | | 101 | | 0 | | 0 | | 0 | | 0 | | 98 | | 67 | | 70 | | 152 | | 0 | |
| Added Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| PasserByVol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Initial Fut: | 39 | | 0 | | 101 | | 0 | | 0 | | 0 | | 0 | | 98 | | 67 | | 70 | | 152 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 43 | | 0 | | 110 | | 0 | | 0 | | 0 | | 0 | | 106 | | 73 | | 76 | | 166 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 43 | | 0 | | 110 | | 0 | | 0 | | 0 | | 0 | | 106 | | 73 | | 76 | | 166 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 460 | xxxx | | 142 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 179 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 563 | xxxx | | 911 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1409 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 538 | xxxx | | 911 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1409 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.08 | xxxx | | 0.12 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.05 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.3 | xxxx | | 0.4 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 12.3 | xxxx | | 9.5 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.7 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | B | * | | A | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | 0.2 | xxxx | xxxxx | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | 7.7 | xxxx | xxxxx | | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | 10.3 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | B | | | | | | * | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 4.8  Worst Case Level Of Service: B[ 13.8]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 63 | 0 | 72 | 0 | 0 | 0 | 0 | 162 | 18 | 109 | 140 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 69 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 153 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 69 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 153 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 75 | 0 | 86 | 0 | 0 | 0 | 0 | 193 | 21 | 130 | 167 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 75 | 0 | 86 | 0 | 0 | 0 | 0 | 193 | 21 | 130 | 167 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 630 | 630 | 204 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 214 | xxxx | xxxxx |
| Potent Cap.: | 449 | 401 | 842 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1368 | xxxx | xxxxx |
| Move Cap.: | 414 | 360 | 842 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1368 | xxxx | xxxxx |
| Volume/Cap: | 0.18 | 0.00 | 0.10 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.09 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 568 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 1.2 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 13.8 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx |
| Shared LOS: | * | B | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 13.8 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | B | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

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Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.4 | 0.036 | A | 9.4 | 0.036 | + 0.000 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.0 | 0.048 | A | 9.0 | 0.048 | + 0.000 D/V |
| # 5 Curry St/Tehachapi Blvd | A | 8.6 | 0.172 | A | 8.6 | 0.172 | + 0.000 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 23.9 | 0.411 | C | 23.9 | 0.411 | + 0.000 D/V |
| # 8 Tucker Road/Valley Blvd | C | 21.8 | 0.403 | C | 21.8 | 0.403 | + 0.000 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 7.9 | 0.091 | A | 7.9 | 0.091 | + 0.000 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 8.6 | 0.261 | A | 8.6 | 0.261 | + 0.000 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | A | 9.3 | 0.092 | A | 9.3 | 0.092 | + 0.000 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 10.4 | 0.059 | B | 10.4 | 0.059 | + 0.000 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 3.7  Worst Case Level Of Service: A[ 9.4]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | 38 | 0 | 0 | 29 | 10 | 0 | 0 | 0 | 12 | 0 | 7 | | | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | | | | |
| Initial Bse: | 53 | 42 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 53 | 42 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | |
| PHF Volume: | 57 | 45 | 0 | 0 | 35 | 12 | 0 | 0 | 0 | 14 | 0 | 8 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 57 | 45 | 0 | 0 | 35 | 12 | 0 | 0 | 0 | 14 | 0 | 8 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 46 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 200 | 206 | 45 | | | | |
| Potent Cap.: | 1574 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 793 | 694 | 1030 | | | | |
| Move Cap.: | 1574 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 770 | 668 | 1030 | | | | |
| Volume/Cap: | 0.04 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.02 | 0.00 | 0.01 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT - | LTR - | RT | | LT - | LTR - | RT | | LT - | LTR - | RT | | LT - | LTR - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 849 | xxxxx | | | | |
| SharedQueue: | 0.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.1 | xxxxx | | | | |
| Shrd ConDel: | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 9.4 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | A | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | | 9.4 | | | | | |
| ApproachLOS: | * | | | * | | | * | | | | A | | | | | |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 3.5  Worst Case Level Of Service: A[ 9.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 0 1 0 0 0 | | | 0 1 0 1 0 | | | 0 0 0 0 0 | | |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 69 | 10 | 11 | 31 | 0 | 18 | 2 | 42 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 76 | 11 | 12 | 34 | 0 | 20 | 2 | 46 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 76 | 11 | 12 | 34 | 0 | 20 | 2 | 46 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 82 | 12 | 13 | 37 | 0 | 21 | 2 | 50 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 82 | 12 | 13 | 37 | 0 | 21 | 2 | 50 | 0 | 0 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 94 | xxxx | xxxxx | 151 | 157 | 37 | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1513 | xxxx | xxxxx | 845 | 738 | 1041 | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 1513 | xxxx | xxxxx | 840 | 732 | 1041 | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.01 | xxxx | xxxx | 0.03 | 0.00 | 0.05 | xxxx | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | A | * | * | * | * | * | * | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 827 | xxxx | 1022 | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | 0.1 | xxxx | 0.2 | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx | 9.5 | xxxx | 8.7 | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | A | * | * | A | * | A | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | 9.0 | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | A | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.172 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.6 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 0 | 0 | 21 | 0 | 56 | 37 | 185 | 0 | 0 | 169 | 26 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 21 | 0 | 56 | 37 | 185 | 0 | 0 | 169 | 26 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 0 | 23 | 0 | 61 | 41 | 201 | 0 | 0 | 183 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 23 | 0 | 61 | 41 | 201 | 0 | 0 | 183 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 0 | 23 | 0 | 61 | 41 | 201 | 0 | 0 | 183 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 1.00 | 0.27 | 0.00 | 0.73 | 0.33 | 1.67 | 0.00 | 0.00 | 1.73 | 0.27 |
| Final Sat.: | 0 | 597 | 675 | 180 | 0 | 484 | 235 | 1191 | 0 | 0 | 1266 | 202 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.00 | 0.00 | 0.13 | xxxx | 0.13 | 0.17 | 0.17 | xxxx | xxxx | 0.14 | 0.14 |
| Crit Moves: | | **** | | | | **** | **** | | | | **** | |
| Delay/Veh: | 0.0 | 0.0 | 0.0 | 8.8 | 0.0 | 8.8 | 8.8 | 8.6 | 0.0 | 0.0 | 8.3 | 8.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 0.0 | 8.8 | 0.0 | 8.8 | 8.8 | 8.6 | 0.0 | 0.0 | 8.3 | 8.2 |
| LOS by Move: | * | * | * | A | * | A | A | A | * | * | A | A |
| ApproachDel: | xxxxxx | | | 8.8 | | | 8.7 | | | 8.3 | | |
| Delay Adj: | xxxxx | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | xxxxxx | | | 8.8 | | | 8.7 | | | 8.3 | | |
| LOS by Appr: | * | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.411 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 23.9 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 121 | 144 | 119 | 46 | 129 | 76 | 52 | 130 | 90 | 185 | 150 | 46 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 121 | 144 | 119 | 46 | 129 | 76 | 52 | 130 | 90 | 185 | 150 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 131 | 156 | 130 | 50 | 141 | 82 | 56 | 142 | 98 | 201 | 163 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 131 | 156 | 130 | 50 | 141 | 82 | 56 | 142 | 98 | 201 | 163 | 50 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 131 | 156 | 130 | 50 | 141 | 82 | 56 | 142 | 98 | 201 | 163 | 50 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.04 | 0.08 | 0.03 | 0.04 | 0.05 | 0.03 | 0.07 | 0.06 | 0.11 | 0.09 | 0.03 |
| Crit Moves: | **** | | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.18 | 0.15 | 0.15 | 0.15 | 0.12 | 0.12 | 0.23 | 0.18 | 0.18 | 0.27 | 0.23 | 0.23 |
| Volume/Cap: | 0.41 | 0.29 | 0.53 | 0.18 | 0.31 | 0.41 | 0.14 | 0.41 | 0.33 | 0.41 | 0.38 | 0.14 |
| Delay/Veh: | 24.6 | 24.8 | 27.8 | 24.5 | 26.4 | 27.7 | 20.2 | 24.3 | 23.8 | 20.0 | 21.8 | 20.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.6 | 24.8 | 27.8 | 24.5 | 26.4 | 27.7 | 20.2 | 24.3 | 23.8 | 20.0 | 21.8 | 20.2 |
| LOS by Move: | C | C | C | C | C | C | C | C | C | B | C | C |
| HCM2kAvgQ: | 3 | 2 | 3 | 1 | 2 | 2 | 1 | 3 | 2 | 4 | 3 | 1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.403 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 21.8 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 85 | 145 | 101 | 127 | 151 | 123 | 142 | 142 | 31 | 88 | 133 | 92 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 85 | 145 | 101 | 127 | 151 | 123 | 142 | 142 | 31 | 88 | 133 | 92 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 93 | 157 | 110 | 138 | 164 | 133 | 155 | 155 | 33 | 95 | 144 | 100 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 93 | 157 | 110 | 138 | 164 | 133 | 155 | 155 | 33 | 95 | 144 | 100 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 93 | 157 | 110 | 138 | 164 | 133 | 155 | 155 | 33 | 95 | 144 | 100 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.04 | 0.07 | 0.08 | 0.05 | 0.08 | 0.09 | 0.08 | 0.02 | 0.05 | 0.08 | 0.06 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.20 | 0.20 | 0.13 | 0.20 | 0.20 | 0.21 | 0.27 | 0.27 | 0.13 | 0.19 | 0.19 |
| Volume/Cap: | 0.40 | 0.21 | 0.33 | 0.60 | 0.22 | 0.40 | 0.40 | 0.31 | 0.08 | 0.40 | 0.40 | 0.33 |
| Delay/Veh: | 25.2 | 20.0 | 21.0 | 29.0 | 20.0 | 21.5 | 21.0 | 17.9 | 16.5 | 24.8 | 22.1 | 21.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.2 | 20.0 | 21.0 | 29.0 | 20.0 | 21.5 | 21.0 | 17.9 | 16.5 | 24.8 | 22.1 | 21.7 |
| LOS by Move: | C | B | C | C | C | C | C | B | B | C | C | C |
| HCM2kAvgQ: | 2 | 1 | 2 | 4 | 1 | 3 | 3 | 2 | 0 | 2 | 3 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.091 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 35 | 37 | 0 | 0 | 32 | 39 | 55 | 0 | 27 | 0 | 0 | 1 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 37 | 0 | 0 | 32 | 39 | 55 | 0 | 27 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 38 | 41 | 0 | 0 | 35 | 43 | 60 | 0 | 30 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 41 | 0 | 0 | 35 | 43 | 60 | 0 | 30 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 41 | 0 | 0 | 35 | 43 | 60 | 0 | 30 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Final Sat.: | 669 | 739 | 0 | 652 | 718 | 834 | 655 | 0 | 836 | 0 | 0 | 795 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.05 | xxxx | 0.00 | 0.05 | 0.05 | 0.09 | xxxx | 0.04 | xxxx | xxxx | 0.00 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Delay/Veh: | 8.3 | 7.8 | 0.0 | 0.0 | 7.9 | 7.1 | 8.6 | 0.0 | 7.0 | 0.0 | 0.0 | 7.4 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.3 | 7.8 | 0.0 | 0.0 | 7.9 | 7.1 | 8.6 | 0.0 | 7.0 | 0.0 | 0.0 | 7.4 |
| LOS by Move: | A | A | * | * | A | A | A | * | A | * | * | A |
| ApproachDel: | 8.0 | | | 7.5 | | | 8.1 | | | 7.4 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.0 | | | 7.5 | | | 8.1 | | | 7.4 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.261 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.6 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 32 | 42 | 21 | 23 | 23 | 68 | 66 | 84 | 34 | 21 | 65 | 23 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 32 | 42 | 21 | 23 | 23 | 68 | 66 | 84 | 34 | 21 | 65 | 23 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 35 | 45 | 23 | 25 | 25 | 74 | 71 | 92 | 37 | 23 | 70 | 25 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 35 | 45 | 23 | 25 | 25 | 74 | 71 | 92 | 37 | 23 | 70 | 25 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 35 | 45 | 23 | 25 | 25 | 74 | 71 | 92 | 37 | 23 | 70 | 25 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.34 | 0.44 | 0.22 | 0.20 | 0.20 | 0.60 | 0.36 | 0.46 | 0.18 | 0.19 | 0.60 | 0.21 |
| Final Sat.: | 243 | 319 | 159 | 154 | 154 | 455 | 274 | 351 | 141 | 144 | 448 | 160 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.14 | 0.14 | 0.14 | 0.16 | 0.16 | 0.16 | 0.26 | 0.26 | 0.26 | 0.16 | 0.16 | 0.16 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |
| Delay/Veh: | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.2 | 9.0 | 9.0 | 9.0 | 8.3 | 8.3 | 8.3 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.2 | 9.0 | 9.0 | 9.0 | 8.3 | 8.3 | 8.3 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | A | A | A |
| ApproachDel: | | 8.4 | | | 8.2 | | | 9.0 | | | 8.3 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.4 | | | 8.2 | | | 9.0 | | | 8.3 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.6  Worst Case Level Of Service: A[ 9.3]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 13 | | 0 | | 74 | | 0 | | 0 | | 0 | | 0 | | 58 | | 49 | | 41 | | 73 | | 0 | |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 |
| Initial Bse: | 14 | | 0 | | 81 | | 0 | | 0 | | 0 | | 0 | | 64 | | 54 | | 45 | | 80 | | 0 | |
| Added Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| PasserByVol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Initial Fut: | 14 | | 0 | | 81 | | 0 | | 0 | | 0 | | 0 | | 64 | | 54 | | 45 | | 80 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 15 | | 0 | | 88 | | 0 | | 0 | | 0 | | 0 | | 69 | | 58 | | 49 | | 87 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 15 | | 0 | | 88 | | 0 | | 0 | | 0 | | 0 | | 69 | | 58 | | 49 | | 87 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 283 | xxxx | | 98 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 127 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 711 | xxxx | | 963 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1471 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 693 | xxxx | | 963 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1471 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.02 | xxxx | | 0.09 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.03 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | | 0.3 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.1 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 10.3 | xxxx | | 9.1 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.5 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | B | * | | A | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 0.1 | xxxx | | xxxxx | | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 7.5 | xxxx | | xxxxx | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | | | 9.3 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | |
| ApproachLOS: | | | A | | | | | | * | | | | | | * | | | | | | * | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[ 10.4]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 31 | 0 | 35 | 0 | 0 | 0 | 0 | 115 | 16 | 46 | 84 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 34 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 92 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 34 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 92 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 37 | 0 | 42 | 0 | 0 | 0 | 0 | 137 | 19 | 55 | 100 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 37 | 0 | 42 | 0 | 0 | 0 | 0 | 137 | 19 | 55 | 100 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 356 | 356 | 147 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 156 | xxxx | xxxxx |
| Potent Cap.: | 646 | 573 | 906 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1436 | xxxx | xxxxx |
| Move Cap.: | 627 | 550 | 906 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1436 | xxxx | xxxxx |
| Volume/Cap: | 0.06 | 0.00 | 0.05 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.04 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 749 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 0.4 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 10.4 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx |
| Shared LOS: | * | B | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 10.4 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | B | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
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Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 10.6 | 0.058 | B | 13.5 | 0.110 | + 2.871 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.5 | 0.144 | B | 11.5 | 0.204 | + 1.957 D/V |
| # 5 Curry St/Tehachapi Blvd | C | 15.5 | 0.615 | D | 31.1 | 0.845 | + 0.230 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 31.7 | 0.817 | D | 53.2 | 1.047 | +21.538 D/V |
| # 8 Tucker Road/Valley Blvd | C | 28.6 | 0.788 | D | 47.5 | 1.012 | +18.871 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.5 | 0.149 | A | 9.3 | 0.237 | + 0.088 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | C | 15.1 | 0.703 | C | 25.0 | 0.836 | + 0.132 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 11.8 | 0.186 | B | 13.2 | 0.241 | + 1.421 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | C | 23.3 | 0.432 | E | 36.5 | 0.624 | +13.157 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[ 13.5]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 54 | 49 | 0 | 0 | 39 | 38 | 0 | 0 | 0 | 22 | 4 | 13 | | | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | |
| Initial Bse: | 81 | 74 | 0 | 0 | 59 | 57 | 0 | 0 | 0 | 33 | 6 | 20 | | | | |
| Added Vol: | 17 | 71 | 0 | 0 | 178 | 31 | 0 | 0 | 0 | 9 | 0 | 12 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 98 | 145 | 0 | 0 | 237 | 88 | 0 | 0 | 0 | 42 | 6 | 32 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | | |
| PHF Volume: | 103 | 152 | 0 | 0 | 249 | 93 | 0 | 0 | 0 | 44 | 6 | 33 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 103 | 152 | 0 | 0 | 249 | 93 | 0 | 0 | 0 | 44 | 6 | 33 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 342 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 655 | 701 | 152 | | | | |
| Potent Cap.: | 1228 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 434 | 365 | 899 | | | | |
| Move Cap.: | 1228 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 405 | 333 | 899 | | | | |
| Volume/Cap: | 0.08 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.11 | 0.02 | 0.04 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.3 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 507 | xxxxx | | | | |
| SharedQueue: | 0.3 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.6 | xxxxx | | | | |
| Shrd ConDel: | 8.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 13.5 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 13.5 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 3.9  Worst Case Level Of Service: B[ 11.5]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 1 0 | | | 0 1 0 0 0 | | | 0 1 0 1 0 | | | 0 0 0 0 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 77 | 14 | 12 | 49 | 0 | 27 | 1 | 90 | 0 | 0 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 0 | 116 | 21 | 18 | 74 | 0 | 41 | 2 | 135 | 0 | 0 | 0 |
| Added Vol: | 0 | 75 | 15 | 31 | 156 | 0 | 12 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 191 | 36 | 49 | 230 | 0 | 53 | 2 | 155 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 0 | 201 | 38 | 52 | 242 | 0 | 55 | 2 | 164 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 201 | 38 | 52 | 242 | 0 | 55 | 2 | 164 | 0 | 0 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 239 | xxxx | xxxxx | 565 | 584 | 242 | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1340 | xxxx | xxxxx | 490 | 426 | 802 | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 1340 | xxxx | xxxxx | 475 | 409 | 802 | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.04 | xxxx | xxxx | 0.12 | 0.00 | 0.20 | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | A | * | * | * | * | * | * | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 473 | xxxx | 795 | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx | 0.4 | xxxx | 0.8 | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx | 13.7 | xxxx | 10.7 | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | A | * | * | B | * | B | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | 11.5 | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | B | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.845 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 31.1 |
| Optimal Cycle: | 0 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 86 | 0 | 159 | 2 | 3 | 0 | 2 | 572 | 107 | 107 | 412 | 3 |
| Added Vol: | 25 | 0 | 38 | 0 | 0 | 0 | 0 | 122 | 25 | 70 | 200 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 111 | 0 | 197 | 2 | 3 | 0 | 2 | 694 | 132 | 177 | 612 | 3 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 117 | 0 | 208 | 2 | 3 | 0 | 2 | 730 | 139 | 186 | 644 | 3 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 117 | 0 | 208 | 2 | 3 | 0 | 2 | 730 | 139 | 186 | 644 | 3 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 117 | 0 | 208 | 2 | 3 | 0 | 2 | 730 | 139 | 186 | 644 | 3 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.33 | 0.67 | 0.00 | 0.01 | 1.67 | 0.32 | 0.45 | 1.54 | 0.01 |
| Final Sat.: | 392 | 0 | 457 | 133 | 266 | 0 | 2 | 875 | 169 | 222 | 785 | 4 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.30 | xxxx | 0.46 | 0.01 | 0.01 | xxxx | 0.85 | 0.83 | 0.82 | 0.84 | 0.82 | 0.81 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 14.6 | 0.0 | 15.6 | 11.8 | 11.8 | 0.0 | 36.1 | 34.5 | 32.2 | 36.0 | 33.6 | 32.3 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 14.6 | 0.0 | 15.6 | 11.8 | 11.8 | 0.0 | 36.1 | 34.5 | 32.2 | 36.0 | 33.6 | 32.3 |
| LOS by Move: | B | * | C | B | B | * | E | D | D | E | D | D |
| ApproachDel: | 15.2 | | | 11.8 | | | 34.1 | | | 34.2 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 15.2 | | | 11.8 | | | 34.1 | | | 34.2 | | |
| LOS by Appr: | C | | | B | | | D | | | D | | |
| AllWayAvgQ: | 0.4 | 0.4 | 0.7 | 0.0 | 0.0 | 0.0 | 3.8 | 3.4 | 3.4 | 3.6 | 3.2 | 3.2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 1.047 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 53.2 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 206 | 283 | 266 | 188 | 429 | 196 | 110 | 311 | 165 | 275 | 305 | 53 |
| Added Vol: | 12 | 139 | 76 | 51 | 198 | 0 | 42 | 64 | 34 | 100 | 88 | 52 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 218 | 422 | 342 | 239 | 627 | 196 | 152 | 375 | 199 | 375 | 393 | 105 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 230 | 444 | 360 | 252 | 660 | 206 | 160 | 395 | 210 | 395 | 414 | 110 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 230 | 444 | 360 | 252 | 660 | 206 | 160 | 395 | 210 | 395 | 414 | 110 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 230 | 444 | 360 | 252 | 660 | 206 | 160 | 395 | 210 | 395 | 414 | 110 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.12 | 0.22 | 0.14 | 0.18 | 0.13 | 0.09 | 0.21 | 0.13 | 0.22 | 0.22 | 0.07 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.14 | 0.21 | 0.21 | 0.13 | 0.20 | 0.20 | 0.12 | 0.20 | 0.20 | 0.21 | 0.29 | 0.29 |
| Volume/Cap: | 0.90 | 0.58 | 1.05 | 1.05 | 0.90 | 0.62 | 0.73 | 1.05 | 0.65 | 1.05 | 0.76 | 0.24 |
| Delay/Veh: | 57.8 | 24.0 | 86.9 | 99.1 | 38.7 | 27.3 | 39.3 | 85.2 | 28.8 | 84.8 | 27.4 | 18.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 57.8 | 24.0 | 86.9 | 99.1 | 38.7 | 27.3 | 39.3 | 85.2 | 28.8 | 84.8 | 27.4 | 18.0 |
| LOS by Move: | E | C | F | F | D | C | D | F | C | F | C | B |
| HCM2kAvgQ: | 8 | 5 | 14 | 11 | 11 | 5 | 5 | 15 | 5 | 15 | 10 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 1.012 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 47.5 |
| Optimal Cycle: OPTIMIZED | | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 223 | 296 | 120 | 256 | 331 | 251 | 266 | 283 | 92 | 116 | 233 | 99 |
| Added Vol: | 8 | 105 | 5 | 72 | 126 | 114 | 92 | 67 | 13 | 8 | 57 | 67 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 231 | 401 | 125 | 328 | 457 | 365 | 358 | 350 | 105 | 124 | 290 | 166 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 243 | 422 | 132 | 345 | 481 | 384 | 377 | 368 | 110 | 130 | 305 | 175 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 243 | 422 | 132 | 345 | 481 | 384 | 377 | 368 | 110 | 130 | 305 | 175 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 243 | 422 | 132 | 345 | 481 | 384 | 377 | 368 | 110 | 130 | 305 | 175 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.12 | 0.08 | 0.19 | 0.13 | 0.24 | 0.21 | 0.19 | 0.07 | 0.07 | 0.16 | 0.11 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.13 | 0.15 | 0.15 | 0.21 | 0.23 | 0.23 | 0.20 | 0.26 | 0.26 | 0.11 | 0.17 | 0.17 |
| Volume/Cap: | 1.03 | 0.78 | 0.55 | 0.89 | 0.57 | 1.03 | 1.03 | 0.75 | 0.26 | 0.65 | 0.96 | 0.65 |
| Delay/Veh: | 91.5 | 32.0 | 26.3 | 45.1 | 21.4 | 76.3 | 77.6 | 26.7 | 18.0 | 32.8 | 65.7 | 28.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 91.5 | 32.0 | 26.3 | 45.1 | 21.4 | 76.3 | 77.6 | 26.7 | 18.0 | 32.8 | 65.7 | 28.9 |
| LOS by Move: | F | C | C | D | C | E | E | C | B | C | E | C |
| HCM2kAvgQ: | 10 | 6 | 3 | 10 | 5 | 14 | 14 | 8 | 2 | 4 | 11 | 4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.237 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 92 | 92 | 0 | 0 | 56 | 68 | 71 | 3 | 47 | 0 | 0 | 0 |
| Added Vol: | 0 | 9 | 0 | 20 | 10 | 67 | 36 | 19 | 0 | 0 | 23 | 14 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 92 | 101 | 0 | 20 | 66 | 135 | 107 | 22 | 47 | 0 | 23 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 97 | 106 | 0 | 21 | 69 | 142 | 112 | 23 | 49 | 0 | 24 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 97 | 106 | 0 | 21 | 69 | 142 | 112 | 23 | 49 | 0 | 24 | 15 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 97 | 106 | 0 | 21 | 69 | 142 | 112 | 23 | 49 | 0 | 24 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.83 | 0.17 | 1.00 | 0.00 | 0.62 | 0.38 |
| Final Sat.: | 593 | 646 | 0 | 567 | 616 | 701 | 473 | 98 | 691 | 0 | 373 | 227 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.16 | 0.16 | xxxx | 0.04 | 0.11 | 0.20 | 0.24 | 0.24 | 0.07 | xxxx | 0.06 | 0.06 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 9.7 | 9.1 | 0.0 | 9.1 | 9.0 | 8.8 | 10.5 | 10.5 | 8.0 | 0.0 | 9.0 | 9.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.7 | 9.1 | 0.0 | 9.1 | 9.0 | 8.8 | 10.5 | 10.5 | 8.0 | 0.0 | 9.0 | 9.0 |
| LOS by Move: | A | A | * | A | A | A | B | B | A | * | A | A |
| ApproachDel: | | 9.3 | | | 8.9 | | | 9.8 | | | 9.0 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 9.3 | | | 8.9 | | | 9.8 | | | 9.0 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.2 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

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Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.836 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 25.0 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - T - R | | | L - T - R | | | L - T - R | | | L - T - R | | |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 38 | 105 | 38 | 17 | 21 | 57 | 263 | 129 | 53 | 48 | 182 | 83 |
| Added Vol: | 13 | 0 | 34 | 0 | 0 | 0 | 0 | 20 | 13 | 75 | 79 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 51 | 105 | 72 | 17 | 21 | 57 | 263 | 149 | 66 | 123 | 261 | 83 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 53 | 111 | 75 | 17 | 22 | 60 | 277 | 157 | 69 | 130 | 275 | 87 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 53 | 111 | 75 | 17 | 22 | 60 | 277 | 157 | 69 | 130 | 275 | 87 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 53 | 111 | 75 | 17 | 22 | 60 | 277 | 157 | 69 | 130 | 275 | 87 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.22 | 0.47 | 0.31 | 0.17 | 0.22 | 0.61 | 0.55 | 0.31 | 0.14 | 0.26 | 0.56 | 0.18 |
| Final Sat.: | 110 | 230 | 156 | 80 | 102 | 276 | 332 | 188 | 83 | 160 | 339 | 107 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.48 | 0.48 | 0.48 | 0.22 | 0.22 | 0.22 | 0.84 | 0.84 | 0.84 | 0.81 | 0.81 | 0.81 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |
| Delay/Veh: | 14.7 | 14.7 | 14.7 | 11.5 | 11.5 | 11.5 | 30.1 | 30.1 | 30.1 | 27.4 | 27.4 | 27.4 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 14.7 | 14.7 | 14.7 | 11.5 | 11.5 | 11.5 | 30.1 | 30.1 | 30.1 | 27.4 | 27.4 | 27.4 |
| LOS by Move: | B | B | B | B | B | B | D | D | D | D | D | D |
| ApproachDel: | | 14.7 | | | 11.5 | | | 30.1 | | | 27.4 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 14.7 | | | 11.5 | | | 30.1 | | | 27.4 | |
| LOS by Appr: | | B | | | B | | | D | | | D | |
| AllWayAvgQ: | 0.7 | 0.7 | 0.7 | 0.2 | 0.2 | 0.2 | 3.6 | 3.6 | 3.6 | 3.1 | 3.1 | 3.1 |

Note: Queue reported is the number of cars per lane.

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Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: B[ 13.2]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | 0 | 100 | | | 0 | 0 | 0 | | | 0 | 73 | 45 | | | 74 | 164 | 0 | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | | | 1.50 | 1.50 | 1.50 | | | 1.50 | 1.50 | 1.50 | | | 1.50 | 1.50 | 1.50 | | |
| Initial Bse: | 72 | 0 | 150 | | | 0 | 0 | 0 | | | 0 | 110 | 68 | | | 111 | 247 | 0 | | |
| Added Vol: | 7 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 27 | 55 | | | 0 | 61 | 0 | | |
| PasserByVol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| Initial Fut: | 79 | 0 | 150 | | | 0 | 0 | 0 | | | 0 | 137 | 123 | | | 111 | 308 | 0 | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | | 1.00 | 1.00 | 1.00 | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | | |
| PHF Volume: | 83 | 0 | 158 | | | 0 | 0 | 0 | | | 0 | 144 | 129 | | | 117 | 324 | 0 | | |
| Reduct Vol: | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | |
| FinalVolume: | 83 | 0 | 158 | | | 0 | 0 | 0 | | | 0 | 144 | 129 | | | 117 | 324 | 0 | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 767 | xxxx | 209 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 273 | xxxx | xxxxx | | | | | | | |
| Potent Cap.: | 373 | xxxx | 837 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1302 | xxxx | xxxxx | | | | | | | |
| Move Cap.: | 346 | xxxx | 837 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1302 | xxxx | xxxxx | | | | | | | |
| Volume/Cap: | 0.24 | xxxx | 0.19 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.09 | xxxx | xxxx | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.9 | xxxx | 0.7 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.3 | xxxx | xxxxx | | | | | | | |
| Control Del: | 18.7 | xxxx | 10.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.0 | xxxx | xxxxx | | | | | | | |
| LOS by Move: | C | * | B | * | * | * | * | * | * | | A | * | * | | | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 0.3 | xxxx | xxxxx | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.0 | xxxx | xxxxx | | | | | | | |
| Shared LOS: | * | * | * | * | * | * | * | * | * | | A | * | * | | | | | | | |
| ApproachDel: | 13.2 | | | xxxxxx | | | xxxxxx | | | | xxxxxx | | | | | | | | | |
| ApproachLOS: | B | | | * | | | * | | | | * | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 13.2  Worst Case Level Of Service: E[ 36.5]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 91 | 0 | 68 | 0 | 0 | 0 | 0 | 154 | 19 | 91 | 146 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 137 | 0 | 102 | 0 | 0 | 0 | 0 | 232 | 29 | 137 | 220 | 0 |
| Added Vol: | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 198 | 0 | 102 | 0 | 0 | 0 | 0 | 232 | 29 | 137 | 220 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 208 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 30 | 144 | 231 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 208 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 30 | 144 | 231 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 778 | 778 | 259 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 274 | xxxx | xxxxx |
| Potent Cap.: | 368 | 330 | 785 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1301 | xxxx | xxxxx |
| Move Cap.: | 334 | 290 | 785 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1301 | xxxx | xxxxx |
| Volume/Cap: | 0.62 | 0.00 | 0.14 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.11 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.4 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.1 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 415 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 6.3 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.4 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 36.5 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.1 | xxxx | xxxxx |
| Shared LOS: | * | E | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 36.5 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | E | | | * | | | * | | | * | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 12.9 | 0.099 | C | 15.9 | 0.161 | + 3.049 D/V |
| # 2 Mill St/SR 58 EB Ramps | B | 10.7 | 0.203 | B | 12.6 | 0.289 | + 1.903 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 14.1 | 0.501 | C | 19.4 | 0.684 | + 0.183 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | D | 38.0 | 0.934 | E | 58.9 | 1.103 | +20.861 D/V |
| # 8 Tucker Road/Valley Blvd | D | 41.1 | 0.923 | D | 52.7 | 1.023 | +11.674 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.3 | 0.142 | A | 8.7 | 0.214 | + 0.072 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | B | 10.3 | 0.416 | B | 12.1 | 0.556 | + 0.140 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 11.3 | 0.170 | B | 12.4 | 0.209 | + 1.020 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | C | 20.3 | 0.332 | C | 24.6 | 0.430 | + 4.294 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: C[ 15.9]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 0 | 27 | 2 | 19 | | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | |
| Initial Bse: | 122 | 173 | 0 | 0 | 95 | 116 | 0 | 0 | 0 | 41 | 3 | 29 | | | | |
| Added Vol: | 10 | 139 | 0 | 0 | 45 | 8 | 0 | 0 | 0 | 8 | 0 | 25 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 132 | 312 | 0 | 0 | 140 | 124 | 0 | 0 | 0 | 49 | 3 | 54 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | | |
| PHF Volume: | 139 | 328 | 0 | 0 | 147 | 130 | 0 | 0 | 0 | 51 | 3 | 56 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 139 | 328 | 0 | 0 | 147 | 130 | 0 | 0 | 0 | 51 | 3 | 56 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 277 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 818 | 883 | 328 | | | | |
| Potent Cap.: | 1297 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 348 | 287 | 718 | | | | |
| Move Cap.: | 1297 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 317 | 253 | 718 | | | | |
| Volume/Cap: | 0.11 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.16 | 0.01 | 0.08 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.4 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 439 | xxxxx | | | | |
| SharedQueue: | 0.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 1.0 | xxxxx | | | | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 15.9 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | C | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 15.9 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | C | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: B[ 12.6]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | | L | T | R | | L | T | R | | L | T | R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 0 0 1 0 | | | | 0 1 0 0 0 | | | | 0 1 0 1 0 | | | | 0 0 0 0 0 | | | |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 130 | 25 | | 18 | 73 | 0 | | 67 | 1 | 121 | | 0 | 0 | 0 | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | |
| Initial Bse: | 0 | 196 | 38 | | 27 | 110 | 0 | | 101 | 2 | 182 | | 0 | 0 | 0 | |
| Added Vol: | 0 | 124 | 8 | | 8 | 45 | 0 | | 25 | 0 | 9 | | 0 | 0 | 0 | |
| PasserByVol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 0 | 320 | 46 | | 35 | 155 | 0 | | 126 | 2 | 191 | | 0 | 0 | 0 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | |
| PHF Volume: | 0 | 336 | 48 | | 37 | 163 | 0 | | 132 | 2 | 201 | | 0 | 0 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| FinalVolume: | 0 | 336 | 48 | | 37 | 163 | 0 | | 132 | 2 | 201 | | 0 | 0 | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | 6.4 | 6.5 | 6.2 | | xxxxx | xxxx | xxxxx | |
| FollowUpTim: | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | 3.5 | 4.0 | 3.3 | | xxxxx | xxxx | xxxxx | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | | 384 | xxxx | xxxxx | | 597 | 621 | 163 | | xxxx | xxxx | xxxxx | |
| Potent Cap.: | xxxx | xxxx | xxxxx | | 1185 | xxxx | xxxxx | | 469 | 406 | 887 | | xxxx | xxxx | xxxxx | |
| Move Cap.: | xxxx | xxxx | xxxxx | | 1185 | xxxx | xxxxx | | 458 | 393 | 887 | | xxxx | xxxx | xxxxx | |
| Volume/Cap: | xxxx | xxxx | xxxx | | 0.03 | xxxx | xxxx | | 0.29 | 0.00 | 0.23 | | xxxx | xxxx | xxxx | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | | 0.1 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | |
| Control Del: | xxxxx | xxxx | xxxxx | | 8.1 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | |
| LOS by Move: | * | * | * | | A | * | * | | * | * | * | | * | * | * | |
| Movement: | LT - LTR - RT | | | | LT - LTR - RT | | | | LT - LTR - RT | | | | LT - LTR - RT | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 457 | xxxx | 878 | | xxxx | xxxx | xxxxx | |
| SharedQueue: | xxxxx | xxxx | xxxxx | | 0.1 | xxxx | xxxxx | | 1.2 | xxxx | 0.9 | | xxxxx | xxxx | xxxxx | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | | 8.1 | xxxx | xxxxx | | 16.1 | xxxx | 10.3 | | xxxxx | xxxx | xxxxx | |
| Shared LOS: | * | * | * | | A | * | * | | C | * | B | | * | * | * | |
| ApproachDel: | xxxxxx | | | | xxxxxx | | | | 12.6 | | | | xxxxxx | | | |
| ApproachLOS: | * | | | | * | | | | B | | | | * | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.684 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 19.4 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 0 | 0 | 6 | 71 | 5 | 159 | 72 | 454 | 20 | 8 | 457 | 59 |
| Added Vol: | 18 | 0 | 35 | 0 | 0 | 0 | 0 | 139 | 11 | 15 | 86 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 18 | 0 | 41 | 71 | 5 | 159 | 72 | 593 | 31 | 23 | 543 | 59 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 19 | 0 | 43 | 74 | 5 | 168 | 76 | 624 | 32 | 24 | 572 | 62 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 0 | 43 | 74 | 5 | 168 | 76 | 624 | 32 | 24 | 572 | 62 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 0 | 43 | 74 | 5 | 168 | 76 | 624 | 32 | 24 | 572 | 62 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.30 | 0.02 | 0.68 | 0.21 | 1.70 | 0.09 | 0.07 | 1.74 | 0.19 |
| Final Sat.: | 383 | 0 | 440 | 149 | 10 | 337 | 111 | 925 | 48 | 38 | 935 | 102 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | xxxx | 0.10 | 0.50 | 0.50 | 0.50 | 0.68 | 0.68 | 0.67 | 0.62 | 0.61 | 0.60 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 11.8 | 0.0 | 10.9 | 16.5 | 16.5 | 16.5 | 22.2 | 21.5 | 20.9 | 19.3 | 18.8 | 18.3 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.8 | 0.0 | 10.9 | 16.5 | 16.5 | 16.5 | 22.2 | 21.5 | 20.9 | 19.3 | 18.8 | 18.3 |
| LOS by Move: | B | * | B | C | C | C | C | C | C | C | C | C |
| ApproachDel: | 11.2 | | | 16.5 | | | 21.5 | | | 18.8 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 11.2 | | | 16.5 | | | 21.5 | | | 18.8 | | |
| LOS by Appr: | B | | | C | | | C | | | C | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.1 | 0.9 | 0.9 | 0.9 | 1.9 | 1.8 | 1.8 | 1.5 | 1.4 | 1.4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

Cycle (sec): 65 | Critical Vol./Cap.(X): 1.103
Loss Time (sec): 16 | Average Delay (sec/veh): 58.9
Optimal Cycle: OPTIMIZED | Level Of Service: E

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 173 | 469 | 325 | 177 | 402 | 128 | 153 | 325 | 153 | 358 | 238 | 104 |
| Added Vol: | 4 | 44 | 51 | 34 | 72 | 0 | 10 | 82 | 10 | 50 | 28 | 30 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 177 | 513 | 376 | 211 | 474 | 128 | 163 | 407 | 163 | 408 | 266 | 134 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 186 | 540 | 396 | 223 | 498 | 135 | 172 | 428 | 172 | 429 | 280 | 141 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 186 | 540 | 396 | 223 | 498 | 135 | 172 | 428 | 172 | 429 | 280 | 141 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 186 | 540 | 396 | 223 | 498 | 135 | 172 | 428 | 172 | 429 | 280 | 141 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.15 | 0.24 | 0.12 | 0.14 | 0.08 | 0.10 | 0.23 | 0.11 | 0.24 | 0.15 | 0.09 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.14 | 0.22 | 0.22 | 0.11 | 0.19 | 0.19 | 0.17 | 0.20 | 0.20 | 0.22 | 0.25 | 0.25 |
| Volume/Cap: | 0.72 | 0.67 | 1.10 | 1.10 | 0.72 | 0.44 | 0.58 | 1.10 | 0.52 | 1.10 | 0.58 | 0.34 |
| Delay/Veh: | 36.3 | 25.4 | 103.5 | 122.6 | 28.4 | 24.2 | 27.8 | 102 | 24.5 | 101.9 | 22.9 | 20.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.3 | 25.4 | 103.5 | 122.6 | 28.4 | 24.2 | 27.8 | 102 | 24.5 | 101.9 | 22.9 | 20.3 |
| LOS by Move: | D | C | F | F | C | C | C | F | C | F | C | C |
| HCM2kAvgQ: | 5 | 7 | 17 | 11 | 7 | 3 | 4 | 18 | 4 | 18 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

Cycle (sec): 60 | Critical Vol./Cap.(X): 1.023
Loss Time (sec): 16 | Average Delay (sec/veh): 52.7
Optimal Cycle: OPTIMIZED | Level Of Service: D

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 212 | 304 | 99 | 235 | 257 | 316 | 394 | 311 | 81 | 102 | 202 | 180 |
| Added Vol: | 0 | 43 | 0 | 15 | 33 | 45 | 49 | 21 | 0 | 1 | 9 | 23 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 212 | 347 | 99 | 250 | 290 | 361 | 443 | 332 | 81 | 103 | 211 | 203 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 223 | 365 | 104 | 263 | 305 | 380 | 466 | 350 | 85 | 109 | 222 | 214 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 223 | 365 | 104 | 263 | 305 | 380 | 466 | 350 | 85 | 109 | 222 | 214 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 223 | 365 | 104 | 263 | 305 | 380 | 466 | 350 | 85 | 109 | 222 | 214 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.10 | 0.06 | 0.15 | 0.08 | 0.24 | 0.26 | 0.18 | 0.05 | 0.06 | 0.12 | 0.13 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.11 | 0.16 | 0.16 | 0.17 | 0.22 | 0.22 | 0.24 | 0.28 | 0.28 | 0.13 | 0.17 | 0.17 |
| Volume/Cap: | 1.09 | 0.64 | 0.41 | 0.85 | 0.39 | 1.09 | 1.09 | 0.66 | 0.19 | 0.48 | 0.70 | 0.80 |
| Delay/Veh: | 115.3 | 26.2 | 23.8 | 43.0 | 20.5 | 97.8 | 92.6 | 22.3 | 16.7 | 26.0 | 30.4 | 39.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 115.3 | 26.2 | 23.8 | 43.0 | 20.5 | 97.8 | 92.6 | 22.3 | 16.7 | 26.0 | 30.4 | 39.1 |
| LOS by Move: | F | C | C | D | C | F | F | C | B | C | C | D |
| HCM2kAvgQ: | 10 | 5 | 2 | 8 | 3 | 15 | 18 | 7 | 1 | 3 | 5 | 6 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.214 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.7 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 56 | 48 | 0 | 0 | 62 | 99 | 83 | 0 | 42 | 0 | 0 | 0 |
| Added Vol: | 0 | 9 | 0 | 8 | 2 | 8 | 35 | 5 | 0 | 0 | 7 | 13 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 56 | 57 | 0 | 8 | 64 | 107 | 118 | 5 | 42 | 0 | 7 | 13 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 59 | 60 | 0 | 8 | 67 | 113 | 124 | 5 | 44 | 0 | 7 | 14 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 60 | 0 | 8 | 67 | 113 | 124 | 5 | 44 | 0 | 7 | 14 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 59 | 60 | 0 | 8 | 67 | 113 | 124 | 5 | 44 | 0 | 7 | 14 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.96 | 0.04 | 1.00 | 0.00 | 0.35 | 0.65 |
| Final Sat.: | 611 | 667 | 0 | 598 | 653 | 749 | 580 | 25 | 751 | 0 | 234 | 434 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.09 | xxxx | 0.01 | 0.10 | 0.15 | 0.21 | 0.21 | 0.06 | xxxx | 0.03 | 0.03 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Delay/Veh: | 9.0 | 8.4 | 0.0 | 8.6 | 8.6 | 8.1 | 9.9 | 9.9 | 7.5 | 0.0 | 8.2 | 8.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.0 | 8.4 | 0.0 | 8.6 | 8.6 | 8.1 | 9.9 | 9.9 | 7.5 | 0.0 | 8.2 | 8.2 |
| LOS by Move: | A | A | * | A | A | A | A | A | A | * | A | A |
| ApproachDel: | 8.7 | | | 8.3 | | | 9.3 | | | 8.2 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.7 | | | 8.3 | | | 9.3 | | | 8.2 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.556 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 12.1 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 62 | 26 | 50 | 17 | 33 | 71 | 47 | 138 | 102 | 39 | 191 | 8 |
| Added Vol: | 5 | 0 | 44 | 0 | 0 | 0 | 0 | 71 | 5 | 10 | 16 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 67 | 26 | 94 | 17 | 33 | 71 | 47 | 209 | 107 | 49 | 207 | 8 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 70 | 27 | 99 | 17 | 35 | 74 | 49 | 220 | 113 | 52 | 218 | 8 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 70 | 27 | 99 | 17 | 35 | 74 | 49 | 220 | 113 | 52 | 218 | 8 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 70 | 27 | 99 | 17 | 35 | 74 | 49 | 220 | 113 | 52 | 218 | 8 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.36 | 0.14 | 0.50 | 0.14 | 0.27 | 0.59 | 0.13 | 0.58 | 0.29 | 0.19 | 0.78 | 0.03 |
| Final Sat.: | 213 | 82 | 299 | 79 | 157 | 336 | 88 | 396 | 203 | 119 | 503 | 18 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.33 | 0.33 | 0.33 | 0.22 | 0.22 | 0.22 | 0.56 | 0.56 | 0.56 | 0.43 | 0.43 | 0.43 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |
| Delay/Veh: | 10.8 | 10.8 | 10.8 | 9.9 | 9.9 | 9.9 | 13.6 | 13.6 | 13.6 | 12.0 | 12.0 | 12.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.8 | 10.8 | 10.8 | 9.9 | 9.9 | 9.9 | 13.6 | 13.6 | 13.6 | 12.0 | 12.0 | 12.0 |
| LOS by Move: | B | B | B | A | A | A | B | B | B | B | B | B |
| ApproachDel: | | 10.8 | | | 9.9 | | | 13.6 | | | 12.0 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 10.8 | | | 9.9 | | | 13.6 | | | 12.0 | |
| LOS by Appr: | | B | | | A | | | B | | | B | |
| AllWayAvgQ: | 0.4 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 1.1 | 1.1 | 1.1 | 0.6 | 0.6 | 0.6 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: B[ 12.4]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 36 | | 0 | | 92 | 0 | | 0 | | 0 | 0 | | 89 | | 61 | 64 | | 139 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | |
| Initial Bse: | 54 | | 0 | | 138 | 0 | | 0 | | 0 | 0 | | 134 | | 92 | 96 | | 209 | | 0 |
| Added Vol: | 27 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 6 | | 9 | 0 | | 28 | | 0 |
| PasserByVol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Initial Fut: | 81 | | 0 | | 138 | 0 | | 0 | | 0 | 0 | | 140 | | 101 | 96 | | 237 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | |
| PHF Volume: | 85 | | 0 | | 146 | 0 | | 0 | | 0 | 0 | | 147 | | 106 | 101 | | 250 | | 0 |
| Reduct Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 85 | | 0 | | 146 | 0 | | 0 | | 0 | 0 | | 147 | | 106 | 101 | | 250 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 652 | xxxx | | 200 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 253 | xxxx | xxxxx | | | | |
| Potent Cap.: | 436 | xxxx | | 846 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1324 | xxxx | xxxxx | | | | |
| Move Cap.: | 408 | xxxx | | 846 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1324 | xxxx | xxxxx | | | | |
| Volume/Cap: | 0.21 | xxxx | | 0.17 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | | | 0.08 | xxxx | xxxx | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.8 | xxxx | | 0.6 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 0.2 | xxxx | xxxxx | | | | |
| Control Del: | 16.1 | xxxx | | 10.1 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 7.9 | xxxx | xxxxx | | | | |
| LOS by Move: | C | * | | B | * | * | * | * | * | * | | | | A | * | * | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 0.2 | xxxx | | xxxxx | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 7.9 | xxxx | | xxxxx | |
| Shared LOS: | * | * | | * | | * | * | | * | | * | * | | * | | A | * | | * | |
| ApproachDel: | | 12.4 | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | | B | | | | * | | | | | * | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 8.0 Worst Case Level Of Service: C[ 24.6]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 63 | 0 | 72 | 0 | 0 | 0 | 0 | 162 | 18 | 109 | 140 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 95 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 27 | 164 | 211 | 0 |
| Added Vol: | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 123 | 0 | 108 | 0 | 0 | 0 | 0 | 244 | 27 | 164 | 211 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 129 | 0 | 114 | 0 | 0 | 0 | 0 | 256 | 28 | 173 | 222 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 129 | 0 | 114 | 0 | 0 | 0 | 0 | 256 | 28 | 173 | 222 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 837 | 837 | 271 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 285 | xxxx | xxxxx |
| Potent Cap.: | 339 | 305 | 773 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1289 | xxxx | xxxxx |
| Move Cap.: | 301 | 260 | 773 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1289 | xxxx | xxxxx |
| Volume/Cap: | 0.43 | 0.00 | 0.15 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.13 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.5 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.2 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 421 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 3.5 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.5 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 24.6 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.2 | xxxx | xxxxx |
| Shared LOS: | * | C | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 24.6 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | C | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.7 | 0.049 | B | 11.6 | 0.068 | + 1.870 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.2 | 0.065 | B | 11.0 | 0.094 | + 1.796 D/V |
| # 5 Curry St/Tehachapi Blvd | A | 9.2 | 0.237 | B | 11.7 | 0.426 | + 0.189 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 24.3 | 0.519 | C | 28.1 | 0.748 | + 3.795 D/V |
| # 8 Tucker Road/Valley Blvd | C | 23.3 | 0.536 | C | 27.6 | 0.683 | + 4.315 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.1 | 0.124 | A | 8.4 | 0.166 | + 0.041 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 9.6 | 0.371 | B | 11.0 | 0.438 | + 0.068 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | A | 9.7 | 0.127 | B | 10.1 | 0.134 | + 0.418 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 11.4 | 0.093 | B | 11.8 | 0.112 | + 0.306 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[ 11.6]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | 38 | 0 | 0 | 29 | 10 | 0 | 0 | 0 | 12 | 0 | 7 | | | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | |
| Initial Bse: | 72 | 57 | 0 | 0 | 44 | 15 | 0 | 0 | 0 | 18 | 0 | 11 | | | | |
| Added Vol: | 11 | 71 | 0 | 0 | 178 | 31 | 0 | 0 | 0 | 9 | 0 | 12 | | | | |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 83 | 128 | 0 | 0 | 222 | 46 | 0 | 0 | 0 | 27 | 0 | 23 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | | |
| PHF Volume: | 88 | 135 | 0 | 0 | 233 | 48 | 0 | 0 | 0 | 28 | 0 | 24 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 88 | 135 | 0 | 0 | 233 | 48 | 0 | 0 | 0 | 28 | 0 | 24 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 282 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 568 | 592 | 135 | | | | |
| Potent Cap.: | 1292 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 488 | 422 | 919 | | | | |
| Move Cap.: | 1292 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 461 | 392 | 919 | | | | |
| Volume/Cap: | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.06 | 0.00 | 0.03 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.0 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 596 | xxxxx | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.3 | xxxxx | | | | |
| Shrd ConDel: | 8.0 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 11.6 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 11.6 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 2.9  Worst Case Level Of Service: B[ 11.0]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 69 | | 10 | | 11 | 31 | | 0 | | 18 | | 2 | 42 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 0 | 104 | | 15 | | 17 | 47 | | 0 | | 27 | | 3 | 63 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 69 | | 11 | | 31 | 156 | | 0 | | 12 | | 0 | 11 | | 0 | | 0 | | 0 |
| PasserByVol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 173 | | 26 | | 48 | 203 | | 0 | | 39 | | 3 | 74 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 0 | 182 | | 27 | | 50 | 213 | | 0 | | 41 | | 3 | 78 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 182 | | 27 | | 50 | 213 | | 0 | | 41 | | 3 | 78 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 209 | xxxx | | xxxxx | | 509 | | 523 | 213 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1374 | xxxx | | xxxxx | | 528 | | 462 | 832 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1374 | xxxx | | xxxxx | | 513 | | 444 | 832 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.04 | xxxx | | xxxx | | 0.08 | | 0.01 | 0.09 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 7.7 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 507 | | xxxx | 804 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | 0.3 | | xxxx | 0.3 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 7.7 | xxxx | | xxxxx | | 12.8 | | xxxx | 10.0 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | B | | * | A | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 11.0 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | B | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.426 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.7 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 0 | 0 | 0 | 29 | 0 | 77 | 51 | 254 | 0 | 0 | 232 | 36 |
| Added Vol: | 25 | 0 | 21 | 0 | 0 | 0 | 0 | 122 | 25 | 42 | 199 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 25 | 0 | 21 | 29 | 0 | 77 | 51 | 376 | 25 | 42 | 431 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 44 | 453 | 38 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 44 | 453 | 38 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 44 | 453 | 38 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.27 | 0.00 | 0.73 | 0.23 | 1.66 | 0.11 | 0.17 | 1.69 | 0.14 |
| Final Sat.: | 447 | 0 | 525 | 145 | 0 | 390 | 139 | 1043 | 70 | 104 | 1082 | 92 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | xxxx | 0.04 | 0.21 | xxxx | 0.21 | 0.39 | 0.38 | 0.37 | 0.43 | 0.42 | 0.41 |
| Crit Moves: | **** | | | | | **** | **** | | | **** | | |
| Delay/Veh: | 10.5 | 0.0 | 9.1 | 10.8 | 0.0 | 10.8 | 11.8 | 11.6 | 11.4 | 12.3 | 12.0 | 11.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.5 | 0.0 | 9.1 | 10.8 | 0.0 | 10.8 | 11.8 | 11.6 | 11.4 | 12.3 | 12.0 | 11.8 |
| LOS by Move: | B | * | A | B | * | B | B | B | B | B | B | B |
| ApproachDel: | 9.9 | | | 10.8 | | | 11.6 | | | 12.0 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 9.9 | | | 10.8 | | | 11.6 | | | 12.0 | | |
| LOS by Appr: | A | | | B | | | B | | | B | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.7 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

Cycle (sec): 65 | Critical Vol./Cap.(X): 0.748
Loss Time (sec): 16 | Average Delay (sec/veh): 28.1
Optimal Cycle: OPTIMIZED | Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 165 | 197 | 164 | 63 | 177 | 104 | 71 | 179 | 123 | 254 | 206 | 63 |
| Added Vol: | 12 | 107 | 76 | 51 | 144 | 0 | 42 | 64 | 34 | 100 | 88 | 51 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 177 | 304 | 240 | 114 | 321 | 104 | 113 | 243 | 157 | 354 | 294 | 114 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 187 | 320 | 253 | 120 | 338 | 109 | 119 | 256 | 166 | 373 | 310 | 120 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 187 | 320 | 253 | 120 | 338 | 109 | 119 | 256 | 166 | 373 | 310 | 120 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 187 | 320 | 253 | 120 | 338 | 109 | 119 | 256 | 166 | 373 | 310 | 120 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.09 | 0.16 | 0.07 | 0.09 | 0.07 | 0.07 | 0.13 | 0.10 | 0.21 | 0.16 | 0.07 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.16 | 0.21 | 0.21 | 0.09 | 0.14 | 0.14 | 0.16 | 0.18 | 0.18 | 0.27 | 0.29 | 0.29 |
| Volume/Cap: | 0.66 | 0.43 | 0.75 | 0.72 | 0.66 | 0.47 | 0.40 | 0.75 | 0.57 | 0.75 | 0.56 | 0.26 |
| Delay/Veh: | 31.2 | 22.8 | 33.4 | 43.0 | 29.4 | 27.2 | 25.2 | 34.4 | 27.2 | 27.9 | 20.9 | 18.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 31.2 | 22.8 | 33.4 | 43.0 | 29.4 | 27.2 | 25.2 | 34.4 | 27.2 | 27.9 | 20.9 | 18.0 |
| LOS by Move: | C | C | C | D | C | C | C | C | C | C | C | B |
| HCM2kAvgQ: | 5 | 3 | 7 | 4 | 5 | 3 | 3 | 7 | 4 | 9 | 6 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

Cycle (sec): 60 | Critical Vol./Cap.(X): 0.683
Loss Time (sec): 16 | Average Delay (sec/veh): 27.6
Optimal Cycle: OPTIMIZED | Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 117 | 199 | 138 | 174 | 208 | 168 | 196 | 196 | 42 | 120 | 182 | 126 |
| Added Vol: | 0 | 82 | 1 | 46 | 85 | 114 | 92 | 10 | 0 | 0 | 23 | 50 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 117 | 281 | 139 | 220 | 293 | 282 | 288 | 206 | 42 | 120 | 205 | 176 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 123 | 295 | 147 | 232 | 308 | 297 | 303 | 216 | 44 | 127 | 216 | 186 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 295 | 147 | 232 | 308 | 297 | 303 | 216 | 44 | 127 | 216 | 186 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 123 | 295 | 147 | 232 | 308 | 297 | 303 | 216 | 44 | 127 | 216 | 186 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.08 | 0.09 | 0.13 | 0.09 | 0.18 | 0.17 | 0.11 | 0.03 | 0.07 | 0.11 | 0.11 |
| Crit Moves: | | | **** | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.10 | 0.13 | 0.13 | 0.19 | 0.22 | 0.22 | 0.25 | 0.27 | 0.27 | 0.14 | 0.17 | 0.17 |
| Volume/Cap: | 0.68 | 0.61 | 0.68 | 0.68 | 0.39 | 0.83 | 0.68 | 0.41 | 0.10 | 0.51 | 0.68 | 0.69 |
| Delay/Veh: | 36.3 | 26.9 | 33.4 | 28.4 | 20.2 | 37.5 | 24.9 | 18.3 | 16.3 | 25.8 | 29.5 | 30.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.3 | 26.9 | 33.4 | 28.4 | 20.2 | 37.5 | 24.9 | 18.3 | 16.3 | 25.8 | 29.5 | 30.9 |
| LOS by Move: | D | C | C | C | C | D | C | B | B | C | C | C |
| HCM2kAvgQ: | 4 | 4 | 4 | 5 | 3 | 8 | 7 | 4 | 1 | 3 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.166 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.4 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 48 | 51 | 0 | 0 | 44 | 54 | 75 | 0 | 38 | 0 | 0 | 2 |
| Added Vol: | 0 | 2 | 0 | 19 | 9 | 35 | 9 | 13 | 0 | 0 | 13 | 14 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 48 | 53 | 0 | 19 | 53 | 89 | 84 | 13 | 38 | 0 | 13 | 16 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 51 | 56 | 0 | 20 | 55 | 94 | 89 | 14 | 40 | 0 | 14 | 16 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 51 | 56 | 0 | 20 | 55 | 94 | 89 | 14 | 40 | 0 | 14 | 16 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 51 | 56 | 0 | 20 | 55 | 94 | 89 | 14 | 40 | 0 | 14 | 16 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.87 | 0.13 | 1.00 | 0.00 | 0.46 | 0.54 |
| Final Sat.: | 622 | 682 | 0 | 611 | 668 | 768 | 534 | 82 | 764 | 0 | 311 | 371 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.08 | xxxx | 0.03 | 0.08 | 0.12 | 0.17 | 0.17 | 0.05 | xxxx | 0.04 | 0.04 |
| Crit Moves: | | **** | | | | **** | | **** | | | | **** |
| Delay/Veh: | 8.8 | 8.2 | 0.0 | 8.6 | 8.4 | 7.8 | 9.4 | 9.4 | 7.4 | 0.0 | 8.2 | 8.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.8 | 8.2 | 0.0 | 8.6 | 8.4 | 7.8 | 9.4 | 9.4 | 7.4 | 0.0 | 8.2 | 8.2 |
| LOS by Move: | A | A | * | A | A | A | A | A | A | * | A | A |
| ApproachDel: | 8.5 | | | 8.1 | | | 8.8 | | | 8.2 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.5 | | | 8.1 | | | 8.8 | | | 8.2 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.438 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 44 | 57 | 29 | 32 | 32 | 93 | 90 | 116 | 47 | 29 | 89 | 32 |
| Added Vol: | 9 | 0 | 12 | 0 | 0 | 0 | 0 | 19 | 9 | 44 | 69 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 53 | 57 | 41 | 32 | 32 | 93 | 90 | 135 | 56 | 73 | 158 | 32 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 55 | 60 | 43 | 33 | 33 | 98 | 95 | 142 | 59 | 76 | 166 | 33 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 55 | 60 | 43 | 33 | 33 | 98 | 95 | 142 | 59 | 76 | 166 | 33 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 55 | 60 | 43 | 33 | 33 | 98 | 95 | 142 | 59 | 76 | 166 | 33 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.35 | 0.38 | 0.27 | 0.20 | 0.20 | 0.60 | 0.32 | 0.48 | 0.20 | 0.28 | 0.60 | 0.12 |
| Final Sat.: | 209 | 227 | 161 | 126 | 126 | 371 | 217 | 324 | 134 | 184 | 401 | 80 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.44 | 0.44 | 0.44 | 0.41 | 0.41 | 0.41 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |
| Delay/Veh: | 10.2 | 10.2 | 10.2 | 9.9 | 9.9 | 9.9 | 11.7 | 11.7 | 11.7 | 11.4 | 11.4 | 11.4 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.2 | 10.2 | 10.2 | 9.9 | 9.9 | 9.9 | 11.7 | 11.7 | 11.7 | 11.4 | 11.4 | 11.4 |
| LOS by Move: | B | B | B | A | A | A | B | B | B | B | B | B |
| ApproachDel: | 10.2 | | | 9.9 | | | 11.7 | | | 11.4 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 10.2 | | | 9.9 | | | 11.7 | | | 11.4 | | |
| LOS by Appr: | B | | | A | | | B | | | B | | |
| AllWayAvgQ: | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: B[ 10.1]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 13 | | 0 | | 74 | | 0 | | 0 | | 0 | | 0 | | 58 | | 49 | | 41 | | 73 | | 0 | |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 20 | | 0 | | 111 | | 0 | | 0 | | 0 | | 0 | | 87 | | 74 | | 62 | | 110 | | 0 | |
| Added Vol: | 7 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 27 | | 28 | | 0 | | 10 | | 0 | |
| PasserByVol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Initial Fut: | 27 | | 0 | | 111 | | 0 | | 0 | | 0 | | 0 | | 114 | | 102 | | 62 | | 120 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 28 | | 0 | | 117 | | 0 | | 0 | | 0 | | 0 | | 120 | | 107 | | 65 | | 126 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 28 | | 0 | | 117 | | 0 | | 0 | | 0 | | 0 | | 120 | | 107 | | 65 | | 126 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 430 | xxxx | | 174 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 227 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 586 | xxxx | | 875 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1353 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 564 | xxxx | | 875 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1353 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.05 | xxxx | | 0.13 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.05 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | | 0.5 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 11.7 | xxxx | | 9.8 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.8 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | B | * | | A | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | 0.2 | xxxx | xxxxx | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | xxxxx | xxxx | xxxxx | | | | 7.8 | xxxx | xxxxx | | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | 10.1 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | B | | | | | | * | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Horizon Year 2035 No Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.6  Worst Case Level Of Service: B[ 11.8]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 31 | 0 | 35 | 0 | 0 | 0 | 0 | 115 | 16 | 46 | 84 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 47 | 0 | 53 | 0 | 0 | 0 | 0 | 173 | 24 | 69 | 126 | 0 |
| Added Vol: | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 57 | 0 | 53 | 0 | 0 | 0 | 0 | 173 | 24 | 69 | 126 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 60 | 0 | 55 | 0 | 0 | 0 | 0 | 182 | 25 | 73 | 133 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 60 | 0 | 55 | 0 | 0 | 0 | 0 | 182 | 25 | 73 | 133 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 473 | 473 | 195 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 207 | xxxx | xxxxx |
| Potent Cap.: | 553 | 492 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1376 | xxxx | xxxxx |
| Move Cap.: | 530 | 465 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1376 | xxxx | xxxxx |
| Volume/Cap: | 0.11 | 0.00 | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.05 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.2 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 648 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 0.6 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.2 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 11.8 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| Shared LOS: | * | B | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 11.8 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | B | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Friday PM Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.9 | 0.042 | B | 12.7 | 0.084 | + 2.780 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.2 | 0.106 | B | 11.6 | 0.174 | + 2.384 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 11.5 | 0.426 | C | 19.7 | 0.693 | + 0.266 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 25.3 | 0.615 | C | 34.8 | 0.891 | + 9.485 D/V |
| # 8 Tucker Road/Valley Blvd | C | 23.4 | 0.593 | C | 30.9 | 0.834 | + 7.441 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.1 | 0.109 | A | 9.3 | 0.270 | + 0.161 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | B | 10.8 | 0.487 | C | 21.7 | 0.785 | + 0.298 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 10.5 | 0.126 | B | 11.9 | 0.165 | + 1.458 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 14.7 | 0.243 | C | 23.5 | 0.527 | + 8.826 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[ 12.7]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 1 | 0 0 | 0 | | 0 0 | 0 1 | 0 | | 0 0 | 0 0 | 0 | | 0 0 | 1! 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 54 | 49 | 0 | | 0 | 39 | 38 | | 0 | 0 | 0 | | 22 | 4 | 13 | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | 1.10 | 1.10 | |
| Initial Bse: | 59 | 54 | 0 | | 0 | 43 | 42 | | 0 | 0 | 0 | | 24 | 4 | 14 | |
| Added Vol: | 17 | 71 | 0 | | 0 | 178 | 31 | | 0 | 0 | 0 | | 9 | 0 | 12 | |
| Project: | 0 | 36 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Initial Fut: | 76 | 161 | 0 | | 0 | 221 | 73 | | 0 | 0 | 0 | | 33 | 4 | 26 | |
| User Adj: | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | 0.92 | 0.92 | |
| PHF Volume: | 83 | 175 | 0 | | 0 | 240 | 79 | | 0 | 0 | 0 | | 36 | 5 | 29 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| FinalVolume: | 83 | 175 | 0 | | 0 | 240 | 79 | | 0 | 0 | 0 | | 36 | 5 | 29 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 6.4 | 6.5 | 6.2 | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 3.5 | 4.0 | 3.3 | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 319 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 620 | 659 | 175 | | | |
| Potent Cap.: | 1252 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 455 | 386 | 874 | | | |
| Move Cap.: | 1252 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 431 | 359 | 874 | | | |
| Volume/Cap: | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.08 | 0.01 | 0.03 | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 535 | xxxxx | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.4 | xxxxx | | | | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 12.7 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 12.7 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: B[ 11.6]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 77 | | 14 | | 12 | 49 | | 0 | | 27 | | 1 | 90 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | | 1.10 |
| Initial Bse: | 0 | 84 | | 15 | | 13 | 54 | | 0 | | 30 | | 1 | 99 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 75 | | 15 | | 31 | 156 | | 0 | | 12 | | 0 | 20 | | 0 | | 0 | | 0 |
| Project: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 36 | | 0 | 12 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 159 | | 30 | | 44 | 210 | | 0 | | 78 | | 1 | 131 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 0 | 173 | | 33 | | 48 | 228 | | 0 | | 84 | | 1 | 142 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 173 | | 33 | | 48 | 228 | | 0 | | 84 | | 1 | 142 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 206 | xxxx | | xxxxx | | 514 | | 530 | 228 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1377 | xxxx | | xxxxx | | 524 | | 457 | 816 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1377 | xxxx | | xxxxx | | 510 | | 441 | 816 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.03 | xxxx | | xxxx | | 0.17 | | 0.00 | 0.17 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 7.7 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 509 | | xxxx | 811 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | 0.6 | | xxxx | 0.6 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 7.7 | xxxx | | xxxxx | | 13.5 | | xxxx | 10.4 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | B | | * | B | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 11.6 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | B | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.693 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 19.7 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 62 | 0 | 116 | 1 | 2 | 0 | 1 | 416 | 78 | 78 | 300 | 2 |
| Added Vol: | 25 | 0 | 38 | 0 | 0 | 0 | 0 | 122 | 25 | 70 | 200 | 0 |
| Project: | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |
| Initial Fut: | 87 | 0 | 166 | 1 | 2 | 0 | 1 | 598 | 103 | 148 | 500 | 2 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 95 | 0 | 181 | 1 | 2 | 0 | 1 | 651 | 112 | 161 | 544 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 95 | 0 | 181 | 1 | 2 | 0 | 1 | 651 | 112 | 161 | 544 | 2 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 95 | 0 | 181 | 1 | 2 | 0 | 1 | 651 | 112 | 161 | 544 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.33 | 0.67 | 0.00 | 0.01 | 1.70 | 0.29 | 0.45 | 1.54 | 0.01 |
| Final Sat.: | 421 | 0 | 492 | 136 | 273 | 0 | 2 | 952 | 167 | 240 | 832 | 4 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.23 | xxxx | 0.37 | 0.01 | 0.01 | xxxx | 0.69 | 0.68 | 0.67 | 0.67 | 0.65 | 0.65 |
| Crit Moves: | | | **** | | **** | | **** | | | **** | | |
| Delay/Veh: | 13.0 | 0.0 | 13.2 | 11.3 | 11.3 | 0.0 | 22.0 | 21.3 | 20.3 | 21.5 | 20.4 | 19.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 13.0 | 0.0 | 13.2 | 11.3 | 11.3 | 0.0 | 22.0 | 21.3 | 20.3 | 21.5 | 20.4 | 19.8 |
| LOS by Move: | B | * | B | B | B | * | C | C | C | C | C | C |
| ApproachDel: | 13.1 | | | 11.3 | | | 21.2 | | | 20.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 13.1 | | | 11.3 | | | 21.2 | | | 20.7 | | |
| LOS by Appr: | B | | | B | | | C | | | C | | |
| AllWayAvgQ: | 0.3 | 0.3 | 0.5 | 0.0 | 0.0 | 0.0 | 2.0 | 1.8 | 1.8 | 1.8 | 1.6 | 1.6 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.891 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 34.8 |
| Optimal Cycle: | 86 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 150 | 206 | 194 | 137 | 312 | 142 | 80 | 227 | 121 | 201 | 222 | 38 |
| Added Vol: | 12 | 139 | 76 | 51 | 198 | 0 | 42 | 64 | 34 | 100 | 88 | 52 |
| Project: | 0 | 0 | 14 | 10 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 |
| Initial Fut: | 162 | 345 | 284 | 198 | 510 | 142 | 122 | 315 | 155 | 301 | 310 | 90 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 176 | 375 | 309 | 215 | 555 | 155 | 133 | 342 | 168 | 327 | 337 | 98 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 176 | 375 | 309 | 215 | 555 | 155 | 133 | 342 | 168 | 327 | 337 | 98 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 176 | 375 | 309 | 215 | 555 | 155 | 133 | 342 | 168 | 327 | 337 | 98 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.10 | 0.19 | 0.12 | 0.15 | 0.10 | 0.07 | 0.18 | 0.10 | 0.18 | 0.18 | 0.06 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.14 | 0.21 | 0.21 | 0.13 | 0.21 | 0.21 | 0.14 | 0.20 | 0.20 | 0.20 | 0.27 | 0.27 |
| Volume/Cap: | 0.72 | 0.48 | 0.89 | 0.89 | 0.72 | 0.45 | 0.53 | 0.89 | 0.51 | 0.89 | 0.67 | 0.23 |
| Delay/Veh: | 37.0 | 22.9 | 48.4 | 58.5 | 27.1 | 23.2 | 28.2 | 47.1 | 24.5 | 47.8 | 24.6 | 18.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 22.9 | 48.4 | 58.5 | 27.1 | 23.2 | 28.2 | 47.1 | 24.5 | 47.8 | 24.6 | 18.9 |
| LOS by Move: | D | C | D | E | C | C | C | D | C | D | C | B |
| HCM2kAvgQ: | 5 | 4 | 10 | 8 | 7 | 3 | 3 | 10 | 4 | 10 | 7 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.834 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 30.9 |
| Optimal Cycle: | 73 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 162 | 216 | 88 | 186 | 241 | 183 | 194 | 206 | 67 | 84 | 170 | 72 |
| Added Vol: | 8 | 105 | 5 | 72 | 126 | 114 | 92 | 67 | 13 | 8 | 57 | 67 |
| Project: | 0 | 12 | 0 | 0 | 0 | 0 | 12 | 24 | 0 | 0 | 0 | 0 |
| Initial Fut: | 170 | 333 | 93 | 258 | 367 | 297 | 298 | 297 | 80 | 92 | 227 | 139 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 185 | 362 | 101 | 281 | 399 | 323 | 324 | 323 | 87 | 100 | 247 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 185 | 362 | 101 | 281 | 399 | 323 | 324 | 323 | 87 | 100 | 247 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 185 | 362 | 101 | 281 | 399 | 323 | 324 | 323 | 87 | 100 | 247 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.10 | 0.06 | 0.16 | 0.11 | 0.20 | 0.18 | 0.17 | 0.05 | 0.06 | 0.13 | 0.09 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.12 | 0.16 | 0.16 | 0.19 | 0.24 | 0.24 | 0.21 | 0.25 | 0.25 | 0.12 | 0.17 | 0.17 |
| Volume/Cap: | 0.85 | 0.61 | 0.38 | 0.81 | 0.47 | 0.85 | 0.85 | 0.67 | 0.21 | 0.45 | 0.78 | 0.56 |
| Delay/Veh: | 51.7 | 25.2 | 23.3 | 36.8 | 20.1 | 38.4 | 39.2 | 23.8 | 17.9 | 25.8 | 35.6 | 25.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 51.7 | 25.2 | 23.3 | 36.8 | 20.1 | 38.4 | 39.2 | 23.8 | 17.9 | 25.8 | 35.6 | 25.7 |
| LOS by Move: | D | C | C | D | C | D | D | C | B | C | D | C |
| HCM2kAvgQ: | 6 | 4 | 2 | 8 | 4 | 9 | 9 | 7 | 1 | 2 | 7 | 4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.270 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 67 | 67 | 0 | 0 | 41 | 49 | 52 | 2 | 34 | 0 | 0 | 0 |
| Added Vol: | 0 | 9 | 0 | 20 | 10 | 67 | 36 | 19 | 0 | 0 | 23 | 14 |
| Project: | 0 | 24 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 67 | 100 | 0 | 20 | 51 | 116 | 124 | 21 | 34 | 0 | 23 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 73 | 109 | 0 | 22 | 55 | 126 | 134 | 23 | 37 | 0 | 25 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 73 | 109 | 0 | 22 | 55 | 126 | 134 | 23 | 37 | 0 | 25 | 15 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 73 | 109 | 0 | 22 | 55 | 126 | 134 | 23 | 37 | 0 | 25 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.85 | 0.15 | 1.00 | 0.00 | 0.62 | 0.38 |
| Final Sat.: | 592 | 645 | 0 | 567 | 615 | 701 | 497 | 85 | 709 | 0 | 381 | 232 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.17 | xxxx | 0.04 | 0.09 | 0.18 | 0.27 | 0.27 | 0.05 | xxxx | 0.07 | 0.07 |
| Crit Moves: | | **** | | | | **** | **** | | | | **** | |
| Delay/Veh: | 9.4 | 9.1 | 0.0 | 9.1 | 8.8 | 8.6 | 10.7 | 10.7 | 7.8 | 0.0 | 8.9 | 8.9 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.4 | 9.1 | 0.0 | 9.1 | 8.8 | 8.6 | 10.7 | 10.7 | 7.8 | 0.0 | 8.9 | 8.9 |
| LOS by Move: | A | A | * | A | A | A | B | B | A | * | A | A |
| ApproachDel: | | 9.2 | | | 8.7 | | | 10.1 | | | 8.9 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 9.2 | | | 8.7 | | | 10.1 | | | 8.9 | |
| LOS by Appr: | | A | | | A | | | B | | | A | |
| AllWayAvgQ: | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 0.0 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.785 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 21.7 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 27 | 77 | 27 | 12 | 15 | 42 | 192 | 94 | 38 | 35 | 133 | 60 |
| Added Vol: | 13 | 0 | 34 | 0 | 0 | 0 | 0 | 20 | 13 | 75 | 79 | 0 |
| Project: | 0 | 60 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 71 |
| Initial Fut: | 40 | 137 | 61 | 12 | 15 | 42 | 263 | 114 | 51 | 110 | 212 | 131 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 44 | 149 | 67 | 13 | 17 | 45 | 286 | 124 | 56 | 120 | 230 | 143 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 44 | 149 | 67 | 13 | 17 | 45 | 286 | 124 | 56 | 120 | 230 | 143 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 44 | 149 | 67 | 13 | 17 | 45 | 286 | 124 | 56 | 120 | 230 | 143 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.17 | 0.57 | 0.26 | 0.17 | 0.22 | 0.61 | 0.61 | 0.27 | 0.12 | 0.24 | 0.47 | 0.29 |
| Final Sat.: | 87 | 294 | 132 | 79 | 100 | 272 | 371 | 161 | 73 | 152 | 293 | 182 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.50 | 0.50 | 0.50 | 0.17 | 0.17 | 0.17 | 0.77 | 0.77 | 0.77 | 0.78 | 0.78 | 0.78 |
| Crit Moves: | **** | | | **** | | | **** | | | | **** | |
| Delay/Veh: | 14.8 | 14.8 | 14.8 | 10.9 | 10.9 | 10.9 | 24.2 | 24.2 | 24.2 | 24.7 | 24.7 | 24.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 14.8 | 14.8 | 14.8 | 10.9 | 10.9 | 10.9 | 24.2 | 24.2 | 24.2 | 24.7 | 24.7 | 24.7 |
| LOS by Move: | B | B | B | B | B | B | C | C | C | C | C | C |
| ApproachDel: | 14.8 | | | 10.9 | | | 24.2 | | | 24.7 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 14.8 | | | 10.9 | | | 24.2 | | | 24.7 | | |
| LOS by Appr: | B | | | B | | | C | | | C | | |
| AllWayAvgQ: | 0.8 | 0.8 | 0.8 | 0.1 | 0.1 | 0.1 | 2.6 | 2.6 | 2.6 | 2.8 | 2.8 | 2.8 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[ 11.9]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | | 0 | | 100 | 0 | | 0 | | 0 | 0 | | 73 | | 45 | 74 | | 164 | | 0 |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | |
| Initial Bse: | 53 | | 0 | | 110 | 0 | | 0 | | 0 | 0 | | 80 | | 49 | 81 | | 180 | | 0 |
| Added Vol: | 7 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 27 | | 55 | 0 | | 61 | | 0 |
| Project: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 71 | | 0 |
| Initial Fut: | 60 | | 0 | | 110 | 0 | | 0 | | 0 | 0 | | 107 | | 104 | 81 | | 312 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | |
| PHF Volume: | 65 | | 0 | | 119 | 0 | | 0 | | 0 | 0 | | 116 | | 113 | 88 | | 339 | | 0 |
| Reduct Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 65 | | 0 | | 119 | 0 | | 0 | | 0 | 0 | | 116 | | 113 | 88 | | 339 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 688 | xxxx | | 173 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 230 | xxxx | xxxxx | | | | |
| Potent Cap.: | 415 | xxxx | | 876 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1350 | xxxx | xxxxx | | | | |
| Move Cap.: | 393 | xxxx | | 876 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1350 | xxxx | xxxxx | | | | |
| Volume/Cap: | 0.16 | xxxx | | 0.14 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | | | 0.07 | xxxx | xxxx | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.6 | xxxx | | 0.5 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 0.2 | xxxx | xxxxx | | | | |
| Control Del: | 16.0 | xxxx | | 9.8 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 7.9 | xxxx | xxxxx | | | | |
| LOS by Move: | C | * | | A | * | * | * | * | * | * | | | | A | * | * | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 0.2 | xxxx | | xxxxx | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 7.9 | xxxx | | xxxxx | |
| Shared LOS: | * | * | | * | | * | * | | * | | * | * | | * | | A | * | | * | |
| ApproachDel: | | 11.9 | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | | B | | | | * | | | | | * | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 9.8 Worst Case Level Of Service: C[ 23.5]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 91 | 0 | 68 | 0 | 0 | 0 | 0 | 154 | 19 | 91 | 146 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 100 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 160 | 0 |
| Added Vol: | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 |
| Initial Fut: | 209 | 0 | 75 | 0 | 0 | 0 | 0 | 169 | 21 | 100 | 184 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 227 | 0 | 81 | 0 | 0 | 0 | 0 | 183 | 23 | 108 | 200 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 227 | 0 | 81 | 0 | 0 | 0 | 0 | 183 | 23 | 108 | 200 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 612 | 612 | 195 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 206 | xxxx | xxxxx |
| Potent Cap.: | 460 | 411 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx |
| Move Cap.: | 431 | 377 | 852 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1377 | xxxx | xxxxx |
| Volume/Cap: | 0.53 | 0.00 | 0.10 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.08 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 495 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 4.2 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 23.5 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.8 | xxxx | xxxxx |
| Shared LOS: | * | C | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 23.5 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | C | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 11.2 | 0.068 | B | 11.7 | 0.068 | + 0.476 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.9 | 0.148 | B | 10.4 | 0.190 | + 0.435 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 11.0 | 0.348 | B | 11.7 | 0.421 | + 0.073 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 26.5 | 0.703 | C | 27.8 | 0.751 | + 1.314 D/V |
| # 8 Tucker Road/Valley Blvd | C | 25.9 | 0.695 | C | 26.4 | 0.708 | + 0.531 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.0 | 0.103 | A | 8.5 | 0.186 | + 0.084 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 8.9 | 0.291 | B | 11.2 | 0.477 | + 0.187 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 10.3 | 0.120 | B | 10.5 | 0.120 | + 0.242 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 13.8 | 0.181 | C | 17.2 | 0.319 | + 3.334 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

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Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: B[ 11.7]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | | | | | |
| Base Vol: | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 27 | 2 | 19 | | | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | | | | |
| Initial Bse: | 89 | 126 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Project: | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 89 | 173 | 0 | 0 | 69 | 84 | 0 | 0 | 0 | 30 | 2 | 21 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | |
| PHF Volume: | 96 | 188 | 0 | 0 | 75 | 92 | 0 | 0 | 0 | 32 | 2 | 23 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 96 | 188 | 0 | 0 | 75 | 92 | 0 | 0 | 0 | 32 | 2 | 23 | | | | |
| **Critical Gap Module:** | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| **Capacity Module:** | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 167 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 502 | 548 | 188 | | | | |
| Potent Cap.: | 1423 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 533 | 447 | 859 | | | | |
| Move Cap.: | 1423 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 503 | 415 | 859 | | | | |
| Volume/Cap: | 0.07 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.06 | 0.01 | 0.03 | | | | |
| **Level Of Service Module:** | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 7.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 596 | xxxxx | | | | |
| SharedQueue: | 0.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.3 | xxxxx | | | | |
| Shrd ConDel: | 7.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 11.7 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | B | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 11.7 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | B | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 5.5  Worst Case Level Of Service: B[ 10.4]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 130 | | 25 | | 18 | 73 | | 0 | | 67 | | 1 | 121 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | | 1.10 | 1.10 | | 1.10 | | 1.10 | | 1.10 |
| Initial Bse: | 0 | 142 | | 27 | | 20 | 80 | | 0 | | 73 | | 1 | 133 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| Project: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 47 | | 0 | 16 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 142 | | 27 | | 20 | 80 | | 0 | | 120 | | 1 | 149 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | | 0.92 | 0.92 | | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 0 | 155 | | 30 | | 21 | 87 | | 0 | | 131 | | 1 | 162 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 155 | | 30 | | 21 | 87 | | 0 | | 131 | | 1 | 162 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 185 | xxxx | | xxxxx | | 300 | | 315 | 87 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1402 | xxxx | | xxxxx | | 696 | | 604 | 977 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1402 | xxxx | | xxxxx | | 688 | | 595 | 977 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.02 | xxxx | | xxxx | | 0.19 | | 0.00 | 0.17 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.0 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 7.6 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 687 | | xxxx | 973 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.0 | xxxx | | xxxxx | | 0.7 | | xxxx | 0.6 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 7.6 | xxxx | | xxxxx | | 11.5 | | xxxx | 9.4 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | B | | * | A | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 10.4 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | B | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.421 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.7 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 0 | 4 | 52 | 3 | 116 | 53 | 331 | 14 | 5 | 333 | 43 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 78 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 20 | 52 | 3 | 116 | 53 | 409 | 14 | 5 | 333 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 22 | 56 | 4 | 126 | 57 | 445 | 15 | 6 | 362 | 46 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 22 | 56 | 4 | 126 | 57 | 445 | 15 | 6 | 362 | 46 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 22 | 56 | 4 | 126 | 57 | 445 | 15 | 6 | 362 | 46 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 1.00 | 0.30 | 0.02 | 0.68 | 0.22 | 1.72 | 0.06 | 0.03 | 1.75 | 0.22 |
| Final Sat.: | 0 | 470 | 518 | 167 | 11 | 377 | 136 | 1072 | 38 | 17 | 1078 | 141 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.00 | 0.04 | 0.33 | 0.33 | 0.33 | 0.42 | 0.41 | 0.41 | 0.34 | 0.34 | 0.33 |
| Crit Moves: | | | **** | | **** | | **** | | | **** | | |
| Delay/Veh: | 0.0 | 0.0 | 9.2 | 12.0 | 12.0 | 12.0 | 12.4 | 12.2 | 12.0 | 11.3 | 11.1 | 10.9 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 9.2 | 12.0 | 12.0 | 12.0 | 12.4 | 12.2 | 12.0 | 11.3 | 11.1 | 10.9 |
| LOS by Move: | * | * | A | B | B | B | B | B | B | B | B | B |
| ApproachDel: | 9.2 | | | 12.0 | | | 12.2 | | | 11.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 9.2 | | | 12.0 | | | 12.2 | | | 11.1 | | |
| LOS by Appr: | A | | | B | | | B | | | B | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.751 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.8 |
| Optimal Cycle: | 66 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 126 | 342 | 237 | 129 | 293 | 93 | 112 | 237 | 112 | 261 | 173 | 76 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| Initial Fut: | 126 | 342 | 247 | 139 | 293 | 93 | 112 | 279 | 112 | 261 | 173 | 76 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 137 | 372 | 268 | 151 | 318 | 101 | 122 | 303 | 122 | 284 | 188 | 82 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 137 | 372 | 268 | 151 | 318 | 101 | 122 | 303 | 122 | 284 | 188 | 82 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 137 | 372 | 268 | 151 | 318 | 101 | 122 | 303 | 122 | 284 | 188 | 82 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.10 | 0.17 | 0.08 | 0.09 | 0.06 | 0.07 | 0.16 | 0.08 | 0.16 | 0.10 | 0.05 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.17 | 0.22 | 0.22 | 0.11 | 0.17 | 0.17 | 0.20 | 0.21 | 0.21 | 0.21 | 0.22 | 0.22 |
| Volume/Cap: | 0.46 | 0.47 | 0.75 | 0.75 | 0.53 | 0.38 | 0.33 | 0.75 | 0.35 | 0.75 | 0.45 | 0.23 |
| Delay/Veh: | 25.5 | 22.4 | 32.3 | 42.6 | 25.7 | 25.0 | 22.7 | 31.7 | 22.4 | 32.3 | 22.9 | 21.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.5 | 22.4 | 32.3 | 42.6 | 25.7 | 25.0 | 22.7 | 31.7 | 22.4 | 32.3 | 22.9 | 21.3 |
| LOS by Move: | C | C | C | D | C | C | C | C | C | C | C | C |
| HCM2kAvgQ: | 3 | 4 | 7 | 5 | 4 | 2 | 2 | 8 | 2 | 7 | 4 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.708 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.4 |
| Optimal Cycle: | 59 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 155 | 221 | 72 | 171 | 187 | 230 | 287 | 227 | 59 | 75 | 147 | 132 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 16 | 0 | 0 | 0 | 0 | 16 | 31 | 0 | 0 | 0 | 0 |
| Initial Fut: | 155 | 237 | 72 | 171 | 187 | 230 | 303 | 258 | 59 | 75 | 147 | 132 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 168 | 258 | 79 | 186 | 204 | 250 | 330 | 280 | 64 | 81 | 160 | 143 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 168 | 258 | 79 | 186 | 204 | 250 | 330 | 280 | 64 | 81 | 160 | 143 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 168 | 258 | 79 | 186 | 204 | 250 | 330 | 280 | 64 | 81 | 160 | 143 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.07 | 0.05 | 0.10 | 0.06 | 0.15 | 0.18 | 0.15 | 0.04 | 0.04 | 0.08 | 0.09 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.12 | 0.18 | 0.18 | 0.14 | 0.20 | 0.20 | 0.24 | 0.27 | 0.27 | 0.14 | 0.17 | 0.17 |
| Volume/Cap: | 0.76 | 0.39 | 0.26 | 0.72 | 0.28 | 0.76 | 0.76 | 0.54 | 0.15 | 0.33 | 0.50 | 0.53 |
| Delay/Veh: | 39.7 | 21.9 | 21.5 | 34.4 | 20.4 | 32.4 | 28.8 | 19.9 | 16.7 | 24.3 | 24.0 | 24.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.7 | 21.9 | 21.5 | 34.4 | 20.4 | 32.4 | 28.8 | 19.9 | 16.7 | 24.3 | 24.0 | 24.9 |
| LOS by Move: | D | C | C | C | C | C | C | B | B | C | C | C |
| HCM2kAvgQ: | 5 | 3 | 1 | 5 | 2 | 6 | 8 | 5 | 1 | 2 | 3 | 3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.186 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.5 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 41 | 35 | 0 | 0 | 45 | 72 | 60 | 0 | 31 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 31 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 41 | 66 | 0 | 0 | 45 | 72 | 107 | 0 | 31 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 44 | 72 | 0 | 0 | 49 | 79 | 117 | 0 | 33 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 44 | 72 | 0 | 0 | 49 | 79 | 117 | 0 | 33 | 0 | 0 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 44 | 72 | 0 | 0 | 49 | 79 | 117 | 0 | 33 | 0 | 0 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 636 | 699 | 0 | 616 | 674 | 776 | 625 | 0 | 788 | 0 | 651 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.10 | xxxx | 0.00 | 0.07 | 0.10 | 0.19 | xxxx | 0.04 | xxxx | 0.00 | xxxx |
| Crit Moves: | | **** | | | | **** | **** | | | | **** | |
| Delay/Veh: | 8.6 | 8.3 | 0.0 | 0.0 | 8.3 | 7.7 | 9.5 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.6 | 8.3 | 0.0 | 0.0 | 8.3 | 7.7 | 9.5 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 |
| LOS by Move: | A | A | * | * | A | A | A | * | A | * | * | * |
| ApproachDel: | 8.4 | | | 7.9 | | | 9.0 | | | xxxxxx | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | xxxxx | | |
| ApprAdjDel: | 8.4 | | | 7.9 | | | 9.0 | | | xxxxxx | | |
| LOS by Appr: | A | | | A | | | A | | | * | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.477 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.2 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 45 | 19 | 36 | 12 | 24 | 52 | 34 | 101 | 75 | 28 | 139 | 5 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 78 | 0 | 0 | 0 | 0 | 94 | 0 | 0 | 0 | 0 | 94 |
| Initial Fut: | 45 | 97 | 36 | 12 | 24 | 52 | 128 | 101 | 75 | 28 | 139 | 99 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 49 | 105 | 39 | 13 | 26 | 56 | 139 | 110 | 81 | 31 | 151 | 108 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 49 | 105 | 39 | 13 | 26 | 56 | 139 | 110 | 81 | 31 | 151 | 108 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 49 | 105 | 39 | 13 | 26 | 56 | 139 | 110 | 81 | 31 | 151 | 108 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.25 | 0.55 | 0.20 | 0.14 | 0.27 | 0.59 | 0.42 | 0.33 | 0.25 | 0.11 | 0.52 | 0.37 |
| Final Sat.: | 153 | 330 | 123 | 81 | 162 | 346 | 292 | 230 | 170 | 74 | 364 | 260 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.32 | 0.32 | 0.32 | 0.16 | 0.16 | 0.16 | 0.48 | 0.48 | 0.48 | 0.42 | 0.42 | 0.42 |
| Crit Moves: | **** | | | | | **** | | | **** | **** | | |
| Delay/Veh: | 10.7 | 10.7 | 10.7 | 9.3 | 9.3 | 9.3 | 12.1 | 12.1 | 12.1 | 11.1 | 11.1 | 11.1 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.7 | 10.7 | 10.7 | 9.3 | 9.3 | 9.3 | 12.1 | 12.1 | 12.1 | 11.1 | 11.1 | 11.1 |
| LOS by Move: | B | B | B | A | A | A | B | B | B | B | B | B |
| ApproachDel: | 10.7 | | | 9.3 | | | 12.1 | | | 11.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 10.7 | | | 9.3 | | | 12.1 | | | 11.1 | | |
| LOS by Appr: | B | | | A | | | B | | | B | | |
| AllWayAvgQ: | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 | 0.1 | 0.8 | 0.8 | 0.8 | 0.6 | 0.6 | 0.6 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[ 10.5]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 36 | | 0 | | 92 | | 0 | | 0 | | 0 | | 0 | | 89 | | 61 | | 64 | | 139 | | 0 | |
| Growth Adj: | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 | 1.10 | 1.10 | | 1.10 | | 1.10 |
| Initial Bse: | 39 | | 0 | | 101 | | 0 | | 0 | | 0 | | 0 | | 98 | | 67 | | 70 | | 152 | | 0 | |
| Added Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Project: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 71 | | 0 | |
| Initial Fut: | 39 | | 0 | | 101 | | 0 | | 0 | | 0 | | 0 | | 98 | | 67 | | 70 | | 223 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 | 0.92 | 0.92 | | 0.92 | | 0.92 |
| PHF Volume: | 43 | | 0 | | 110 | | 0 | | 0 | | 0 | | 0 | | 106 | | 73 | | 76 | | 243 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 43 | | 0 | | 110 | | 0 | | 0 | | 0 | | 0 | | 106 | | 73 | | 76 | | 243 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 538 | xxxx | | 142 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 179 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 508 | xxxx | | 911 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1409 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 486 | xxxx | | 911 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1409 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.09 | xxxx | | 0.12 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.05 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.3 | xxxx | | 0.4 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 13.1 | xxxx | | 9.5 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 7.7 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | B | * | | A | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 0.2 | xxxx | | xxxxx | | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 7.7 | xxxx | | xxxxx | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | | 10.5 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | |
| ApproachLOS: | | B | | | | | | * | | | | | | * | | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 6.2 Worst Case Level Of Service: C[ 17.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 63 | 0 | 72 | 0 | 0 | 0 | 0 | 162 | 18 | 109 | 140 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 69 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 153 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 |
| Initial Fut: | 117 | 0 | 79 | 0 | 0 | 0 | 0 | 178 | 20 | 119 | 177 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 127 | 0 | 86 | 0 | 0 | 0 | 0 | 193 | 21 | 130 | 193 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 127 | 0 | 86 | 0 | 0 | 0 | 0 | 193 | 21 | 130 | 193 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 656 | 656 | 204 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 214 | xxxx | xxxxx |
| Potent Cap.: | 433 | 388 | 842 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1368 | xxxx | xxxxx |
| Move Cap.: | 399 | 348 | 842 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1368 | xxxx | xxxxx |
| Volume/Cap: | 0.32 | 0.00 | 0.10 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.09 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 507 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 2.1 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.3 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 17.2 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx |
| Shared LOS: | * | C | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 17.2 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | C | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
Saturday PM Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.4 | 0.036 | A | 9.7 | 0.036 | + 0.307 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.0 | 0.048 | A | 9.3 | 0.086 | + 0.311 D/V |
| # 5 Curry St/Tehachapi Blvd | A | 8.6 | 0.172 | A | 8.9 | 0.234 | + 0.061 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 23.9 | 0.411 | C | 24.3 | 0.443 | + 0.375 D/V |
| # 8 Tucker Road/Valley Blvd | C | 21.8 | 0.403 | C | 22.0 | 0.416 | + 0.129 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 7.9 | 0.091 | A | 8.4 | 0.172 | + 0.081 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 8.6 | 0.261 | B | 10.5 | 0.441 | + 0.180 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | A | 9.3 | 0.092 | A | 9.4 | 0.092 | + 0.087 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 10.4 | 0.059 | B | 11.6 | 0.147 | + 1.218 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: A[ 9.7]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | 38 | 0 | 0 | 29 | 10 | 0 | 0 | 0 | 12 | 0 | 7 | | | | | |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | | | | | |
| Initial Bse: | 53 | 42 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 | | | | | |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Project: | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Initial Fut: | 53 | 89 | 0 | 0 | 32 | 11 | 0 | 0 | 0 | 13 | 0 | 8 | | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | | | | | |
| PHF Volume: | 57 | 96 | 0 | 0 | 35 | 12 | 0 | 0 | 0 | 14 | 0 | 8 | | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| FinalVolume: | 57 | 96 | 0 | 0 | 35 | 12 | 0 | 0 | 0 | 14 | 0 | 8 | | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 46 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 251 | 257 | 96 | | | | | |
| Potent Cap.: | 1574 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 742 | 650 | 966 | | | | | |
| Move Cap.: | 1574 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 720 | 626 | 966 | | | | | |
| Volume/Cap: | 0.04 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.02 | 0.00 | 0.01 | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | |
| Control Del: | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | | |
| Movement: | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 795 | xxxxx | | | | | |
| SharedQueue: | 0.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.1 | xxxxx | | | | | |
| Shrd ConDel: | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 9.7 | xxxxx | | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | A | * | | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 9.7 | | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | A | | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: A[ 9.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 | 1 | 0 | 0 1 0 | 0 | 0 | 0 1 0 | 1 | 0 | 0 0 0 | 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 69 | 10 | 11 | 31 | 0 | 18 | 2 | 42 | 0 | 0 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 76 | 11 | 12 | 34 | 0 | 20 | 2 | 46 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 16 | 0 | 0 | 0 |
| Initial Fut: | 0 | 76 | 11 | 12 | 34 | 0 | 67 | 2 | 62 | 0 | 0 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 82 | 12 | 13 | 37 | 0 | 73 | 2 | 67 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 82 | 12 | 13 | 37 | 0 | 73 | 2 | 67 | 0 | 0 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | 94 | xxxx | xxxxx | 151 | 157 | 37 | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 1513 | xxxx | xxxxx | 845 | 738 | 1041 | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | 1513 | xxxx | xxxxx | 840 | 732 | 1041 | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | 0.01 | xxxx | xxxx | 0.09 | 0.00 | 0.06 | xxxx | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | A | * | * | * | * | * | * | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 836 | xxxx | 1026 | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx | 0.3 | xxxx | 0.2 | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx | 9.7 | xxxx | 8.8 | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | A | * | * | A | * | A | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | 9.3 | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | A | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Opening Year 2018 With Project
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.234 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 0 | 0 | 0 | 21 | 0 | 56 | 37 | 185 | 0 | 0 | 169 | 26 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 78 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 16 | 21 | 0 | 56 | 37 | 263 | 0 | 0 | 169 | 26 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 0 | 0 | 17 | 23 | 0 | 61 | 41 | 286 | 0 | 0 | 183 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 17 | 23 | 0 | 61 | 41 | 286 | 0 | 0 | 183 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 17 | 23 | 0 | 61 | 41 | 286 | 0 | 0 | 183 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 1.00 | 0.27 | 0.00 | 0.73 | 0.25 | 1.75 | 0.00 | 0.00 | 1.73 | 0.27 |
| Final Sat.: | 0 | 574 | 647 | 173 | 0 | 464 | 173 | 1241 | 0 | 0 | 1224 | 195 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.00 | 0.03 | 0.13 | xxxx | 0.13 | 0.23 | 0.23 | xxxx | xxxx | 0.15 | 0.15 |
| Crit Moves: | | | **** | **** | | | **** | | | | **** | |
| Delay/Veh: | 0.0 | 0.0 | 7.9 | 9.1 | 0.0 | 9.1 | 9.3 | 9.2 | 0.0 | 0.0 | 8.5 | 8.4 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 7.9 | 9.1 | 0.0 | 9.1 | 9.3 | 9.2 | 0.0 | 0.0 | 8.5 | 8.4 |
| LOS by Move: | * | * | A | A | * | A | A | A | * | * | A | A |
| ApproachDel: | 7.9 | | | 9.1 | | | 9.2 | | | 8.5 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 7.9 | | | 9.1 | | | 9.2 | | | 8.5 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 0.443 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 24.3 |
| Optimal Cycle: | 43 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 121 | 144 | 119 | 46 | 129 | 76 | 52 | 130 | 90 | 185 | 150 | 46 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| Initial Fut: | 121 | 144 | 129 | 56 | 129 | 76 | 52 | 172 | 90 | 185 | 150 | 46 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 131 | 156 | 141 | 61 | 141 | 82 | 56 | 187 | 98 | 201 | 163 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 131 | 156 | 141 | 61 | 141 | 82 | 56 | 187 | 98 | 201 | 163 | 50 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 131 | 156 | 141 | 61 | 141 | 82 | 56 | 187 | 98 | 201 | 163 | 50 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.04 | 0.09 | 0.03 | 0.04 | 0.05 | 0.03 | 0.10 | 0.06 | 0.11 | 0.09 | 0.03 |
| Crit Moves: | **** | | | | | **** | | **** | | **** | | |
| Green/Cycle: | 0.16 | 0.14 | 0.14 | 0.14 | 0.11 | 0.11 | 0.24 | 0.22 | 0.22 | 0.25 | 0.24 | 0.24 |
| Volume/Cap: | 0.44 | 0.31 | 0.62 | 0.24 | 0.34 | 0.44 | 0.13 | 0.44 | 0.27 | 0.44 | 0.36 | 0.13 |
| Delay/Veh: | 25.5 | 25.5 | 31.8 | 25.4 | 27.0 | 28.5 | 19.6 | 22.5 | 21.3 | 21.2 | 21.2 | 19.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.5 | 25.5 | 31.8 | 25.4 | 27.0 | 28.5 | 19.6 | 22.5 | 21.3 | 21.2 | 21.2 | 19.7 |
| LOS by Move: | C | C | C | C | C | C | B | C | C | C | C | B |
| HCM2kAvgQ: | 3 | 2 | 4 | 1 | 2 | 2 | 1 | 4 | 2 | 4 | 3 | 1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.416 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 22.0 |
| Optimal Cycle: | 46 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 85 | 145 | 101 | 127 | 151 | 123 | 142 | 142 | 31 | 88 | 133 | 92 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 16 | 0 | 0 | 0 | 0 | 16 | 31 | 0 | 0 | 0 | 0 |
| Initial Fut: | 85 | 161 | 101 | 127 | 151 | 123 | 158 | 173 | 31 | 88 | 133 | 92 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 93 | 175 | 110 | 138 | 164 | 133 | 172 | 189 | 33 | 95 | 144 | 100 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 93 | 175 | 110 | 138 | 164 | 133 | 172 | 189 | 33 | 95 | 144 | 100 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 93 | 175 | 110 | 138 | 164 | 133 | 172 | 189 | 33 | 95 | 144 | 100 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.07 | 0.08 | 0.05 | 0.08 | 0.10 | 0.10 | 0.02 | 0.05 | 0.08 | 0.06 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.12 | 0.20 | 0.20 | 0.12 | 0.20 | 0.20 | 0.23 | 0.27 | 0.27 | 0.14 | 0.18 | 0.18 |
| Volume/Cap: | 0.42 | 0.24 | 0.34 | 0.62 | 0.23 | 0.42 | 0.42 | 0.36 | 0.08 | 0.39 | 0.42 | 0.34 |
| Delay/Veh: | 25.6 | 20.4 | 21.3 | 30.1 | 20.4 | 21.9 | 20.4 | 18.0 | 16.2 | 24.6 | 22.5 | 22.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.6 | 20.4 | 21.3 | 30.1 | 20.4 | 21.9 | 20.4 | 18.0 | 16.2 | 24.6 | 22.5 | 22.1 |
| LOS by Move: | C | C | C | C | C | C | C | B | B | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 4 | 2 | 3 | 3 | 3 | 0 | 2 | 3 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.172 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.4 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 35 | 37 | 0 | 0 | 32 | 39 | 55 | 0 | 27 | 0 | 0 | 1 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 31 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 68 | 0 | 0 | 32 | 39 | 102 | 0 | 27 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 38 | 74 | 0 | 0 | 35 | 43 | 111 | 0 | 30 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 74 | 0 | 0 | 35 | 43 | 111 | 0 | 30 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 74 | 0 | 0 | 35 | 43 | 111 | 0 | 30 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 |
| Final Sat.: | 647 | 710 | 0 | 621 | 680 | 784 | 642 | 0 | 816 | 0 | 0 | 760 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.10 | xxxx | 0.00 | 0.05 | 0.05 | 0.17 | xxxx | 0.04 | xxxx | xxxx | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | | | **** |
| Delay/Veh: | 8.5 | 8.2 | 0.0 | 0.0 | 8.1 | 7.4 | 9.3 | 0.0 | 7.1 | 0.0 | 0.0 | 7.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 8.5 | 8.2 | 0.0 | 0.0 | 8.1 | 7.4 | 9.3 | 0.0 | 7.1 | 0.0 | 0.0 | 7.5 |
| LOS by Move: | A | A | * | * | A | A | A | * | A | * | * | A |
| ApproachDel: | 8.3 | | | 7.7 | | | 8.8 | | | 7.5 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.3 | | | 7.7 | | | 8.8 | | | 7.5 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.441 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.5 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 32 | 42 | 21 | 23 | 23 | 68 | 66 | 84 | 34 | 21 | 65 | 23 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 78 | 0 | 0 | 0 | 0 | 94 | 0 | 0 | 0 | 0 | 94 |
| Initial Fut: | 32 | 120 | 21 | 23 | 23 | 68 | 160 | 84 | 34 | 21 | 65 | 117 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 35 | 130 | 23 | 25 | 25 | 74 | 174 | 92 | 37 | 23 | 70 | 127 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 35 | 130 | 23 | 25 | 25 | 74 | 174 | 92 | 37 | 23 | 70 | 127 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 35 | 130 | 23 | 25 | 25 | 74 | 174 | 92 | 37 | 23 | 70 | 127 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.18 | 0.70 | 0.12 | 0.20 | 0.20 | 0.60 | 0.58 | 0.30 | 0.12 | 0.10 | 0.32 | 0.58 |
| Final Sat.: | 116 | 437 | 76 | 128 | 128 | 378 | 394 | 208 | 84 | 73 | 226 | 409 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.30 | 0.30 | 0.30 | 0.20 | 0.20 | 0.20 | 0.44 | 0.44 | 0.44 | 0.31 | 0.31 | 0.31 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |
| Delay/Veh: | 10.3 | 10.3 | 10.3 | 9.2 | 9.2 | 9.2 | 11.6 | 11.6 | 11.6 | 9.7 | 9.7 | 9.7 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.3 | 10.3 | 10.3 | 9.2 | 9.2 | 9.2 | 11.6 | 11.6 | 11.6 | 9.7 | 9.7 | 9.7 |
| LOS by Move: | B | B | B | A | A | A | B | B | B | A | A | A |
| ApproachDel: | | 10.3 | | | 9.2 | | | 11.6 | | | 9.7 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 10.3 | | | 9.2 | | | 11.6 | | | 9.7 | |
| LOS by Appr: | | B | | | A | | | B | | | A | |
| AllWayAvgQ: | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.7 | 0.7 | 0.7 | 0.4 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: A[ 9.4]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 0 1 | | | 0 0 0 0 0 | | | 0 0 0 1 0 | | | 0 1 0 0 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 13 | 0 | 74 | 0 | 0 | 0 | 0 | 58 | 49 | 41 | 73 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 14 | 0 | 81 | 0 | 0 | 0 | 0 | 64 | 54 | 45 | 80 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 |
| Initial Fut: | 14 | 0 | 81 | 0 | 0 | 0 | 0 | 64 | 54 | 45 | 151 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 15 | 0 | 88 | 0 | 0 | 0 | 0 | 69 | 58 | 49 | 164 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 15 | 0 | 88 | 0 | 0 | 0 | 0 | 69 | 58 | 49 | 164 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | xxxx | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 360 | xxxx | 98 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 127 | xxxx | xxxxx |
| Potent Cap.: | 643 | xxxx | 963 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1471 | xxxx | xxxxx |
| Move Cap.: | 626 | xxxx | 963 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1471 | xxxx | xxxxx |
| Volume/Cap: | 0.02 | xxxx | 0.09 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.03 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | 0.3 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Control Del: | 10.9 | xxxx | 9.1 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.5 | xxxx | xxxxx |
| LOS by Move: | B | * | A | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.5 | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 9.4 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | A | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[ 11.6]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 1 | 0 | 0 1 | 0 0 | 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 31 | 0 | 35 | 0 | 0 | 0 | 0 | 115 | 16 | 46 | 84 | 0 |
| Growth Adj: | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 |
| Initial Bse: | 34 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 92 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Project: | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 |
| Initial Fut: | 82 | 0 | 38 | 0 | 0 | 0 | 0 | 126 | 18 | 50 | 116 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 89 | 0 | 42 | 0 | 0 | 0 | 0 | 137 | 19 | 55 | 126 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 89 | 0 | 42 | 0 | 0 | 0 | 0 | 137 | 19 | 55 | 126 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 382 | 382 | 147 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 156 | xxxx | xxxxx |
| Potent Cap.: | 624 | 554 | 906 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1436 | xxxx | xxxxx |
| Move Cap.: | 605 | 532 | 906 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1436 | xxxx | xxxxx |
| Volume/Cap: | 0.15 | 0.00 | 0.05 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.04 | xxxx | xxxx |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | A | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | 677 | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | 0.7 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.1 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | 11.6 | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.6 | xxxx | xxxxx |
| Shared LOS: | * | B | * | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 11.6 | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | | B | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 10.6 | 0.058 | C | 16.5 | 0.140 | + 5.843 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.5 | 0.144 | C | 15.8 | 0.502 | + 6.328 D/V |
| # 5 Curry St/Tehachapi Blvd | C | 15.5 | 0.615 | F | 78.1 | 1.188 | + 0.573 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 32.5 | 0.655 | D | 51.5 | 0.995 | +19.057 D/V |
| # 8 Tucker Road/Valley Blvd | C | 28.6 | 0.788 | E | 57.5 | 1.058 | +28.938 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.5 | 0.149 | B | 13.3 | 0.594 | + 0.445 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | C | 15.1 | 0.703 | F | 290.3 | 1.813 | + 1.109 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 11.8 | 0.186 | C | 18.1 | 0.397 | + 6.377 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | C | 23.5 | 0.428 | F | 312.5 | 1.587 | +288.992 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.6  Worst Case Level Of Service: C[ 16.5]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 54 | 49 | 0 | 0 | 39 | 38 | 0 | 0 | 0 | 22 | 4 | 13 | | | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | |
| Initial Bse: | 81 | 74 | 0 | 0 | 59 | 57 | 0 | 0 | 0 | 33 | 6 | 20 | | | | |
| Added Vol: | 17 | 71 | 0 | 0 | 178 | 31 | 0 | 0 | 0 | 9 | 0 | 12 | | | | |
| Project: | 0 | 174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 98 | 319 | 0 | 0 | 237 | 88 | 0 | 0 | 0 | 42 | 6 | 32 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | | |
| PHF Volume: | 103 | 335 | 0 | 0 | 249 | 93 | 0 | 0 | 0 | 44 | 6 | 33 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 103 | 335 | 0 | 0 | 249 | 93 | 0 | 0 | 0 | 44 | 6 | 33 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 342 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 838 | 884 | 335 | | | | |
| Potent Cap.: | 1228 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 339 | 286 | 711 | | | | |
| Move Cap.: | 1228 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 316 | 261 | 711 | | | | |
| Volume/Cap: | 0.08 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.14 | 0.02 | 0.05 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.3 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | LT | - LTR | - RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 397 | xxxxx | | | | |
| SharedQueue: | 0.3 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 0.8 | xxxxx | | | | |
| Shrd ConDel: | 8.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 16.5 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | C | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 16.5 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | C | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 7.8  Worst Case Level Of Service: C[ 15.8]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 77 | | 14 | | 12 | 49 | | 0 | | 27 | | 1 | 90 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 0 | 116 | | 21 | | 18 | 74 | | 0 | | 41 | | 2 | 135 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 75 | | 15 | | 31 | 156 | | 0 | | 12 | | 0 | 20 | | 0 | | 0 | | 0 |
| Project: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 174 | | 0 | 58 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 191 | | 36 | | 49 | 230 | | 0 | | 227 | | 2 | 213 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 0 | 201 | | 38 | | 52 | 242 | | 0 | | 239 | | 2 | 225 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 201 | | 38 | | 52 | 242 | | 0 | | 239 | | 2 | 225 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 239 | xxxx | | xxxxx | | 565 | | 584 | 242 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1340 | xxxx | | xxxxx | | 490 | | 426 | 802 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1340 | xxxx | | xxxxx | | 475 | | 409 | 802 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.04 | xxxx | | xxxx | | 0.50 | | 0.00 | 0.28 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 7.8 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 474 | | xxxx | 797 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | 2.8 | | xxxx | 1.2 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 7.8 | xxxx | | xxxxx | | 20.1 | | xxxx | 11.3 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | C | | * | B | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 15.8 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | C | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.188 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 78.1 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 1 | 0 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 57 | 0 | 106 | 1 | 2 | 0 | 1 | 380 | 71 | 71 | 274 | 2 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 86 | 0 | 159 | 2 | 3 | 0 | 2 | 572 | 107 | 107 | 412 | 3 |
| Added Vol: | 25 | 0 | 38 | 0 | 0 | 0 | 0 | 122 | 25 | 70 | 200 | 0 |
| Project: | 0 | 0 | 58 | 0 | 0 | 0 | 0 | 290 | 0 | 0 | 0 | 0 |
| Initial Fut: | 111 | 0 | 255 | 2 | 3 | 0 | 2 | 984 | 132 | 177 | 612 | 3 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 117 | 0 | 269 | 2 | 3 | 0 | 2 | 1035 | 139 | 186 | 644 | 3 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 117 | 0 | 269 | 2 | 3 | 0 | 2 | 1035 | 139 | 186 | 644 | 3 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 117 | 0 | 269 | 2 | 3 | 0 | 2 | 1035 | 139 | 186 | 644 | 3 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.33 | 0.67 | 0.00 | 0.01 | 1.76 | 0.23 | 0.45 | 1.54 | 0.01 |
| Final Sat.: | 387 | 0 | 449 | 129 | 259 | 0 | 1 | 881 | 120 | 209 | 739 | 4 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.30 | xxxx | 0.60 | 0.01 | 0.01 | xxxx | 1.19 | 1.18 | 1.16 | 0.89 | 0.87 | 0.86 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 15.5 | 0.0 | 21.1 | 12.2 | 12.2 | 0.0 | 127.5 | 123 | 116.8 | 45.9 | 42.7 | 41.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 15.5 | 0.0 | 21.1 | 12.2 | 12.2 | 0.0 | 127.5 | 123 | 116.8 | 45.9 | 42.7 | 41.0 |
| LOS by Move: | C | * | C | B | B | * | F | F | F | E | E | E |
| ApproachDel: | 19.4 | | | 12.2 | | | 122.1 | | | 43.4 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 19.4 | | | 12.2 | | | 122.1 | | | 43.4 | | |
| LOS by Appr: | C | | | B | | | F | | | E | | |
| AllWayAvgQ: | 0.4 | 0.4 | 1.3 | 0.0 | 0.0 | 0.0 | 16.2 | 15.0 | 15.0 | 4.6 | 4.1 | 4.1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 90 | Critical Vol./Cap.(X): | 0.995 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 51.5 |
| Optimal Cycle: | 156 | Level Of Service: | D |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 2 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 137 | 188 | 177 | 125 | 285 | 130 | 73 | 207 | 110 | 183 | 203 | 35 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 206 | 283 | 266 | 188 | 429 | 196 | 110 | 311 | 165 | 275 | 305 | 53 |
| Added Vol: | 12 | 139 | 76 | 51 | 198 | 0 | 42 | 64 | 34 | 100 | 88 | 52 |
| Project: | 0 | 0 | 50 | 50 | 0 | 0 | 0 | 132 | 0 | 0 | 0 | 0 |
| Initial Fut: | 218 | 422 | 392 | 289 | 627 | 196 | 152 | 507 | 199 | 375 | 393 | 105 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 230 | 444 | 413 | 304 | 660 | 206 | 160 | 534 | 210 | 395 | 414 | 110 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 230 | 444 | 413 | 304 | 660 | 206 | 160 | 534 | 210 | 395 | 414 | 110 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 230 | 444 | 413 | 304 | 660 | 206 | 160 | 534 | 210 | 395 | 414 | 110 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.92 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 3502 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.12 | 0.26 | 0.17 | 0.18 | 0.13 | 0.09 | 0.28 | 0.13 | 0.11 | 0.22 | 0.07 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.17 | 0.26 | 0.26 | 0.17 | 0.25 | 0.37 | 0.11 | 0.28 | 0.28 | 0.11 | 0.28 | 0.28 |
| Volume/Cap: | 0.73 | 0.48 | 0.99 | 0.99 | 0.73 | 0.35 | 0.77 | 0.99 | 0.46 | 0.99 | 0.77 | 0.24 |
| Delay/Veh: | 43.3 | 28.7 | 76.1 | 87.3 | 33.8 | 21.1 | 55.3 | 69.7 | 27.4 | 83.6 | 36.6 | 25.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.3 | 28.7 | 76.1 | 87.3 | 33.8 | 21.1 | 55.3 | 69.7 | 27.4 | 83.6 | 36.6 | 25.2 |
| LOS by Move: | D | C | E | F | C | C | E | E | C | F | D | C |
| HCM2kAvgQ: | 8 | 6 | 17 | 14 | 10 | 4 | 6 | 21 | 5 | 10 | 12 | 2 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 1.058 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 57.5 |
| Optimal Cycle: | 127 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 148 | 197 | 80 | 170 | 220 | 167 | 177 | 188 | 61 | 77 | 155 | 66 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 223 | 296 | 120 | 256 | 331 | 251 | 266 | 283 | 92 | 116 | 233 | 99 |
| Added Vol: | 8 | 105 | 5 | 72 | 126 | 114 | 92 | 67 | 13 | 8 | 57 | 67 |
| Project: | 0 | 58 | 0 | 0 | 0 | 0 | 58 | 116 | 0 | 0 | 0 | 0 |
| Initial Fut: | 231 | 459 | 125 | 328 | 457 | 365 | 416 | 466 | 105 | 124 | 290 | 166 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 243 | 483 | 132 | 345 | 481 | 384 | 438 | 490 | 110 | 130 | 305 | 175 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 243 | 483 | 132 | 345 | 481 | 384 | 438 | 490 | 110 | 130 | 305 | 175 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 243 | 483 | 132 | 345 | 481 | 384 | 438 | 490 | 110 | 130 | 305 | 175 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.13 | 0.08 | 0.19 | 0.13 | 0.24 | 0.24 | 0.26 | 0.07 | 0.07 | 0.16 | 0.11 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.12 | 0.14 | 0.14 | 0.20 | 0.22 | 0.22 | 0.22 | 0.29 | 0.29 | 0.10 | 0.17 | 0.17 |
| Volume/Cap: | 1.09 | 0.95 | 0.58 | 0.95 | 0.61 | 1.09 | 1.09 | 0.87 | 0.23 | 0.76 | 0.96 | 0.65 |
| Delay/Veh: | 111.2 | 52.6 | 27.7 | 57.3 | 22.5 | 96.1 | 93.1 | 34.4 | 16.3 | 44.0 | 65.7 | 28.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 111.2 | 52.6 | 27.7 | 57.3 | 22.5 | 96.1 | 93.1 | 34.4 | 16.3 | 44.0 | 65.7 | 28.9 |
| LOS by Move: | F | D | C | E | C | F | F | C | B | D | E | C |
| HCM2kAvgQ: | 11 | 9 | 3 | 11 | 5 | 15 | 17 | 12 | 2 | 4 | 11 | 4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.594 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 13.3 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 61 | 61 | 0 | 0 | 37 | 45 | 47 | 2 | 31 | 0 | 0 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 92 | 92 | 0 | 0 | 56 | 68 | 71 | 3 | 47 | 0 | 0 | 0 |
| Added Vol: | 0 | 9 | 0 | 20 | 10 | 67 | 36 | 19 | 0 | 0 | 23 | 14 |
| Project: | 0 | 116 | 0 | 0 | 0 | 0 | 174 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 92 | 217 | 0 | 20 | 66 | 135 | 281 | 22 | 47 | 0 | 23 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 97 | 228 | 0 | 21 | 69 | 142 | 295 | 23 | 49 | 0 | 24 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 97 | 228 | 0 | 21 | 69 | 142 | 295 | 23 | 49 | 0 | 24 | 15 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 97 | 228 | 0 | 21 | 69 | 142 | 295 | 23 | 49 | 0 | 24 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.07 | 1.00 | 0.00 | 0.62 | 0.38 |
| Final Sat.: | 524 | 568 | 0 | 480 | 515 | 574 | 498 | 39 | 642 | 0 | 318 | 194 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.18 | 0.40 | xxxx | 0.04 | 0.13 | 0.25 | 0.59 | 0.59 | 0.08 | xxxx | 0.08 | 0.08 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 10.7 | 12.6 | 0.0 | 10.2 | 10.3 | 10.4 | 17.8 | 17.8 | 8.5 | 0.0 | 9.9 | 9.9 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 10.7 | 12.6 | 0.0 | 10.2 | 10.3 | 10.4 | 17.8 | 17.8 | 8.5 | 0.0 | 9.9 | 9.9 |
| LOS by Move: | B | B | * | B | B | B | C | C | A | * | A | A |
| ApproachDel: | | 12.0 | | | 10.4 | | | 16.6 | | | 9.9 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 12.0 | | | 10.4 | | | 16.6 | | | 9.9 | |
| LOS by Appr: | | B | | | B | | | C | | | A | |
| AllWayAvgQ: | 0.2 | 0.6 | 0.0 | 0.0 | 0.1 | 0.3 | 1.3 | 1.3 | 0.1 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.813 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 290.3 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 25 | 70 | 25 | 11 | 14 | 38 | 175 | 86 | 35 | 32 | 121 | 55 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 38 | 105 | 38 | 17 | 21 | 57 | 263 | 129 | 53 | 48 | 182 | 83 |
| Added Vol: | 13 | 0 | 34 | 0 | 0 | 0 | 0 | 20 | 13 | 75 | 79 | 0 |
| Project: | 0 | 290 | 0 | 0 | 0 | 0 | 348 | 0 | 0 | 0 | 0 | 348 |
| Initial Fut: | 51 | 395 | 72 | 17 | 21 | 57 | 611 | 149 | 66 | 123 | 261 | 431 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 53 | 416 | 75 | 17 | 22 | 60 | 643 | 157 | 69 | 130 | 275 | 453 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 53 | 416 | 75 | 17 | 22 | 60 | 643 | 157 | 69 | 130 | 275 | 453 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 53 | 416 | 75 | 17 | 22 | 60 | 643 | 157 | 69 | 130 | 275 | 453 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.10 | 0.76 | 0.14 | 0.17 | 0.22 | 0.61 | 0.74 | 0.18 | 0.08 | 0.15 | 0.32 | 0.53 |
| Final Sat.: | 48 | 375 | 68 | 71 | 91 | 247 | 355 | 87 | 38 | 76 | 162 | 267 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 1.11 | 1.11 | 1.11 | 0.24 | 0.24 | 0.24 | 1.81 | 1.81 | 1.81 | 1.70 | 1.70 | 1.70 |
| Crit Moves: | | **** | | | **** | | **** | | | **** | | |
| Delay/Veh: | 100.7 | 101 | 100.7 | 14.6 | 14.6 | 14.6 | 392.2 | 392 | 392.2 | 339.6 | 340 | 339.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 100.7 | 101 | 100.7 | 14.6 | 14.6 | 14.6 | 392.2 | 392 | 392.2 | 339.6 | 340 | 339.6 |
| LOS by Move: | F | F | F | B | B | B | F | F | F | F | F | F |
| ApproachDel: | 100.7 | | | 14.6 | | | 392.2 | | | 339.6 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 100.7 | | | 14.6 | | | 392.2 | | | 339.6 | | |
| LOS by Appr: | F | | | B | | | F | | | F | | |
| AllWayAvgQ: | 12.3 | 12.3 | 12.3 | 0.3 | 0.3 | 0.3 | 50.9 | 50.9 | 50.9 | 46.3 | 46.3 | 46.3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 4.0  Worst Case Level Of Service: C[ 18.1]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | | 0 | | 100 | | 0 | | 0 | | 0 | | 0 | | 73 | | 45 | | 74 | | 164 | | 0 | |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 72 | | 0 | | 150 | | 0 | | 0 | | 0 | | 0 | | 110 | | 68 | | 111 | | 247 | | 0 | |
| Added Vol: | 7 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 27 | | 55 | | 0 | | 61 | | 0 | |
| Project: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 348 | | 0 | |
| Initial Fut: | 79 | | 0 | | 150 | | 0 | | 0 | | 0 | | 0 | | 137 | | 123 | | 111 | | 656 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 83 | | 0 | | 158 | | 0 | | 0 | | 0 | | 0 | | 144 | | 129 | | 117 | | 690 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 83 | | 0 | | 158 | | 0 | | 0 | | 0 | | 0 | | 144 | | 129 | | 117 | | 690 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 1133 | xxxx | | 209 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 273 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 226 | xxxx | | 837 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1302 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 210 | xxxx | | 837 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1302 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.40 | xxxx | | 0.19 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.09 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 1.8 | xxxx | | 0.7 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.3 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 33.1 | xxxx | | 10.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.0 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | D | * | | B | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 0.3 | xxxx | | xxxxx | | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 8.0 | xxxx | | xxxxx | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | 18.1 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | C | | | | | | * | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Friday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 116.5  Worst Case Level Of Service: F[312.5]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - R | L | - | T | - R | L | - | T | - R | L | - | T | - R |
| Control: | Stop Sign | | | | Stop Sign | | | | Uncontrolled | | | | Uncontrolled | | | |
| Rights: | Ignore | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 1 | 0 | 0 | 0 1 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 1 0 | 1 | 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 91 | | 0 | 68 | 0 | | 0 | 0 | | 0 | 154 | 19 | 91 | | 146 | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 |
| Initial Bse: | 137 | | 0 | 102 | 0 | | 0 | 0 | | 0 | 232 | 29 | 137 | | 220 | 0 |
| Added Vol: | 61 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 |
| Project: | 232 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 116 | 0 |
| Initial Fut: | 430 | | 0 | 102 | 0 | | 0 | 0 | | 0 | 232 | 29 | 137 | | 336 | 0 |
| User Adj: | 1.00 | 1.00 | | 0.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.00 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 |
| PHF Volume: | 452 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 244 | 30 | 144 | | 353 | 0 |
| Reduct Vol: | 0 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 |
| FinalVolume: | 452 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 244 | 30 | 144 | | 353 | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 900 | xxxx | | 259 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 274 | xxxx | xxxxx | | |
| Potent Cap.: | 312 | xxxx | | 785 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1301 | xxxx | xxxxx | | |
| Move Cap.: | 285 | xxxx | | 785 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1301 | xxxx | xxxxx | | |
| Volume/Cap: | 1.59 | xxxx | | 0.00 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.11 | xxxx | xxxx | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 27.2 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.4 | xxxx | xxxxx | | |
| Control Del: | 312.5 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.1 | xxxx | xxxxx | | |
| LOS by Move: | F | * | | * | * | * | | * | * | | * | | A | * | | * |
| Movement: | LT - | LTR - | RT | | LT - | LTR - | RT | | LT - | LTR - | RT | | LT - | LTR - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | |
| SharedQueue: | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | |
| Shared LOS: | * | * | | * | * | * | | * | * | | * | | * | * | | * |
| ApproachDel: | 312.5 | | | | xxxxxx | | | | xxxxxx | | | | xxxxxx | | | |
| ApproachLOS: | F | | | | * | | | | * | | | | * | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | B | 12.9 | 0.099 | C | 19.9 | 0.203 | + 7.003 D/V |
| # 2 Mill St/SR 58 EB Ramps | B | 10.7 | 0.203 | C | 18.9 | 0.637 | + 8.167 D/V |
| # 5 Curry St/Tehachapi Blvd | B | 14.1 | 0.501 | E | 37.7 | 0.964 | + 0.463 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 28.3 | 0.800 | E | 59.1 | 1.104 | +30.819 D/V |
| # 8 Tucker Road/Valley Blvd | D | 41.1 | 0.923 | E | 59.9 | 1.064 | +18.808 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.3 | 0.142 | B | 11.7 | 0.521 | + 0.379 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | B | 10.3 | 0.416 | F | 143.2 | 1.452 | + 1.036 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | B | 11.3 | 0.170 | C | 15.6 | 0.323 | + 4.304 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | C | 22.5 | 0.328 | F | 194.2 | 1.290 | +171.745 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 3.3  Worst Case Level Of Service: C[ 19.9]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Uncontrolled | | | | Uncontrolled | | | | Stop Sign | | | | Stop Sign | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 81 | 115 | 0 | 0 | 63 | 77 | 0 | 0 | 0 | 0 | 27 | 2 | 19 | | | |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | |
| Initial Bse: | 122 | 173 | 0 | 0 | 95 | 116 | 0 | 0 | 0 | 41 | 3 | 29 | | | | |
| Added Vol: | 15 | 139 | 0 | 0 | 45 | 8 | 0 | 0 | 0 | 8 | 0 | 25 | | | | |
| Project: | 0 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Initial Fut: | 137 | 461 | 0 | 0 | 140 | 124 | 0 | 0 | 0 | 49 | 3 | 54 | | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | | |
| PHF Volume: | 144 | 485 | 0 | 0 | 147 | 130 | 0 | 0 | 0 | 51 | 3 | 56 | | | | |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| FinalVolume: | 144 | 485 | 0 | 0 | 147 | 130 | 0 | 0 | 0 | 51 | 3 | 56 | | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 6.4 | 6.5 | 6.2 | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 3.5 | 4.0 | 3.3 | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 277 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 986 | 1051 | 485 | | | | |
| Potent Cap.: | 1297 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 277 | 229 | 586 | | | | |
| Move Cap.: | 1297 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | 252 | 201 | 586 | | | | |
| Volume/Cap: | 0.11 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | 0.20 | 0.02 | 0.10 | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.4 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | |
| Control Del: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | |
| LOS by Move: | A | * | * | * | * | * | * | * | * | * | * | * | | | | |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | | | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | 351 | xxxxx | | | | |
| SharedQueue: | 0.4 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 1.3 | xxxxx | | | | |
| Shrd ConDel: | 8.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | 19.9 | xxxxx | | | | |
| Shared LOS: | A | * | * | * | * | * | * | * | * | * | C | * | | | | |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | 19.9 | | | | | | |
| ApproachLOS: | * | | | * | | | * | | | C | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 9.3  Worst Case Level Of Service: C[ 18.9]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 130 | | 25 | | 18 | 73 | | 0 | | 67 | | 1 | 121 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 0 | 196 | | 38 | | 27 | 110 | | 0 | | 101 | | 2 | 182 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 130 | | 8 | | 8 | 45 | | 0 | | 25 | | 0 | 11 | | 0 | | 0 | | 0 |
| Project: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 149 | | 0 | 50 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 326 | | 46 | | 35 | 155 | | 0 | | 275 | | 2 | 243 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 0 | 343 | | 48 | | 37 | 163 | | 0 | | 289 | | 2 | 256 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 343 | | 48 | | 37 | 163 | | 0 | | 289 | | 2 | 256 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 391 | xxxx | | xxxxx | | 603 | | 627 | 163 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1179 | xxxx | | xxxxx | | 465 | | 403 | 887 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1179 | xxxx | | xxxxx | | 454 | | 390 | 887 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.03 | xxxx | | xxxx | | 0.64 | | 0.00 | 0.29 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 8.2 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 453 | | xxxx | 880 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | 4.4 | | xxxx | 1.2 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 8.2 | xxxx | | xxxxx | | 26.1 | | xxxx | 10.8 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | D | | * | B | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 18.9 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | C | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.964 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 37.7 |
| Optimal Cycle: | 0 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 4 | 47 | 3 | 106 | 48 | 302 | 13 | 5 | 304 | 39 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 0 | 0 | 6 | 71 | 5 | 159 | 72 | 454 | 20 | 8 | 457 | 59 |
| Added Vol: | 18 | 0 | 35 | 0 | 0 | 0 | 0 | 139 | 11 | 15 | 86 | 0 |
| Project: | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 248 | 0 | 0 | 0 | 0 |
| Initial Fut: | 18 | 0 | 91 | 71 | 5 | 159 | 72 | 841 | 31 | 23 | 543 | 59 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 19 | 0 | 96 | 74 | 5 | 168 | 76 | 885 | 32 | 24 | 572 | 62 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 0 | 96 | 74 | 5 | 168 | 76 | 885 | 32 | 24 | 572 | 62 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 0 | 96 | 74 | 5 | 168 | 76 | 885 | 32 | 24 | 572 | 62 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.30 | 0.02 | 0.68 | 0.15 | 1.79 | 0.06 | 0.07 | 1.74 | 0.19 |
| Final Sat.: | 377 | 0 | 433 | 142 | 9 | 321 | 79 | 926 | 34 | 35 | 856 | 94 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | xxxx | 0.22 | 0.52 | 0.52 | 0.52 | 0.96 | 0.96 | 0.95 | 0.67 | 0.67 | 0.66 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 12.3 | 0.0 | 12.7 | 18.2 | 18.2 | 18.2 | 57.2 | 55.0 | 53.1 | 23.5 | 22.9 | 22.3 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 12.3 | 0.0 | 12.7 | 18.2 | 18.2 | 18.2 | 57.2 | 55.0 | 53.1 | 23.5 | 22.9 | 22.3 |
| LOS by Move: | B | * | B | C | C | C | F | F | F | C | C | C |
| ApproachDel: | 12.7 | | | 18.2 | | | 55.2 | | | 22.9 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 12.7 | | | 18.2 | | | 55.2 | | | 22.9 | | |
| LOS by Appr: | B | | | C | | | F | | | C | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.3 | 1.0 | 1.0 | 1.0 | 6.8 | 6.3 | 6.3 | 1.8 | 1.7 | 1.7 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 65 | Critical Vol./Cap.(X): | 1.104 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 59.1 |
| Optimal Cycle: | 169 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 2 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 115 | 312 | 216 | 118 | 267 | 85 | 102 | 216 | 102 | 238 | 158 | 69 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 173 | 469 | 325 | 177 | 402 | 128 | 153 | 325 | 153 | 358 | 238 | 104 |
| Added Vol: | 4 | 46 | 51 | 34 | 72 | 0 | 10 | 82 | 10 | 50 | 28 | 30 |
| Project: | 0 | 0 | 50 | 50 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 |
| Initial Fut: | 177 | 515 | 426 | 261 | 474 | 128 | 163 | 505 | 163 | 408 | 266 | 134 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 186 | 542 | 448 | 275 | 498 | 135 | 172 | 531 | 172 | 429 | 280 | 141 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 186 | 542 | 448 | 275 | 498 | 135 | 172 | 531 | 172 | 429 | 280 | 141 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 186 | 542 | 448 | 275 | 498 | 135 | 172 | 531 | 172 | 429 | 280 | 141 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.92 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 3502 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.15 | 0.28 | 0.15 | 0.14 | 0.08 | 0.10 | 0.28 | 0.11 | 0.12 | 0.15 | 0.09 |
| Crit Moves: | | | **** | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.17 | 0.25 | 0.25 | 0.14 | 0.22 | 0.37 | 0.14 | 0.25 | 0.25 | 0.11 | 0.22 | 0.22 |
| Volume/Cap: | 0.62 | 0.60 | 1.10 | 1.10 | 0.62 | 0.23 | 0.67 | 1.10 | 0.42 | 1.10 | 0.67 | 0.39 |
| Delay/Veh: | 29.1 | 22.5 | 100.2 | 115.8 | 24.3 | 14.4 | 32.8 | 96.8 | 21.0 | 105.7 | 27.1 | 22.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.1 | 22.5 | 100.2 | 115.8 | 24.3 | 14.4 | 32.8 | 96.8 | 21.0 | 105.7 | 27.1 | 22.3 |
| LOS by Move: | C | C | F | F | C | B | C | F | C | F | C | C |
| HCM2kAvgQ: | 5 | 6 | 19 | 13 | 6 | 2 | 5 | 21 | 3 | 11 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 1.064 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 59.9 |
| Optimal Cycle: | 129 | Level Of Service: | E |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 141 | 202 | 66 | 156 | 171 | 210 | 262 | 207 | 54 | 68 | 134 | 120 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 212 | 304 | 99 | 235 | 257 | 316 | 394 | 311 | 81 | 102 | 202 | 180 |
| Added Vol: | 0 | 43 | 0 | 16 | 33 | 45 | 49 | 24 | 0 | 1 | 19 | 25 |
| Project: | 0 | 50 | 0 | 0 | 0 | 0 | 50 | 99 | 0 | 0 | 0 | 0 |
| Initial Fut: | 212 | 397 | 99 | 251 | 290 | 361 | 493 | 434 | 81 | 103 | 221 | 205 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 223 | 418 | 104 | 264 | 305 | 380 | 519 | 457 | 85 | 109 | 232 | 216 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 223 | 418 | 104 | 264 | 305 | 380 | 519 | 457 | 85 | 109 | 232 | 216 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 223 | 418 | 104 | 264 | 305 | 380 | 519 | 457 | 85 | 109 | 232 | 216 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.12 | 0.12 | 0.06 | 0.15 | 0.08 | 0.24 | 0.29 | 0.24 | 0.05 | 0.06 | 0.12 | 0.13 |
| Crit Moves: | **** | | | | | **** | **** | | | | | **** |
| Green/Cycle: | 0.11 | 0.15 | 0.15 | 0.16 | 0.21 | 0.21 | 0.25 | 0.31 | 0.31 | 0.11 | 0.17 | 0.17 |
| Volume/Cap: | 1.14 | 0.77 | 0.43 | 0.89 | 0.41 | 1.14 | 1.14 | 0.77 | 0.17 | 0.56 | 0.73 | 0.80 |
| Delay/Veh: | 134.1 | 31.2 | 24.4 | 50.6 | 21.0 | 116.9 | 109.2 | 25.1 | 15.2 | 29.0 | 32.3 | 40.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 134.1 | 31.2 | 24.4 | 50.6 | 21.0 | 116.9 | 109.2 | 25.1 | 15.2 | 29.0 | 32.3 | 40.0 |
| LOS by Move: | F | C | C | D | C | F | F | C | B | C | C | D |
| HCM2kAvgQ: | 11 | 6 | 2 | 8 | 3 | 17 | 22 | 10 | 1 | 3 | 6 | 6 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.521 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 11.7 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 32 | 0 | 0 | 41 | 66 | 55 | 0 | 28 | 0 | 0 | 0 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 56 | 48 | 0 | 0 | 62 | 99 | 83 | 0 | 42 | 0 | 0 | 0 |
| Added Vol: | 0 | 10 | 0 | 9 | 4 | 17 | 44 | 6 | 0 | 0 | 7 | 14 |
| Project: | 0 | 99 | 0 | 0 | 0 | 0 | 149 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 56 | 157 | 0 | 9 | 66 | 116 | 276 | 6 | 42 | 0 | 7 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 59 | 165 | 0 | 9 | 69 | 122 | 290 | 6 | 44 | 0 | 7 | 15 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 165 | 0 | 9 | 69 | 122 | 290 | 6 | 44 | 0 | 7 | 15 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 59 | 165 | 0 | 9 | 69 | 122 | 290 | 6 | 44 | 0 | 7 | 15 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.98 | 0.02 | 1.00 | 0.00 | 0.33 | 0.67 |
| Final Sat.: | 543 | 591 | 0 | 512 | 554 | 622 | 557 | 12 | 694 | 0 | 192 | 384 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.11 | 0.28 | xxxx | 0.02 | 0.12 | 0.20 | 0.52 | 0.52 | 0.06 | xxxx | 0.04 | 0.04 |
| Crit Moves: | | **** | | | | **** | | **** | | | | **** |
| Delay/Veh: | 9.8 | 10.6 | 0.0 | 9.5 | 9.7 | 9.4 | 15.0 | 15.0 | 8.0 | 0.0 | 9.0 | 9.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.8 | 10.6 | 0.0 | 9.5 | 9.7 | 9.4 | 15.0 | 15.0 | 8.0 | 0.0 | 9.0 | 9.0 |
| LOS by Move: | A | B | * | A | A | A | B | B | A | * | A | A |
| ApproachDel: | | 10.4 | | | 9.5 | | | 14.1 | | | 9.0 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 10.4 | | | 9.5 | | | 14.1 | | | 9.0 | |
| LOS by Appr: | | B | | | A | | | B | | | A | |
| AllWayAvgQ: | 0.1 | 0.3 | 0.0 | 0.0 | 0.1 | 0.2 | 1.0 | 1.0 | 0.1 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 1.452 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 143.2 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 41 | 17 | 33 | 11 | 22 | 47 | 31 | 92 | 68 | 26 | 127 | 5 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 62 | 26 | 50 | 17 | 33 | 71 | 47 | 138 | 102 | 39 | 191 | 8 |
| Added Vol: | 11 | 0 | 52 | 0 | 0 | 0 | 0 | 71 | 7 | 13 | 16 | 0 |
| Project: | 0 | 248 | 0 | 0 | 0 | 0 | 297 | 0 | 0 | 0 | 0 | 297 |
| Initial Fut: | 73 | 274 | 102 | 17 | 33 | 71 | 344 | 209 | 109 | 52 | 207 | 305 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 76 | 288 | 107 | 17 | 35 | 74 | 362 | 220 | 115 | 55 | 218 | 321 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 76 | 288 | 107 | 17 | 35 | 74 | 362 | 220 | 115 | 55 | 218 | 321 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 76 | 288 | 107 | 17 | 35 | 74 | 362 | 220 | 115 | 55 | 218 | 321 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.16 | 0.61 | 0.23 | 0.14 | 0.27 | 0.59 | 0.52 | 0.32 | 0.16 | 0.09 | 0.37 | 0.54 |
| Final Sat.: | 78 | 295 | 110 | 56 | 113 | 240 | 249 | 152 | 79 | 46 | 184 | 271 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.97 | 0.97 | 0.97 | 0.31 | 0.31 | 0.31 | 1.45 | 1.45 | 1.45 | 1.18 | 1.18 | 1.18 |
| Crit Moves: | | **** | | | **** | | | **** | | | **** | |
| Delay/Veh: | 62.2 | 62.2 | 62.2 | 15.6 | 15.6 | 15.6 | 235.6 | 236 | 235.6 | 126.2 | 126 | 126.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 62.2 | 62.2 | 62.2 | 15.6 | 15.6 | 15.6 | 235.6 | 236 | 235.6 | 126.2 | 126 | 126.2 |
| LOS by Move: | F | F | F | C | C | C | F | F | F | F | F | F |
| ApproachDel: | | 62.2 | | | 15.6 | | | 235.6 | | | 126.2 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 62.2 | | | 15.6 | | | 235.6 | | | 126.2 | |
| LOS by Appr: | | F | | | C | | | F | | | F | |
| AllWayAvgQ: | 7.0 | 7.0 | 7.0 | 0.4 | 0.4 | 0.4 | 30.0 | 30.0 | 30.0 | 16.1 | 16.1 | 16.1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
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Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: C[ 15.6]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 36 | | 0 | | 92 | 0 | | 0 | | 0 | 0 | | 89 | | 61 | 64 | | 139 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | |
| Initial Bse: | 54 | | 0 | | 138 | 0 | | 0 | | 0 | 0 | | 134 | | 92 | 96 | | 209 | | 0 |
| Added Vol: | 27 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 6 | | 17 | 0 | | 31 | | 0 |
| Project: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 297 | | 0 |
| Initial Fut: | 81 | | 0 | | 138 | 0 | | 0 | | 0 | 0 | | 140 | | 109 | 96 | | 537 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | |
| PHF Volume: | 85 | | 0 | | 146 | 0 | | 0 | | 0 | 0 | | 147 | | 114 | 101 | | 565 | | 0 |
| Reduct Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 85 | | 0 | | 146 | 0 | | 0 | | 0 | 0 | | 147 | | 114 | 101 | | 565 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 972 | xxxx | | 204 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 262 | xxxx | xxxxx | | | | |
| Potent Cap.: | 282 | xxxx | | 841 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1314 | xxxx | xxxxx | | | | |
| Move Cap.: | 265 | xxxx | | 841 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 1314 | xxxx | xxxxx | | | | |
| Volume/Cap: | 0.32 | xxxx | | 0.17 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | | | 0.08 | xxxx | xxxx | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 1.3 | xxxx | | 0.6 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | 0.3 | xxxx | xxxxx | | | | |
| Control Del: | 25.0 | xxxx | | 10.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | 8.0 | xxxx | xxxxx | | | | |
| LOS by Move: | C | * | | B | * | * | * | * | * | * | | | | A | * | * | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 0.3 | xxxx | | xxxxx | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | xxxxx | xxxx | | xxxxx | | 8.0 | xxxx | | xxxxx | |
| Shared LOS: | * | * | | * | | * | * | | * | | * | * | | * | | A | * | | * | |
| ApproachDel: | | 15.6 | | | | xxxxxx | | | | | xxxxxx | | | | | xxxxxx | | | | |
| ApproachLOS: | | C | | | | * | | | | | * | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday Midday Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 60.1  Worst Case Level Of Service: F[194.2]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Ignore | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 1 | 0 | 1 | 0 | 0 | |
| **Volume Module:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 63 | | 0 | | 72 | | 0 | | 0 | | 0 | | 0 | | 162 | | 18 | | 109 | | 140 | | 0 | |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 95 | | 0 | | 108 | | 0 | | 0 | | 0 | | 0 | | 244 | | 27 | | 164 | | 211 | | 0 | |
| Added Vol: | 31 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Project: | 198 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 99 | | 0 | |
| Initial Fut: | 324 | | 0 | | 108 | | 0 | | 0 | | 0 | | 0 | | 244 | | 27 | | 164 | | 310 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 0.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.00 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 341 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 256 | | 28 | | 173 | | 326 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 341 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 256 | | 28 | | 173 | | 326 | | 0 | |
| **Critical Gap Module:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| **Capacity Module:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 942 | xxxx | | 271 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 285 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 294 | xxxx | | 773 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1289 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 264 | xxxx | | 773 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1289 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 1.29 | xxxx | | 0.00 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.13 | xxxx | xxxx | | | | | | | | | | |
| **Level Of Service Module:** | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 17.1 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.5 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 194.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.2 | xxxx | xxxxx | | | | | | | | | | | |
| LOS by Move: | F | * | | * | | * | | * | | * | | A | | * | | * | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | |
| ApproachDel: | 194.2 | | | | xxxxxx | | | | xxxxxx | | | | xxxxxx | | | | | | | | | | | |
| ApproachLOS: | F | | | | * | | | | * | | | | * | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
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Impact Analysis Report
Level Of Service

| Intersection | Base LOS | Base Del/ Veh | Base V/ C | Future LOS | Future Del/ Veh | Future V/ C | Change in |
|---|---|---|---|---|---|---|---|
| # 1 Mill St/SR 58 WB Ramps | A | 9.7 | 0.049 | B | 13.9 | 0.138 | + 4.195 D/V |
| # 2 Mill St/SR 58 EB Ramps | A | 9.2 | 0.065 | B | 11.2 | 0.103 | + 2.053 D/V |
| # 5 Curry St/Tehachapi Blvd | A | 9.2 | 0.237 | C | 17.5 | 0.726 | + 0.488 V/C |
| # 7 Tucker Rd-SR 202/Tehachapi Blv | C | 29.1 | 0.388 | C | 31.3 | 0.638 | + 2.226 D/V |
| # 8 Tucker Road/Valley Blvd | C | 23.3 | 0.536 | C | 32.2 | 0.872 | + 8.898 D/V |
| # 15 Dennison Rd/Valley Blvd | A | 8.1 | 0.124 | A | 9.8 | 0.382 | + 0.257 V/C |
| # 16 Dennison Rd/Tehachapi Blvd | A | 9.6 | 0.371 | F | 301.0 | 2.018 | + 1.647 V/C |
| # 17 SR 58 EB Ramps/Tehachapi Blvd- | A | 9.7 | 0.127 | B | 12.5 | 0.184 | + 2.773 D/V |
| # 18 SR 58 WB Ramps/Tehachapi Blvd- | B | 12.5 | 0.092 | D | 33.9 | 0.711 | +21.442 D/V |
| #212 | | 0.0 | 0.000 | | 0.0 | 0.000 | + 0.000 D/V |

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 Mill St/SR 58 WB Ramps

Average Delay (sec/veh): 2.6  Worst Case Level Of Service: B[ 13.9]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Uncontrolled | | | | | | Uncontrolled | | | | | | Stop Sign | | | | | | Stop Sign | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1! | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 48 | | 38 | | 0 | | 0 | | 29 | | 10 | | 0 | | 0 | | 0 | | 12 | | 0 | | 7 | |
| Growth Adj: | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | |
| Initial Bse: | 72 | | 57 | | 0 | | 0 | | 44 | | 15 | | 0 | | 0 | | 0 | | 18 | | 0 | | 11 | |
| Added Vol: | 15 | | 71 | | 0 | | 0 | | 178 | | 31 | | 0 | | 0 | | 0 | | 9 | | 0 | | 12 | |
| Project: | 58 | | 0 | | 0 | | 0 | | 0 | | 174 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Initial Fut: | 145 | | 128 | | 0 | | 0 | | 222 | | 220 | | 0 | | 0 | | 0 | | 27 | | 0 | | 23 | |
| User Adj: | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | |
| PHF Adj: | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | |
| PHF Volume: | 153 | | 135 | | 0 | | 0 | | 233 | | 232 | | 0 | | 0 | | 0 | | 28 | | 0 | | 24 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 153 | | 135 | | 0 | | 0 | | 233 | | 232 | | 0 | | 0 | | 0 | | 28 | | 0 | | 24 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 6.4 | | 6.5 | | 6.2 | | | | | | | | | |
| FollowUpTim: | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 3.5 | | 4.0 | | 3.3 | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 465 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 790 | | 905 | | 135 | | | | | | | | | |
| Potent Cap.: | 1107 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 362 | | 278 | | 919 | | | | | | | | | |
| Move Cap.: | 1107 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 320 | | 236 | | 919 | | | | | | | | | |
| Volume/Cap: | 0.14 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.09 | | 0.00 | | 0.03 | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.5 | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx | | | | | | | | | |
| Control Del: | 8.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx | | | | | | | | | |
| LOS by Move: | A | | * | | * | | * | | * | | * | | * | | * | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | xxxx | | 455 | | xxxxx | | | | | | | | | |
| SharedQueue: | 0.5 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | xxxxx | | 0.4 | | xxxxx | | | | | | | | | |
| Shrd ConDel: | 8.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | xxxxx | | 13.9 | | xxxxx | | | | | | | | | |
| Shared LOS: | A | | * | | * | | * | | * | | * | | * | | B | | * | | | | | | | |
| ApproachDel: | xxxxxx | | | | xxxxxx | | | | xxxxxx | | | | 13.9 | | | | | | | | | | | |
| ApproachLOS: | * | | | | * | | | | * | | | | B | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Mill St/SR 58 EB Ramps

Average Delay (sec/veh): 2.8  Worst Case Level Of Service: B[ 11.2]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Uncontrolled | | | | | Uncontrolled | | | | | Stop Sign | | | | | Stop Sign | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 69 | | 10 | | 11 | 31 | | 0 | | 18 | | 2 | 42 | | 0 | | 0 | | 0 |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 0 | 104 | | 15 | | 17 | 47 | | 0 | | 27 | | 3 | 63 | | 0 | | 0 | | 0 |
| Added Vol: | 0 | 73 | | 11 | | 31 | 156 | | 0 | | 12 | | 0 | 18 | | 0 | | 0 | | 0 |
| Project: | 0 | 58 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| Initial Fut: | 0 | 235 | | 26 | | 48 | 203 | | 0 | | 39 | | 3 | 81 | | 0 | | 0 | | 0 |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 0 | 247 | | 27 | | 50 | 213 | | 0 | | 41 | | 3 | 85 | | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | 0 | | 0 |
| FinalVolume: | 0 | 247 | | 27 | | 50 | 213 | | 0 | | 41 | | 3 | 85 | | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | | xxxxx | | 4.1 | xxxx | | xxxxx | | 6.4 | | 6.5 | 6.2 | | xxxxx | | xxxx | | xxxxx |
| FollowUpTim: | xxxxx | xxxx | | xxxxx | | 2.2 | xxxx | | xxxxx | | 3.5 | | 4.0 | 3.3 | | xxxxx | | xxxx | | xxxxx |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | | xxxxx | | 275 | xxxx | | xxxxx | | 574 | | 588 | 213 | | xxxx | | xxxx | | xxxxx |
| Potent Cap.: | xxxx | xxxx | | xxxxx | | 1300 | xxxx | | xxxxx | | 484 | | 424 | 832 | | xxxx | | xxxx | | xxxxx |
| Move Cap.: | xxxx | xxxx | | xxxxx | | 1300 | xxxx | | xxxxx | | 469 | | 407 | 832 | | xxxx | | xxxx | | xxxxx |
| Volume/Cap: | xxxx | xxxx | | xxxx | | 0.04 | xxxx | | xxxx | | 0.09 | | 0.01 | 0.10 | | xxxx | | xxxx | | xxxx |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | xxxx | | xxxx | xxxxx | | xxxx | | xxxx | | xxxxx |
| Control Del: | xxxxx | xxxx | | xxxxx | | 7.9 | xxxx | | xxxxx | | xxxxx | | xxxx | xxxxx | | xxxxx | | xxxx | | xxxxx |
| LOS by Move: | * | * | | * | | A | * | | * | | * | | * | * | | * | | * | | * |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | xxxx | xxxx | | xxxxx | | 464 | | xxxx | 802 | | xxxx | | xxxx | | xxxxx |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | 0.1 | xxxx | | xxxxx | | 0.3 | | xxxx | 0.4 | | xxxxx | | xxxx | | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | 7.9 | xxxx | | xxxxx | | 13.6 | | xxxx | 10.0 | | xxxxx | | xxxx | | xxxxx |
| Shared LOS: | * | * | | * | | A | * | | * | | B | | * | B | | * | | * | | * |
| ApproachDel: | xxxxxx | | | | | xxxxxx | | | | | 11.2 | | | | | xxxxxx | | | | |
| ApproachLOS: | * | | | | | * | | | | | B | | | | | * | | | | |

Note: Queue reported is the number of cars per lane.

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Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #5 Curry St/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.726 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 17.5 |
| Optimal Cycle: | 0 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 1 | 0 0 | 1 | 0 0 | 1! 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 19 | 0 | 51 | 34 | 169 | 0 | 0 | 154 | 24 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 0 | 0 | 0 | 29 | 0 | 77 | 51 | 254 | 0 | 0 | 232 | 36 |
| Added Vol: | 25 | 0 | 21 | 0 | 0 | 0 | 0 | 122 | 25 | 42 | 199 | 0 |
| Project: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 290 | 0 |
| Initial Fut: | 25 | 0 | 21 | 29 | 0 | 77 | 51 | 376 | 25 | 100 | 721 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 105 | 759 | 38 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 105 | 759 | 38 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 26 | 0 | 22 | 30 | 0 | 81 | 54 | 396 | 26 | 105 | 759 | 38 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.27 | 0.00 | 0.73 | 0.23 | 1.66 | 0.11 | 0.23 | 1.69 | 0.08 |
| Final Sat.: | 416 | 0 | 483 | 139 | 0 | 373 | 127 | 952 | 64 | 145 | 1063 | 54 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | xxxx | 0.05 | 0.22 | xxxx | 0.22 | 0.42 | 0.42 | 0.41 | 0.73 | 0.71 | 0.70 |
| Crit Moves: | **** | | | | | **** | **** | | | **** | | |
| Delay/Veh: | 11.2 | 0.0 | 9.8 | 11.5 | 0.0 | 11.5 | 13.3 | 13.0 | 12.7 | 21.9 | 21.0 | 20.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 11.2 | 0.0 | 9.8 | 11.5 | 0.0 | 11.5 | 13.3 | 13.0 | 12.7 | 21.9 | 21.0 | 20.2 |
| LOS by Move: | B | * | A | B | * | B | B | B | B | C | C | C |
| ApproachDel: | 10.6 | | | 11.5 | | | 13.0 | | | 21.0 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 10.6 | | | 11.5 | | | 13.0 | | | 21.0 | | |
| LOS by Appr: | B | | | B | | | B | | | C | | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.2 | 0.7 | 0.6 | 0.6 | 2.3 | 2.1 | 2.1 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Tucker Rd-SR 202/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 90 | Critical Vol./Cap.(X): | 0.638 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ovl | | | Include | | | Include | | |
| Min. Green: | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 2 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 110 | 131 | 109 | 42 | 118 | 69 | 47 | 119 | 82 | 169 | 137 | 42 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 165 | 197 | 164 | 63 | 177 | 104 | 71 | 179 | 123 | 254 | 206 | 63 |
| Added Vol: | 12 | 108 | 76 | 51 | 146 | 0 | 42 | 64 | 34 | 100 | 88 | 51 |
| Project: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 132 | 50 |
| Initial Fut: | 177 | 305 | 240 | 114 | 323 | 104 | 113 | 243 | 157 | 404 | 426 | 164 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 187 | 321 | 253 | 120 | 340 | 109 | 119 | 256 | 166 | 425 | 448 | 173 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 187 | 321 | 253 | 120 | 340 | 109 | 119 | 256 | 166 | 425 | 448 | 173 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 187 | 321 | 253 | 120 | 340 | 109 | 119 | 256 | 166 | 425 | 448 | 173 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.92 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 3502 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.10 | 0.09 | 0.16 | 0.07 | 0.09 | 0.07 | 0.07 | 0.13 | 0.10 | 0.12 | 0.24 | 0.11 |
| Crit Moves: | | | **** | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.18 | 0.25 | 0.25 | 0.10 | 0.17 | 0.27 | 0.10 | 0.25 | 0.25 | 0.22 | 0.37 | 0.37 |
| Volume/Cap: | 0.57 | 0.36 | 0.64 | 0.64 | 0.57 | 0.25 | 0.64 | 0.54 | 0.41 | 0.54 | 0.64 | 0.29 |
| Delay/Veh: | 35.8 | 28.4 | 33.9 | 45.8 | 35.8 | 26.1 | 46.0 | 30.6 | 29.0 | 31.6 | 25.4 | 20.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 35.8 | 28.4 | 33.9 | 45.8 | 35.8 | 26.1 | 46.0 | 30.6 | 29.0 | 31.6 | 25.4 | 20.3 |
| LOS by Move: | D | C | C | D | D | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 5 | 4 | 7 | 4 | 5 | 2 | 4 | 7 | 4 | 6 | 11 | 3 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tucker Road/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 60 | Critical Vol./Cap.(X): | 0.872 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 32.2 |
| Optimal Cycle: | 79 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 8 | 8 | 5 | 10 | 10 | 5 | 10 | 10 | 5 | 10 | 10 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 78 | 132 | 92 | 116 | 138 | 112 | 130 | 130 | 28 | 80 | 121 | 84 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 117 | 199 | 138 | 174 | 208 | 168 | 196 | 196 | 42 | 120 | 182 | 126 |
| Added Vol: | 0 | 82 | 1 | 49 | 85 | 114 | 92 | 23 | 0 | 0 | 30 | 51 |
| Project: | 0 | 0 | 0 | 0 | 58 | 58 | 0 | 0 | 0 | 0 | 116 | 0 |
| Initial Fut: | 117 | 281 | 139 | 223 | 351 | 340 | 288 | 219 | 42 | 120 | 328 | 177 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 123 | 295 | 147 | 235 | 369 | 358 | 303 | 230 | 44 | 127 | 345 | 187 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 123 | 295 | 147 | 235 | 369 | 358 | 303 | 230 | 44 | 127 | 345 | 187 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 123 | 295 | 147 | 235 | 369 | 358 | 303 | 230 | 44 | 127 | 345 | 187 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.85 | 0.95 | 1.00 | 0.85 | 0.95 | 1.00 | 0.85 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1805 | 3610 | 1615 | 1805 | 3610 | 1615 | 1805 | 1900 | 1615 | 1805 | 1900 | 1615 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.08 | 0.09 | 0.13 | 0.10 | 0.22 | 0.17 | 0.12 | 0.03 | 0.07 | 0.18 | 0.12 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.08 | 0.17 | 0.17 | 0.17 | 0.25 | 0.25 | 0.19 | 0.27 | 0.27 | 0.13 | 0.21 | 0.21 |
| Volume/Cap: | 0.82 | 0.48 | 0.53 | 0.79 | 0.40 | 0.88 | 0.88 | 0.46 | 0.10 | 0.53 | 0.88 | 0.56 |
| Delay/Veh: | 55.9 | 23.1 | 24.8 | 36.8 | 19.0 | 40.7 | 45.4 | 19.1 | 16.8 | 26.5 | 42.8 | 23.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 55.9 | 23.1 | 24.8 | 36.8 | 19.0 | 40.7 | 45.4 | 19.1 | 16.8 | 26.5 | 42.8 | 23.5 |
| LOS by Move: | E | C | C | D | B | D | D | B | B | C | D | C |
| HCM2kAvgQ: | 5 | 3 | 3 | 6 | 3 | 10 | 9 | 4 | 1 | 3 | 10 | 4 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #15 Dennison Rd/Valley Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.382 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.8 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 1 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 0 | 1 | 0 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 32 | 34 | 0 | 0 | 29 | 36 | 50 | 0 | 25 | 0 | 0 | 1 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 48 | 51 | 0 | 0 | 44 | 54 | 75 | 0 | 38 | 0 | 0 | 2 |
| Added Vol: | 0 | 5 | 0 | 20 | 10 | 45 | 23 | 14 | 0 | 0 | 14 | 14 |
| Project: | 0 | 0 | 0 | 0 | 116 | 174 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 48 | 56 | 0 | 20 | 170 | 273 | 98 | 14 | 38 | 0 | 14 | 16 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 51 | 59 | 0 | 21 | 179 | 288 | 103 | 15 | 40 | 0 | 15 | 16 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 51 | 59 | 0 | 21 | 179 | 288 | 103 | 15 | 40 | 0 | 15 | 16 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 51 | 59 | 0 | 21 | 179 | 288 | 103 | 15 | 40 | 0 | 15 | 16 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.88 | 0.12 | 1.00 | 0.00 | 0.47 | 0.53 |
| Final Sat.: | 570 | 619 | 0 | 600 | 655 | 753 | 471 | 67 | 647 | 0 | 277 | 306 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.10 | xxxx | 0.04 | 0.27 | 0.38 | 0.22 | 0.22 | 0.06 | xxxx | 0.05 | 0.05 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 9.3 | 8.8 | 0.0 | 8.8 | 10.0 | 10.1 | 10.7 | 10.7 | 8.2 | 0.0 | 9.0 | 9.0 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.3 | 8.8 | 0.0 | 8.8 | 10.0 | 10.1 | 10.7 | 10.7 | 8.2 | 0.0 | 9.0 | 9.0 |
| LOS by Move: | A | A | * | A | B | B | B | B | A | * | A | A |
| ApproachDel: | | 9.0 | | | 10.0 | | | 10.1 | | | 9.0 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 9.0 | | | 10.0 | | | 10.1 | | | 9.0 | |
| LOS by Appr: | | A | | | B | | | B | | | A | |
| AllWayAvgQ: | 0.1 | 0.1 | 0.0 | 0.0 | 0.4 | 0.6 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

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Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Dennison Rd/Tehachapi Blvd

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 2.018 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 301.0 |
| Optimal Cycle: | 0 | Level Of Service: | F |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L - | T - | R | L - | T - | R | L - | T - | R | L - | T - | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 29 | 38 | 19 | 21 | 21 | 62 | 60 | 77 | 31 | 19 | 59 | 21 |
| Growth Adj: | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Initial Bse: | 44 | 57 | 29 | 32 | 32 | 93 | 90 | 116 | 47 | 29 | 89 | 32 |
| Added Vol: | 13 | 0 | 17 | 0 | 0 | 0 | 0 | 19 | 13 | 54 | 69 | 0 |
| Project: | 0 | 0 | 0 | 348 | 290 | 348 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 57 | 57 | 46 | 380 | 322 | 441 | 90 | 135 | 60 | 83 | 158 | 32 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 60 | 60 | 48 | 400 | 339 | 464 | 95 | 142 | 63 | 87 | 166 | 33 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 60 | 60 | 48 | 400 | 339 | 464 | 95 | 142 | 63 | 87 | 166 | 33 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 60 | 60 | 48 | 400 | 339 | 464 | 95 | 142 | 63 | 87 | 166 | 33 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.35 | 0.36 | 0.29 | 0.33 | 0.28 | 0.39 | 0.32 | 0.47 | 0.21 | 0.30 | 0.58 | 0.12 |
| Final Sat.: | 169 | 170 | 136 | 198 | 168 | 230 | 162 | 242 | 107 | 153 | 292 | 58 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.35 | 0.35 | 0.35 | 2.02 | 2.02 | 2.02 | 0.59 | 0.59 | 0.59 | 0.57 | 0.57 | 0.57 |
| Crit Moves: | | **** | | | | **** | | **** | | | **** | |
| Delay/Veh: | 13.5 | 13.5 | 13.5 | 478.8 | 479 | 478.8 | 18.6 | 18.6 | 18.6 | 18.2 | 18.2 | 18.2 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 13.5 | 13.5 | 13.5 | 478.8 | 479 | 478.8 | 18.6 | 18.6 | 18.6 | 18.2 | 18.2 | 18.2 |
| LOS by Move: | B | B | B | F | F | F | C | C | C | C | C | C |
| ApproachDel: | | 13.5 | | | 478.8 | | | 18.6 | | | 18.2 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 13.5 | | | 478.8 | | | 18.6 | | | 18.2 | |
| LOS by Appr: | | B | | | F | | | C | | | C | |
| AllWayAvgQ: | 0.5 | 0.5 | 0.5 | 77.8 | 77.8 | 77.8 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to EARTH TECH, CONCORD, MA

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #17 SR 58 EB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[ 12.5]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 13 | | 0 | | 74 | | 0 | | 0 | | 0 | | 0 | | 58 | | 49 | | 41 | | 73 | | 0 | |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 20 | | 0 | | 111 | | 0 | | 0 | | 0 | | 0 | | 87 | | 74 | | 62 | | 110 | | 0 | |
| Added Vol: | 7 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 27 | | 34 | | 0 | | 19 | | 0 | |
| Project: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 116 | | 232 | | 0 | | 0 | | 0 | |
| Initial Fut: | 27 | | 0 | | 111 | | 0 | | 0 | | 0 | | 0 | | 230 | | 340 | | 62 | | 129 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 28 | | 0 | | 117 | | 0 | | 0 | | 0 | | 0 | | 242 | | 358 | | 65 | | 136 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 28 | | 0 | | 117 | | 0 | | 0 | | 0 | | 0 | | 242 | | 358 | | 65 | | 136 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 687 | xxxx | | 421 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 600 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 416 | xxxx | | 637 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 987 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 394 | xxxx | | 637 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 987 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.07 | xxxx | | 0.18 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.07 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | | 0.7 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 14.8 | xxxx | | 11.9 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.9 | xxxx | xxxxx | | | | | | | | | | |
| LOS by Move: | B | * | | B | * | * | * | * | * | * | | A | * | * | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | | xxxx | xxxx | | xxxxx | | |
| SharedQueue: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 0.2 | xxxx | | xxxxx | | |
| Shrd ConDel: | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | xxxxx | xxxx | | xxxxx | | | 8.9 | xxxx | | xxxxx | | |
| Shared LOS: | * | * | | * | | | * | * | | * | | | * | * | | * | | | A | * | | * | | |
| ApproachDel: | 12.5 | | | | | | xxxxxx | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | B | | | | | | * | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

Event Center & Rodeo Grounds
Future 2035 With Project
Saturday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #18 SR 58 WB Ramps/Tehachapi Blvd-Summit

Average Delay (sec/veh): 10.9  Worst Case Level Of Service: D[ 33.9]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Ignore | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | | 1 | 0 | 1 | 0 | 0 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 31 | | 0 | | 35 | | 0 | | 0 | | 0 | | 0 | | 115 | | 16 | | 46 | | 84 | | 0 | |
| Growth Adj: | 1.50 | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 | 1.50 | 1.50 | | 1.50 | | 1.50 |
| Initial Bse: | 47 | | 0 | | 53 | | 0 | | 0 | | 0 | | 0 | | 173 | | 24 | | 69 | | 126 | | 0 | |
| Added Vol: | 19 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| Project: | 198 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 116 | | 0 | | 0 | | 99 | | 0 | |
| Initial Fut: | 264 | | 0 | | 53 | | 0 | | 0 | | 0 | | 0 | | 289 | | 24 | | 69 | | 225 | | 0 | |
| User Adj: | 1.00 | 1.00 | | 0.00 | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 | 1.00 | 1.00 | | 1.00 | | 1.00 |
| PHF Adj: | 0.95 | 0.95 | | 0.00 | | 0.95 | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 |
| PHF Volume: | 277 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 304 | | 25 | | 73 | | 237 | | 0 | |
| Reduct Vol: | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | |
| FinalVolume: | 277 | | 0 | | 0 | | 0 | | 0 | | 0 | | 0 | | 304 | | 25 | | 73 | | 237 | | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | xxxx | | 6.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | | |
| FollowUpTim: | 3.5 | xxxx | | 3.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 700 | xxxx | | 317 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 329 | xxxx | xxxxx | | | | | | | | | | |
| Potent Cap.: | 409 | xxxx | | 728 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1241 | xxxx | xxxxx | | | | | | | | | | |
| Move Cap.: | 390 | xxxx | | 728 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 1241 | xxxx | xxxxx | | | | | | | | | | |
| Volume/Cap: | 0.71 | xxxx | | 0.00 | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | | 0.06 | xxxx | xxxx | | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 5.3 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | 0.2 | xxxx | xxxxx | | | | | | | | | | |
| Control Del: | 33.9 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | 8.1 | xxxx | xxxxx | | | | | | | | | | | |
| LOS by Move: | D | * | | * | | * | | * | | * | | A | | * | | * | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | | | | | | |
| Shared LOS: | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | | * | |
| ApproachDel: | | 33.9 | | | | xxxxxx | | | | xxxxxx | | | | xxxxxx | | | | | | | | | | |
| ApproachLOS: | | D | | | | * | | | | * | | | | * | | | | | | | | | | |

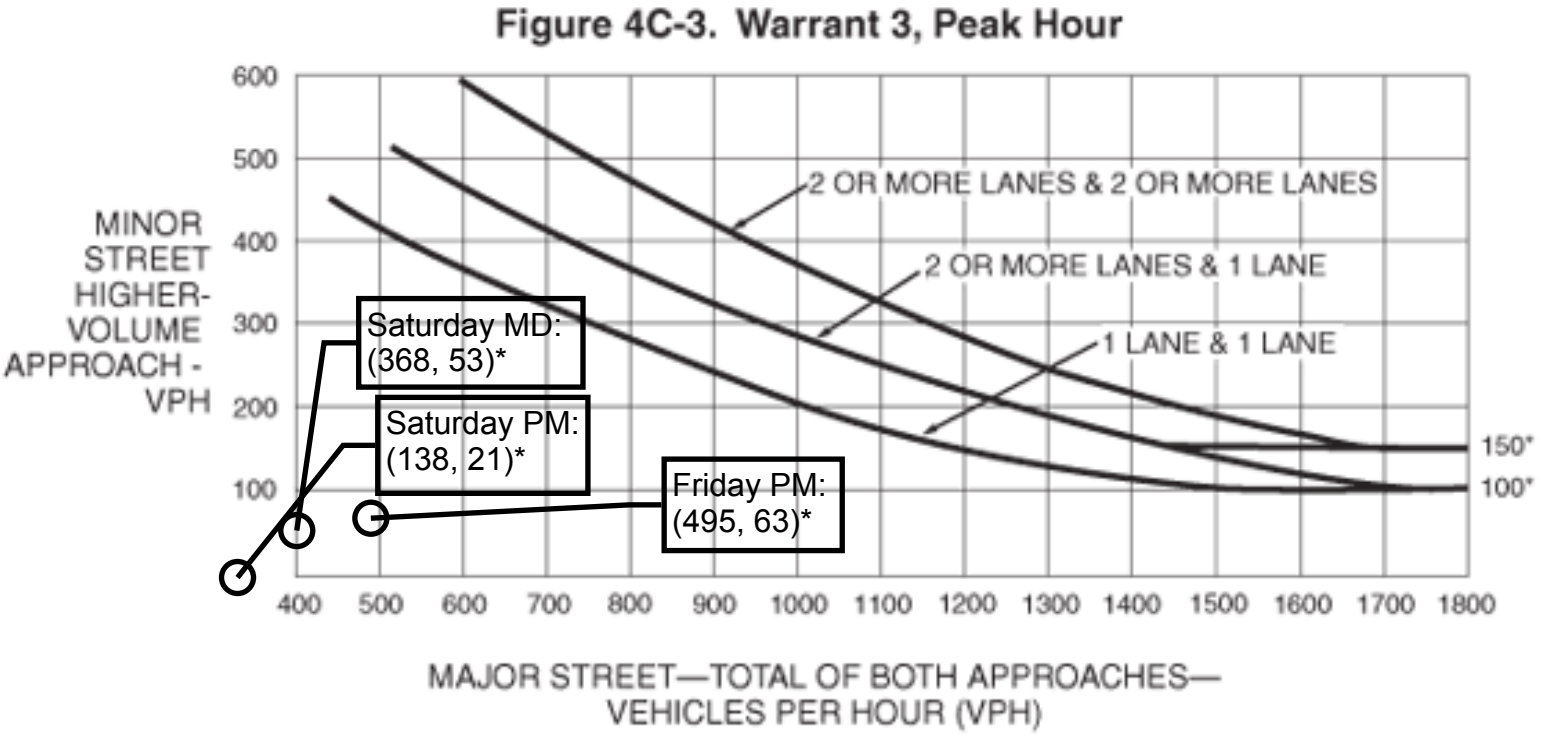
Note: Queue reported is the number of cars per lane.

# APPENDIX E

# SIGNAL WARRANT ANALYSIS

# Signal Warrant Analysis
# 2018 No Project Conditions

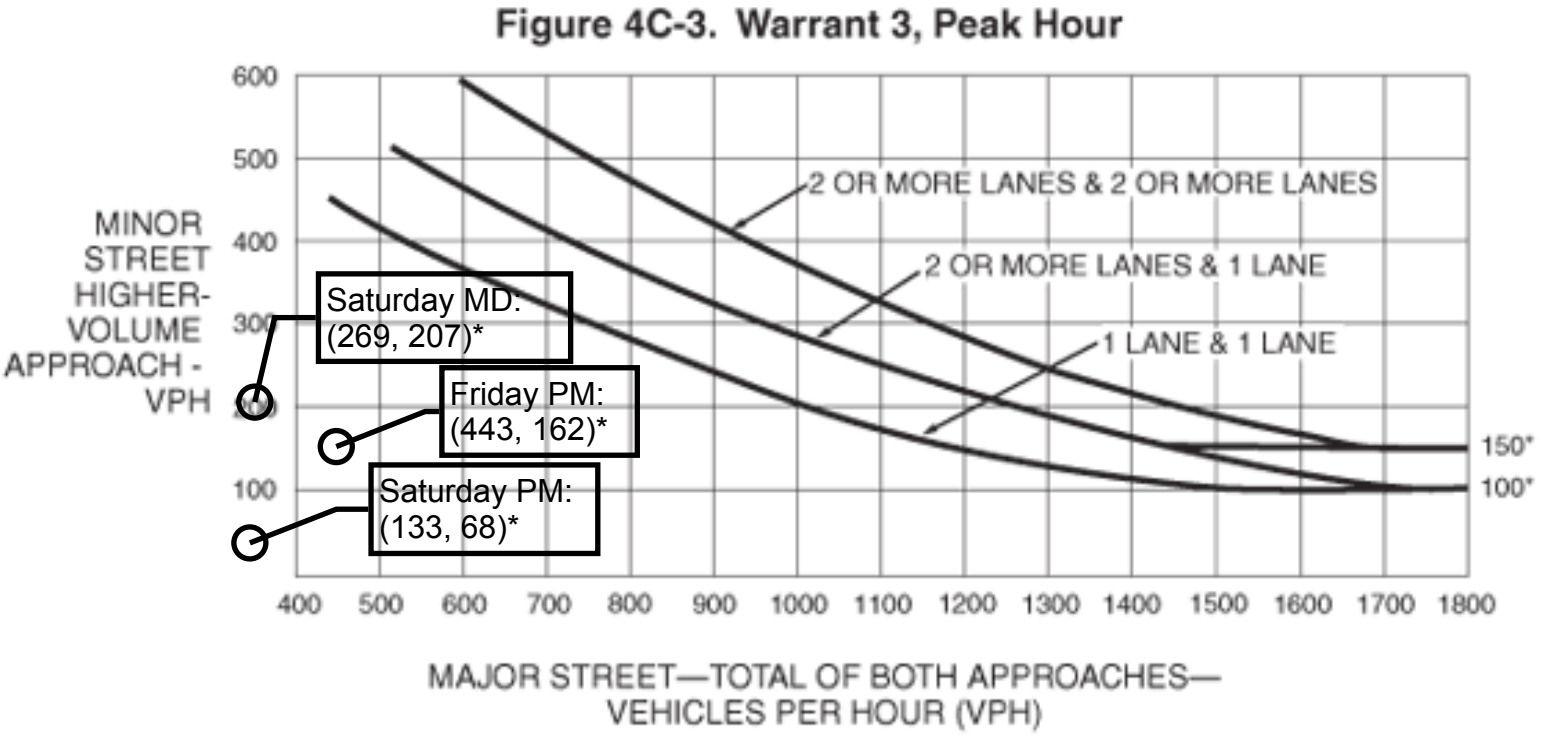
**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 WB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

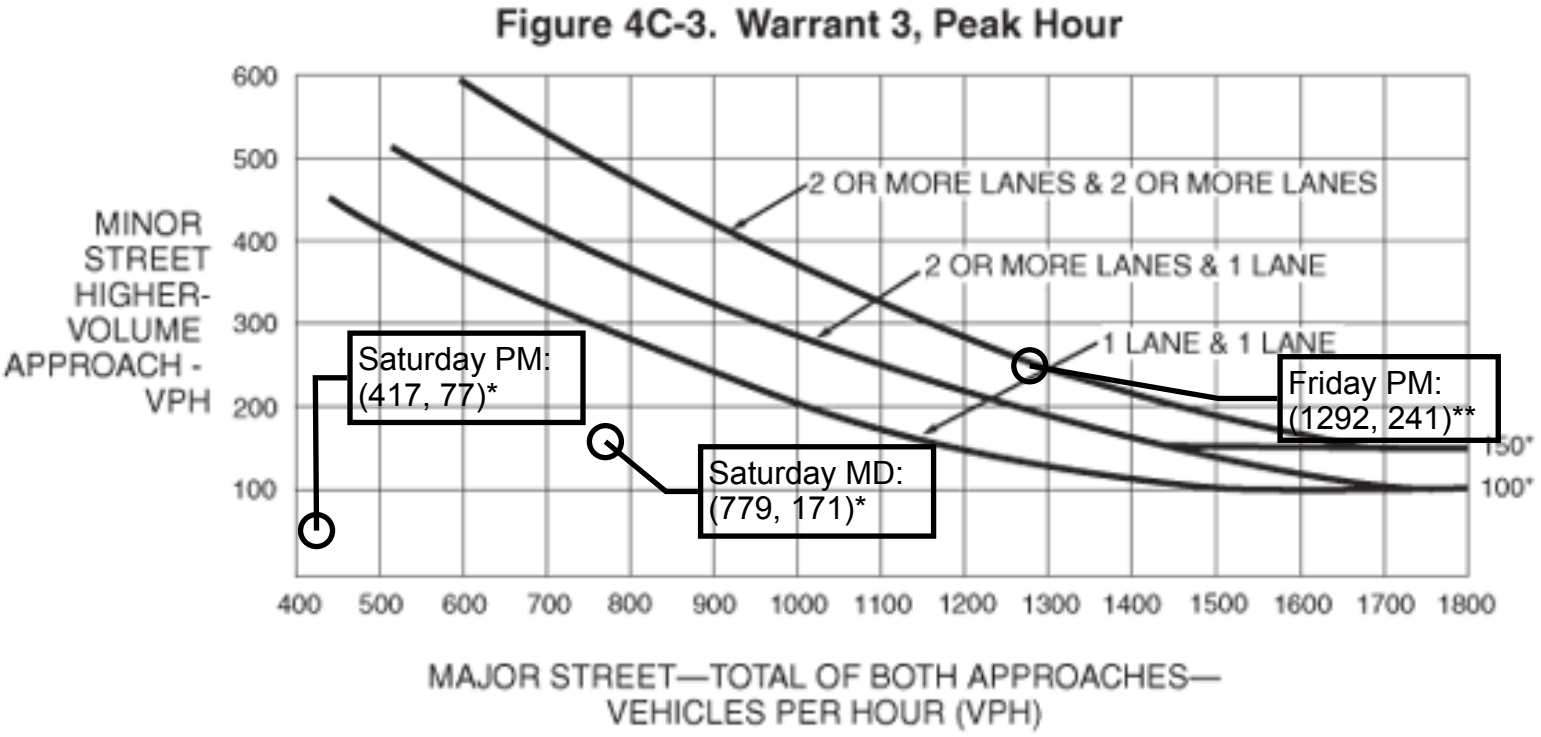
**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 EB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**Curry Street/Tehachapi Boulevard**

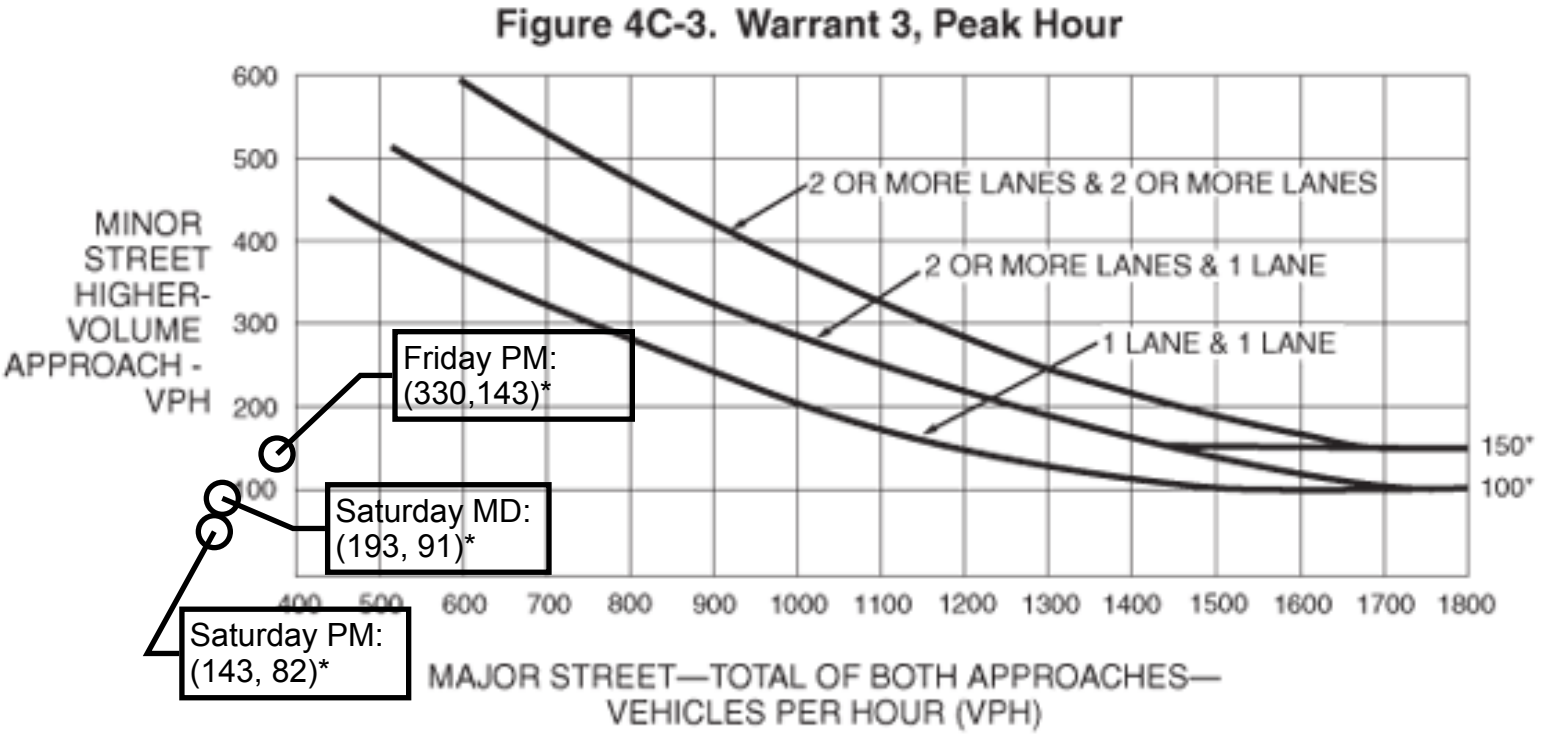



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM)**

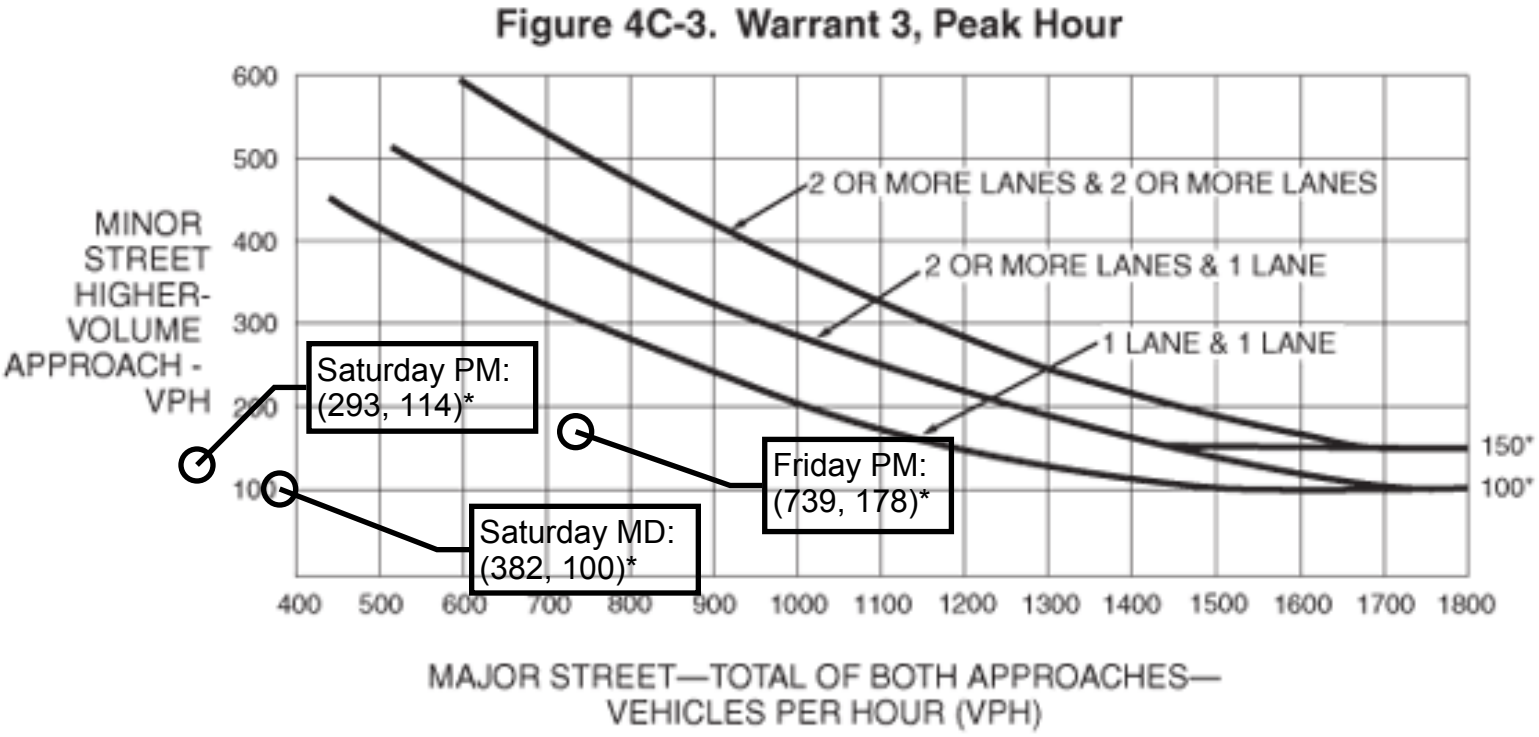
**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**Dennison Road/Valley Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

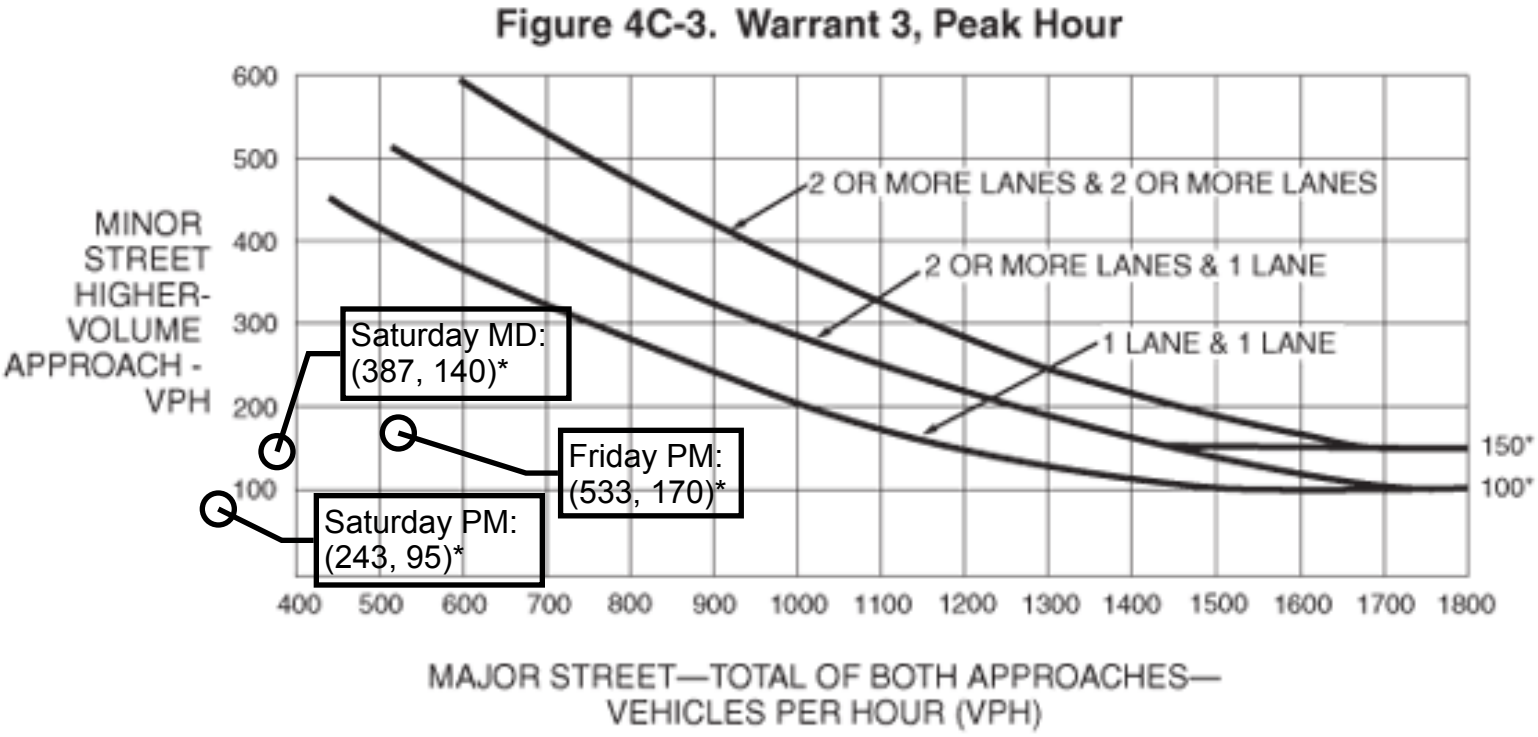
**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**Dennison Road/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

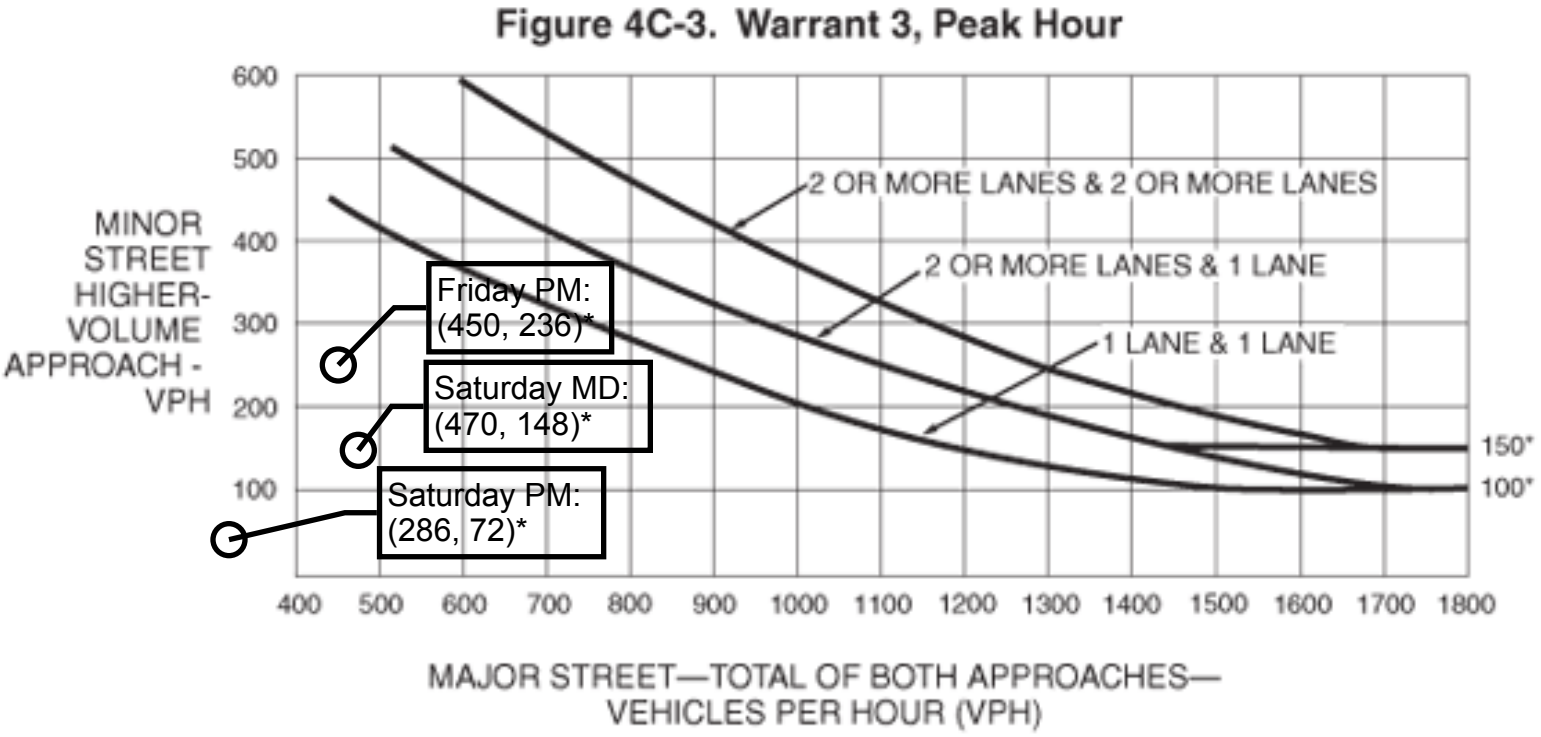
**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**SR-58 EB Ramps/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Opening Year (2018) No Project**
**Signal Warrant Analysis**
**SR-58 WB Ramps/Tehachapi Boulevard**

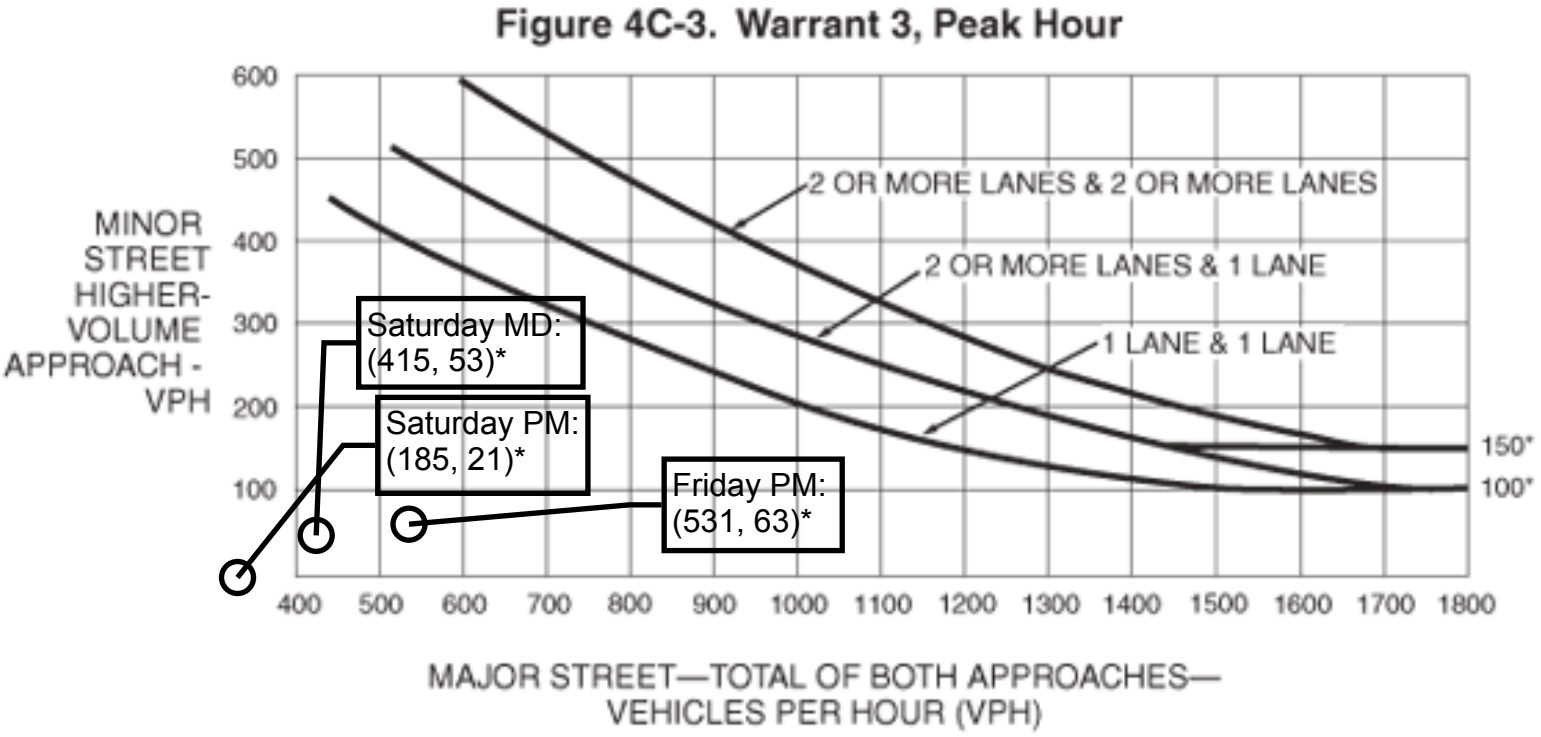



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

# Signal Warrant Analysis
# 2018 With Project Conditions

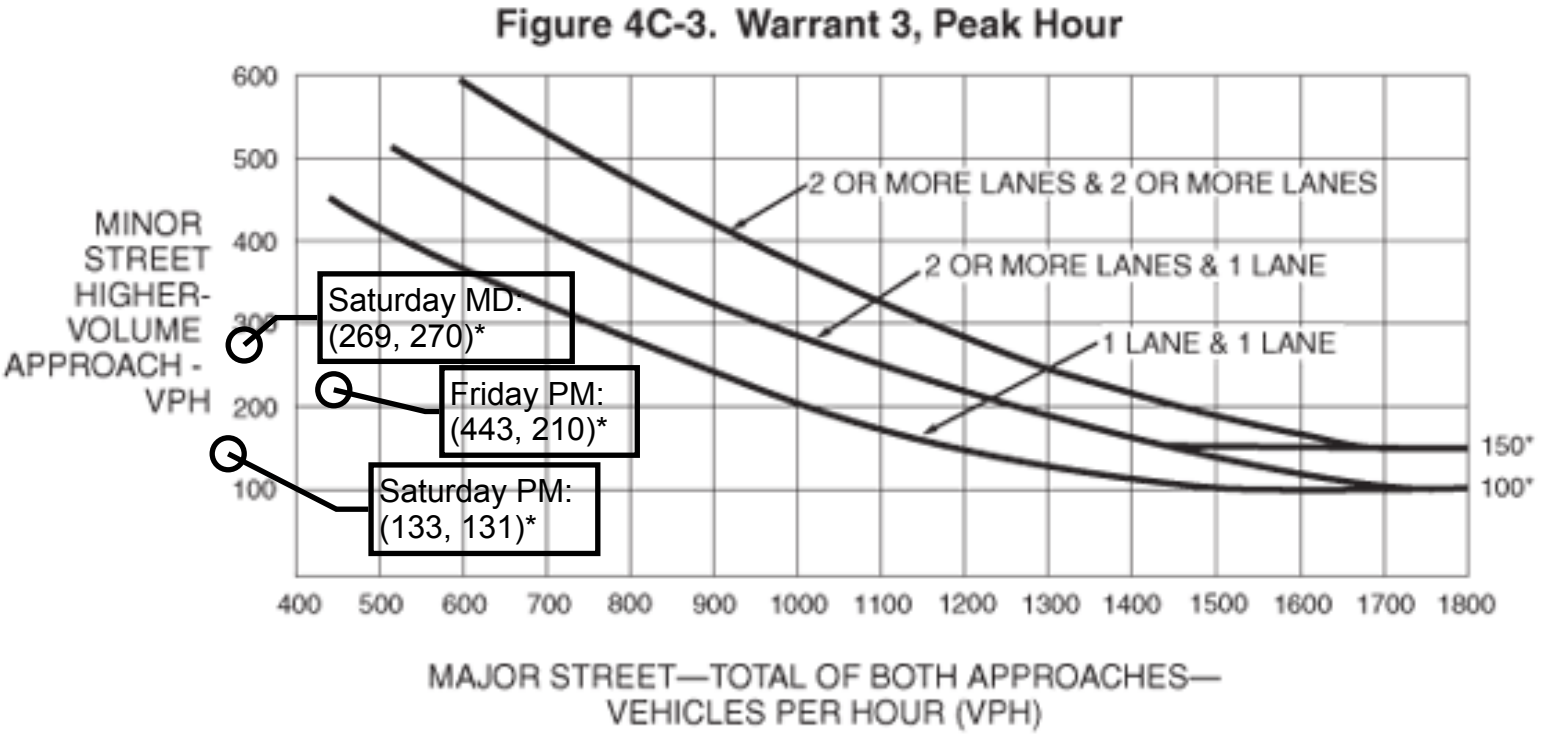
**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 WB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

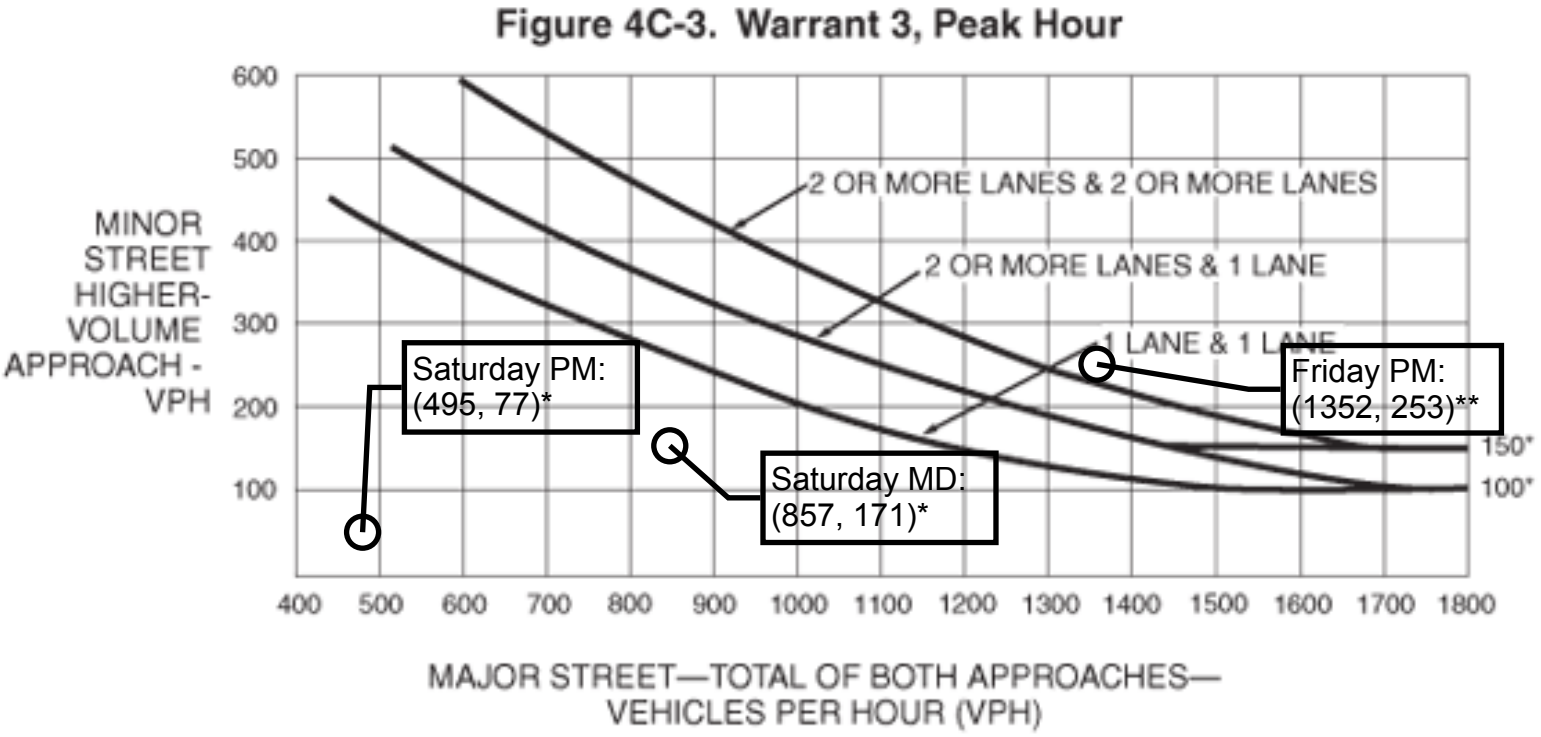
**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 EB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**Curry Street/Tehachapi Boulevard**

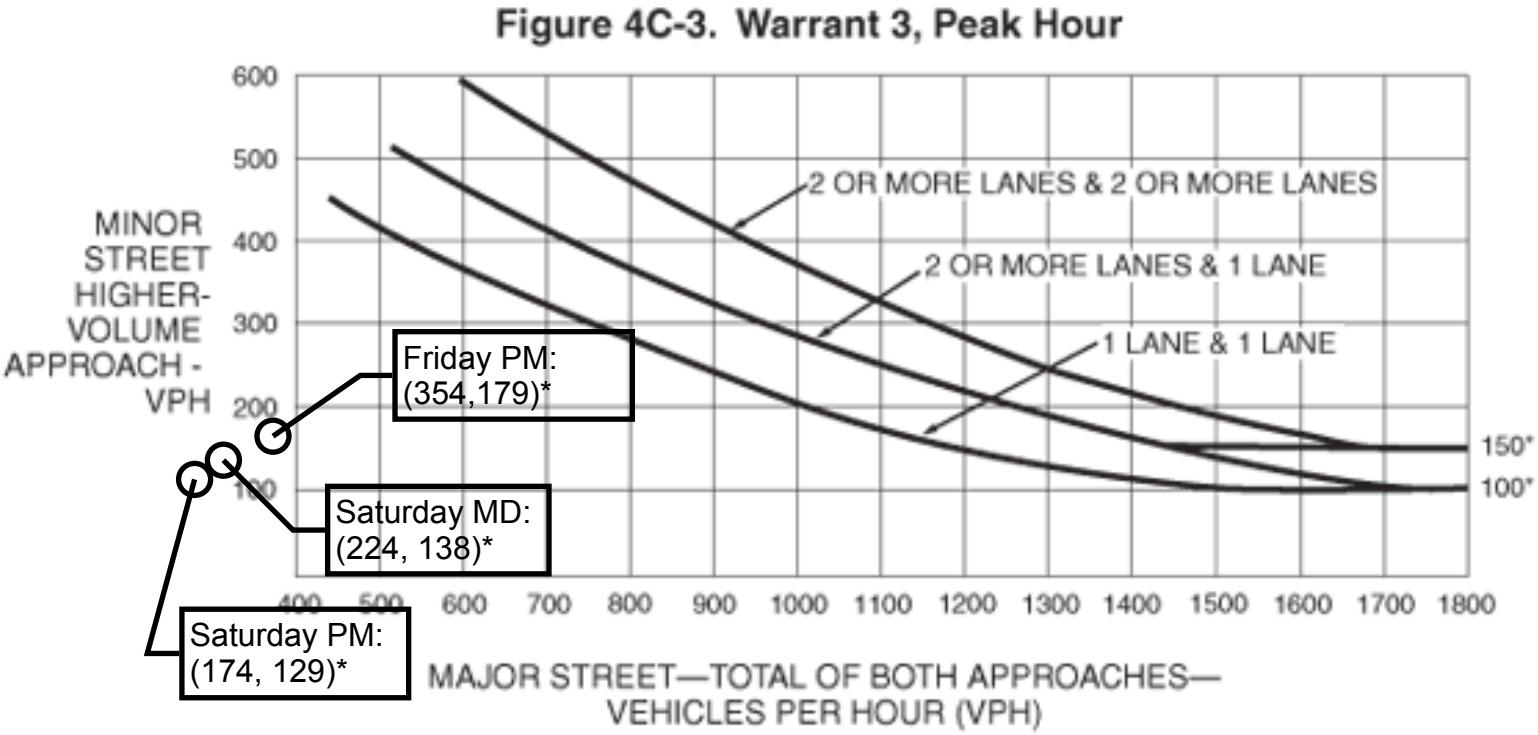



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM)**

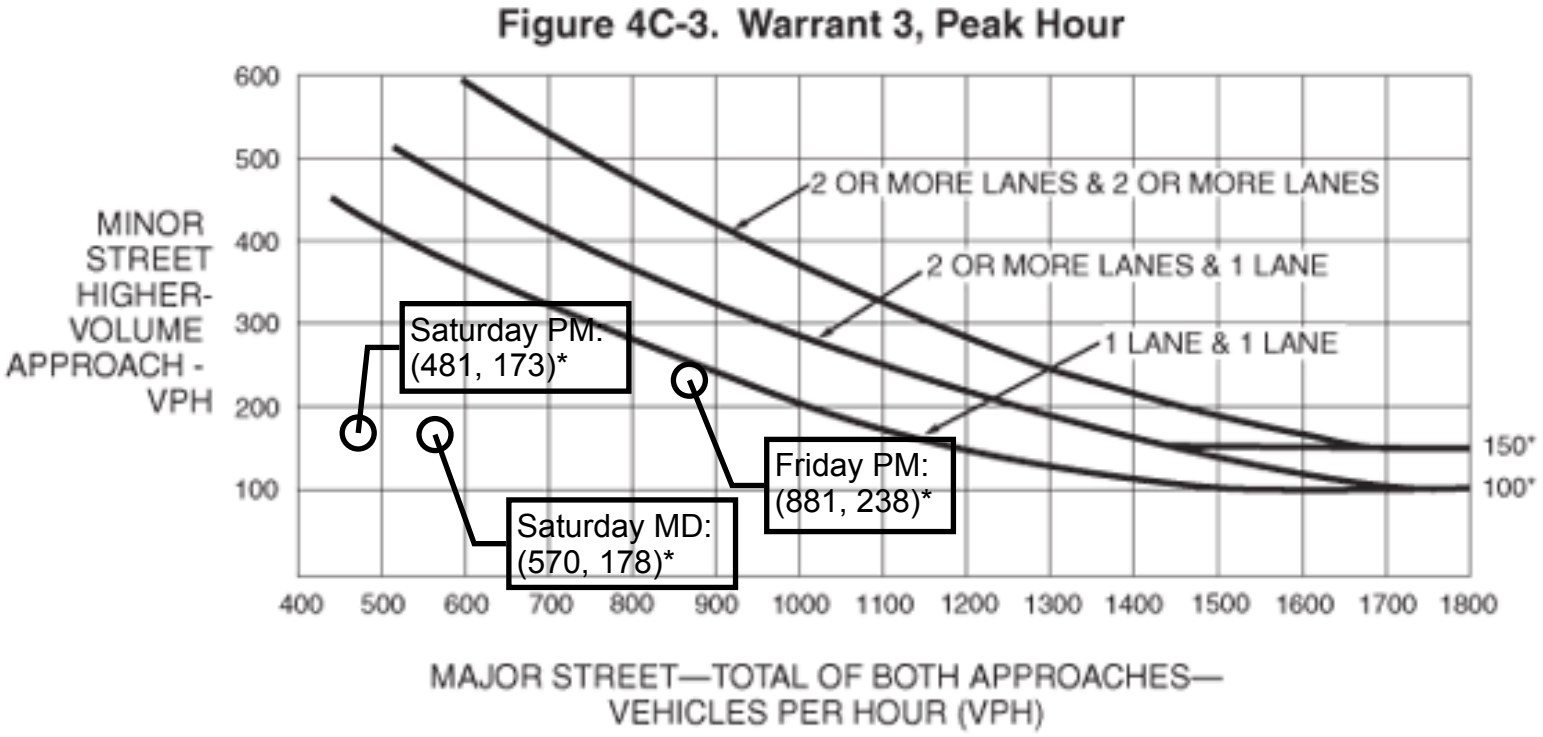
**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**Dennison Road/Valley Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

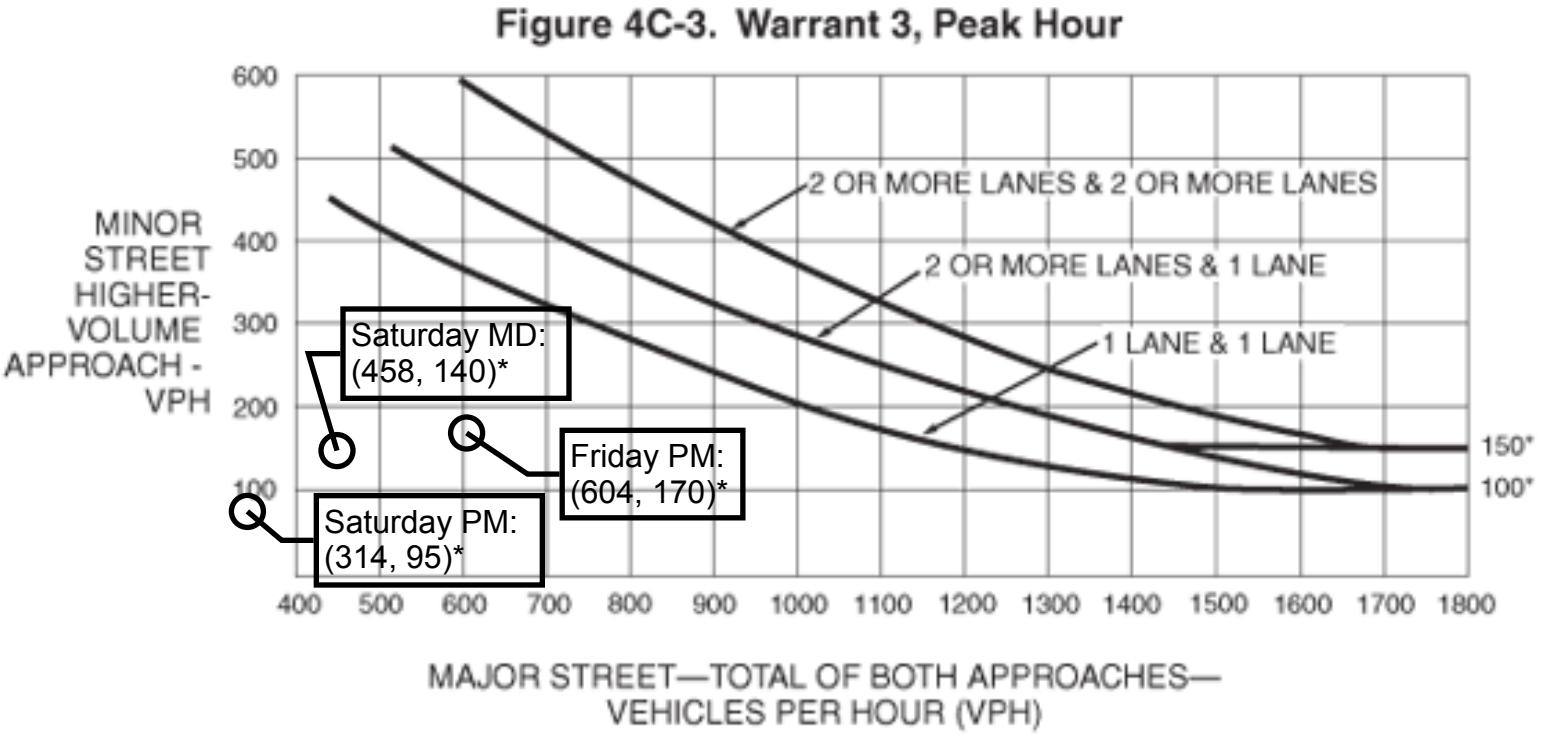
**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**Dennison Road/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

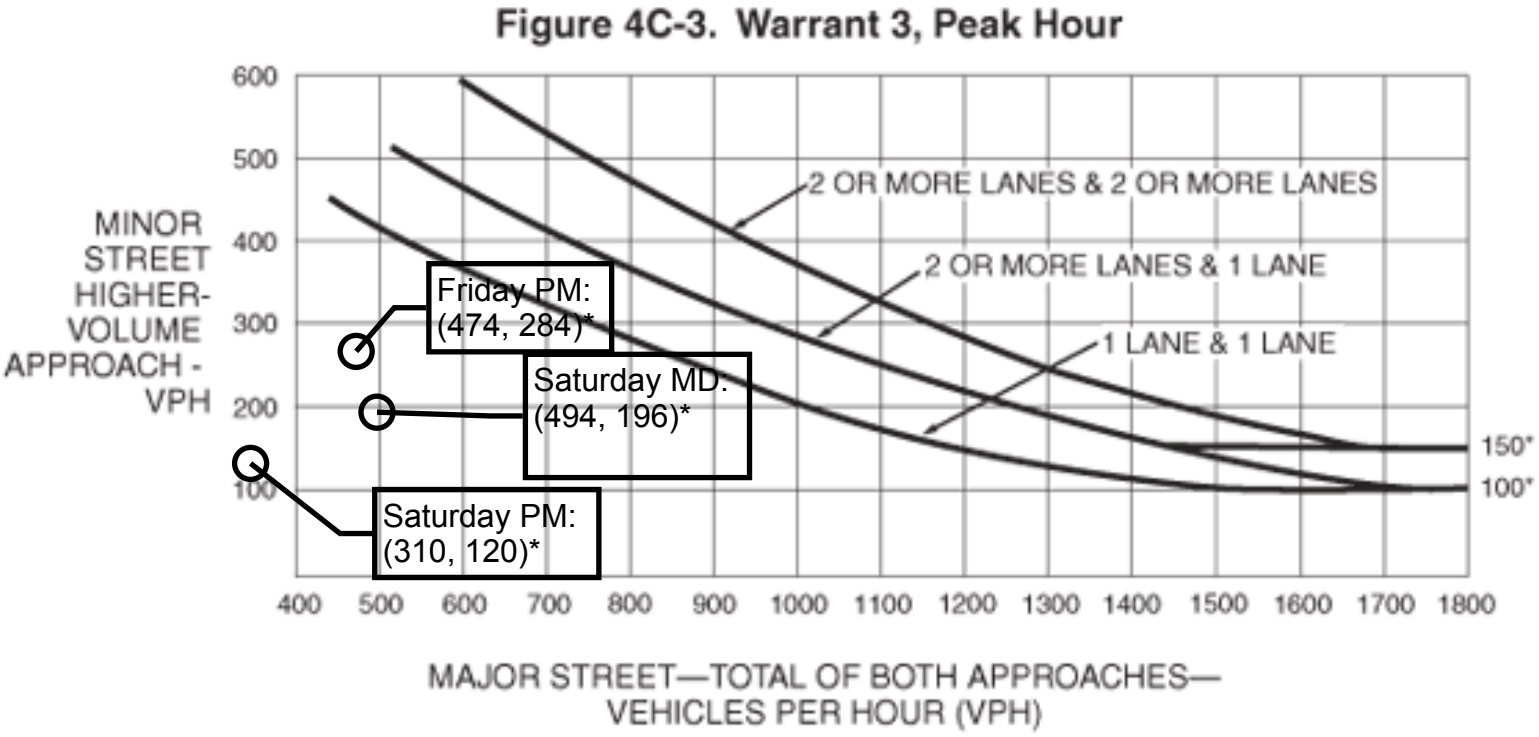
**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**SR-58 EB Ramps/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Opening Year (2018) With Project**
**Signal Warrant Analysis**
**SR-58 WB Ramps/Tehachapi Boulevard**

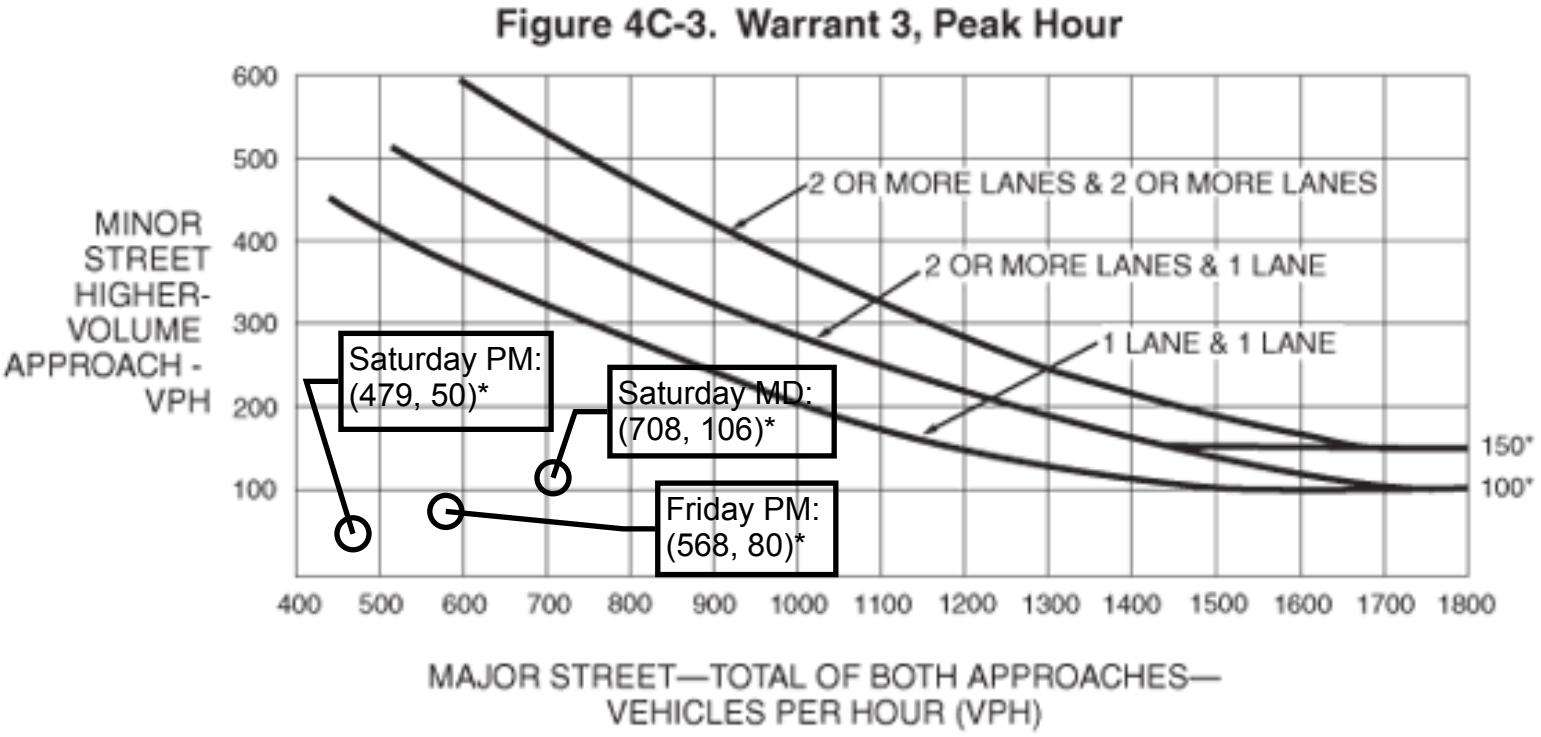



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Signal Warrant Analysis**
**2035 No Project Conditions**

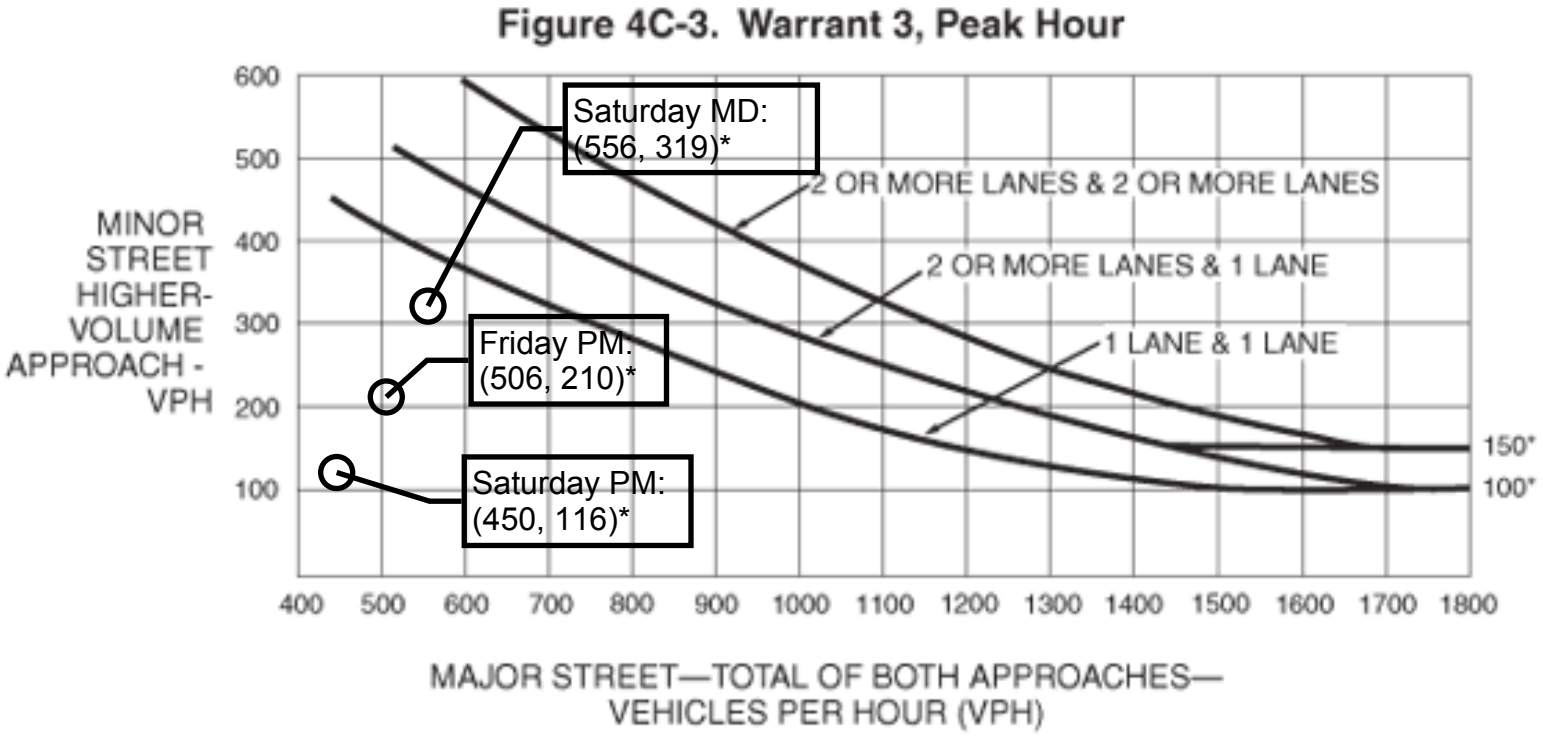
**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 WB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

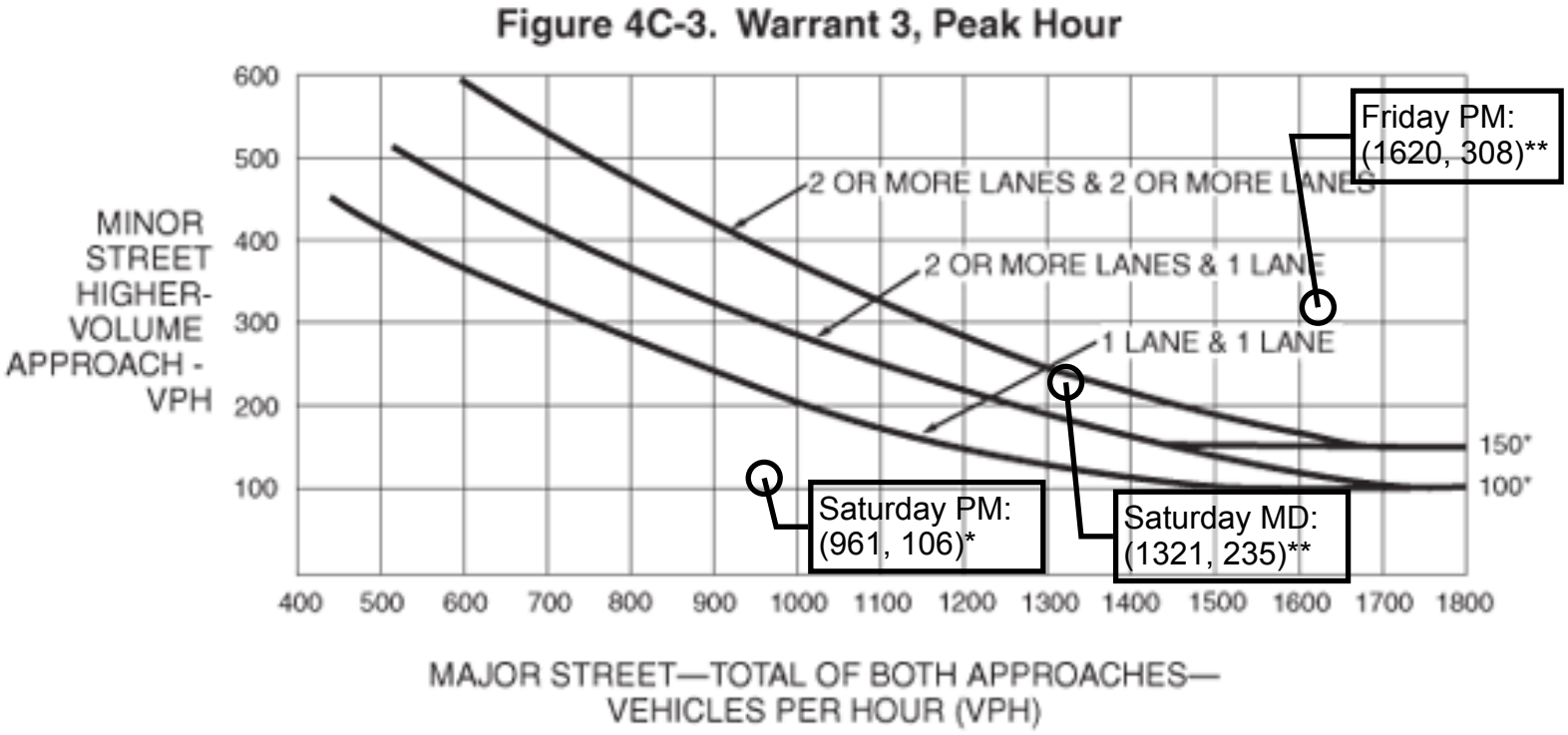
**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 EB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**Curry Street/Tehachapi Boulevard**

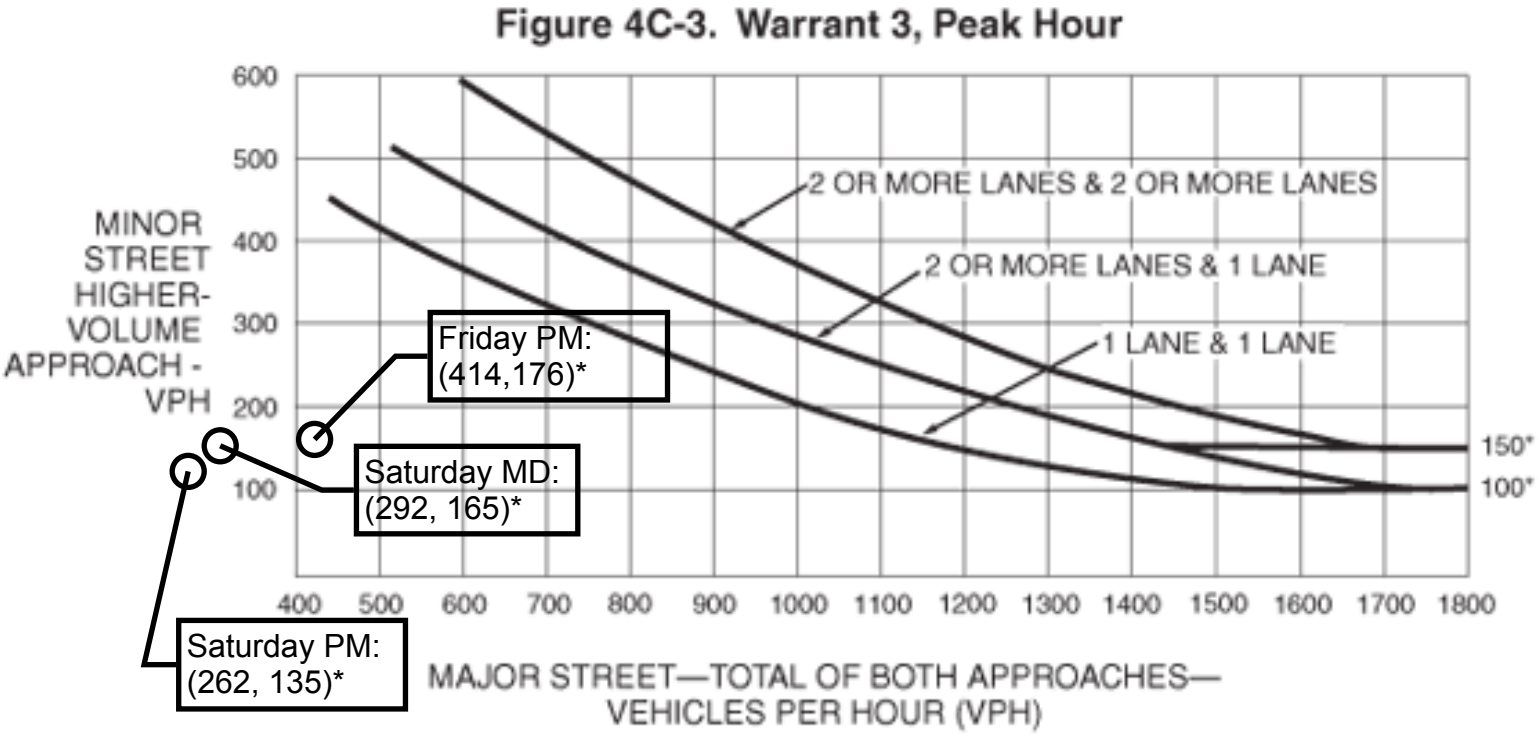



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM and Saturday MD)**

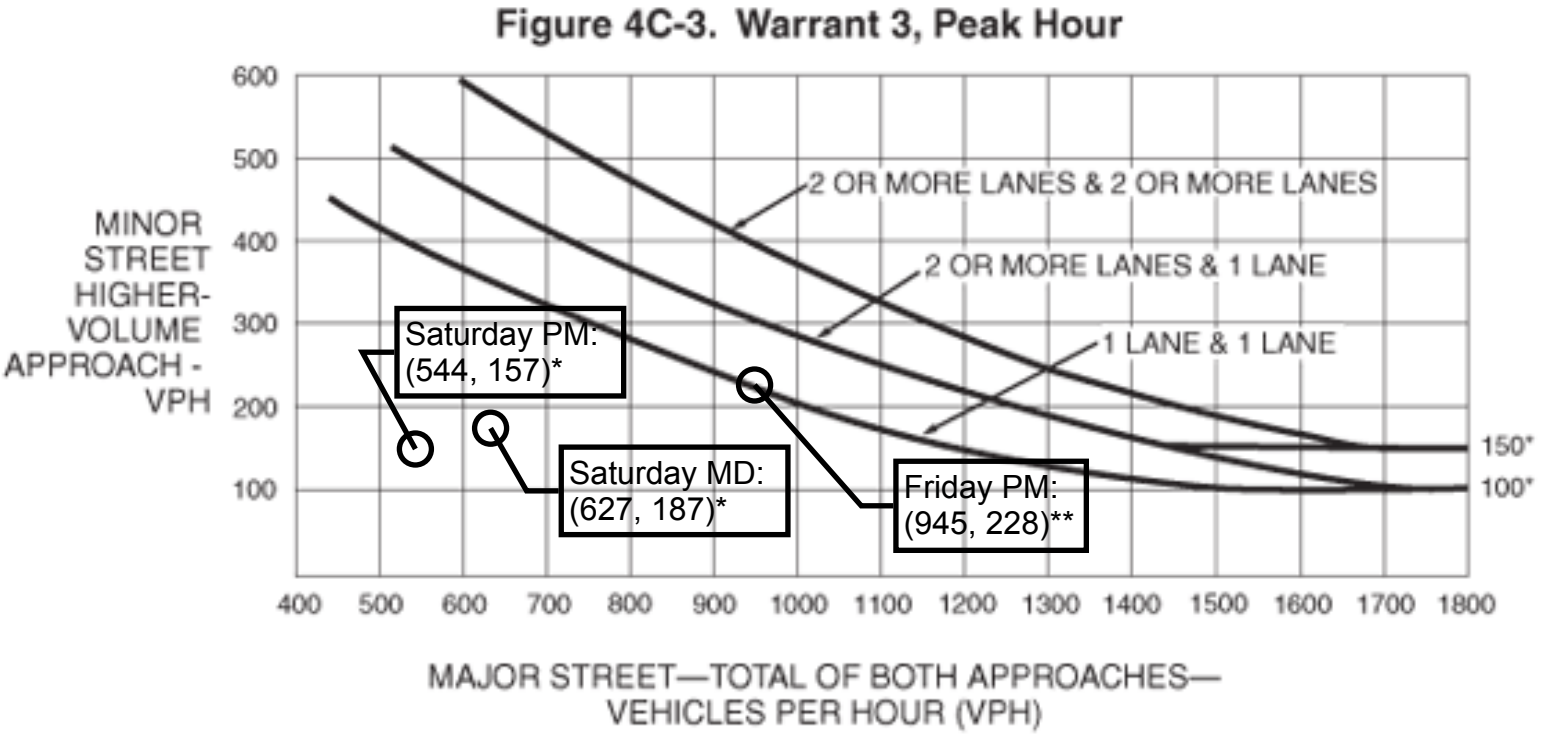
**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**Dennison Road/Valley Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**Dennison Road/Tehachapi Boulevard**

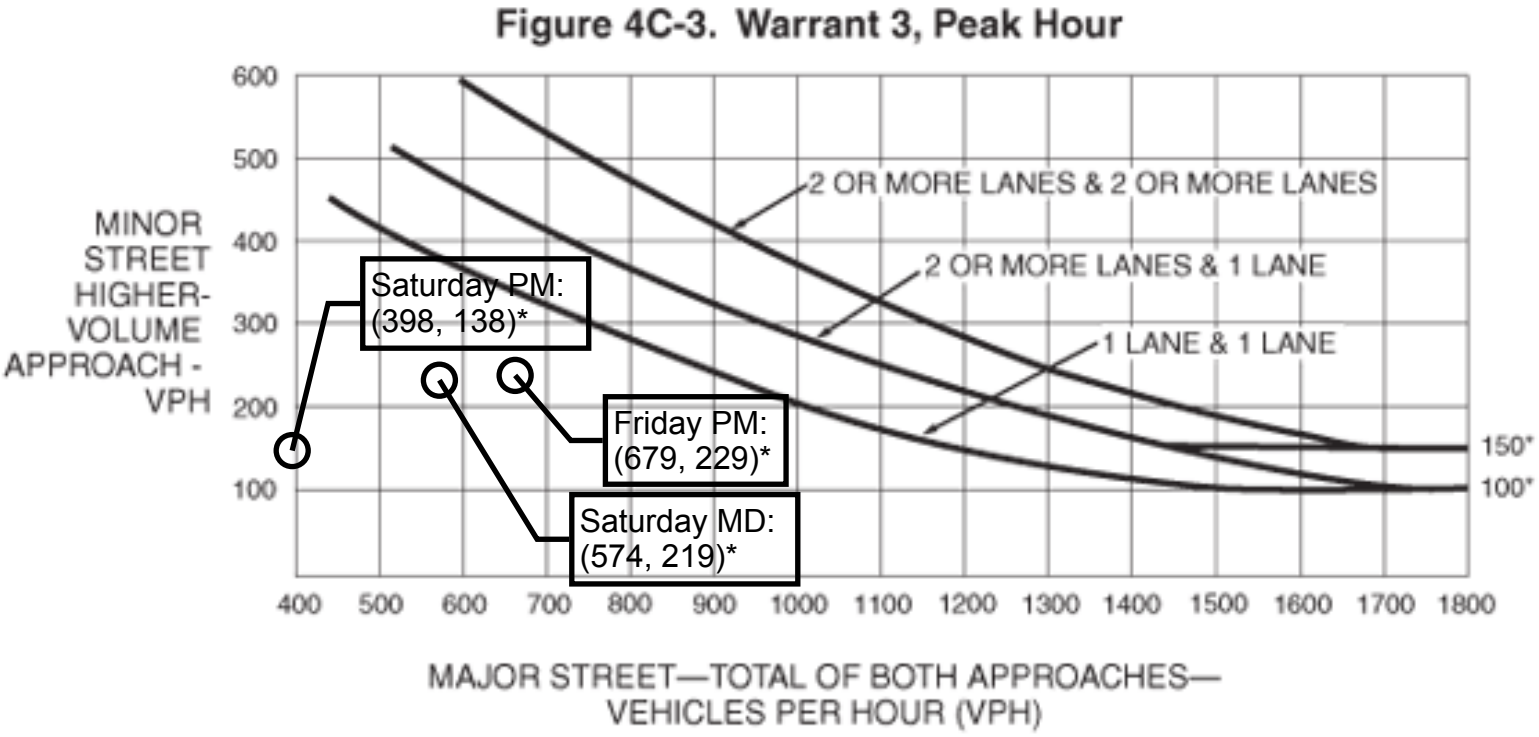



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM)**

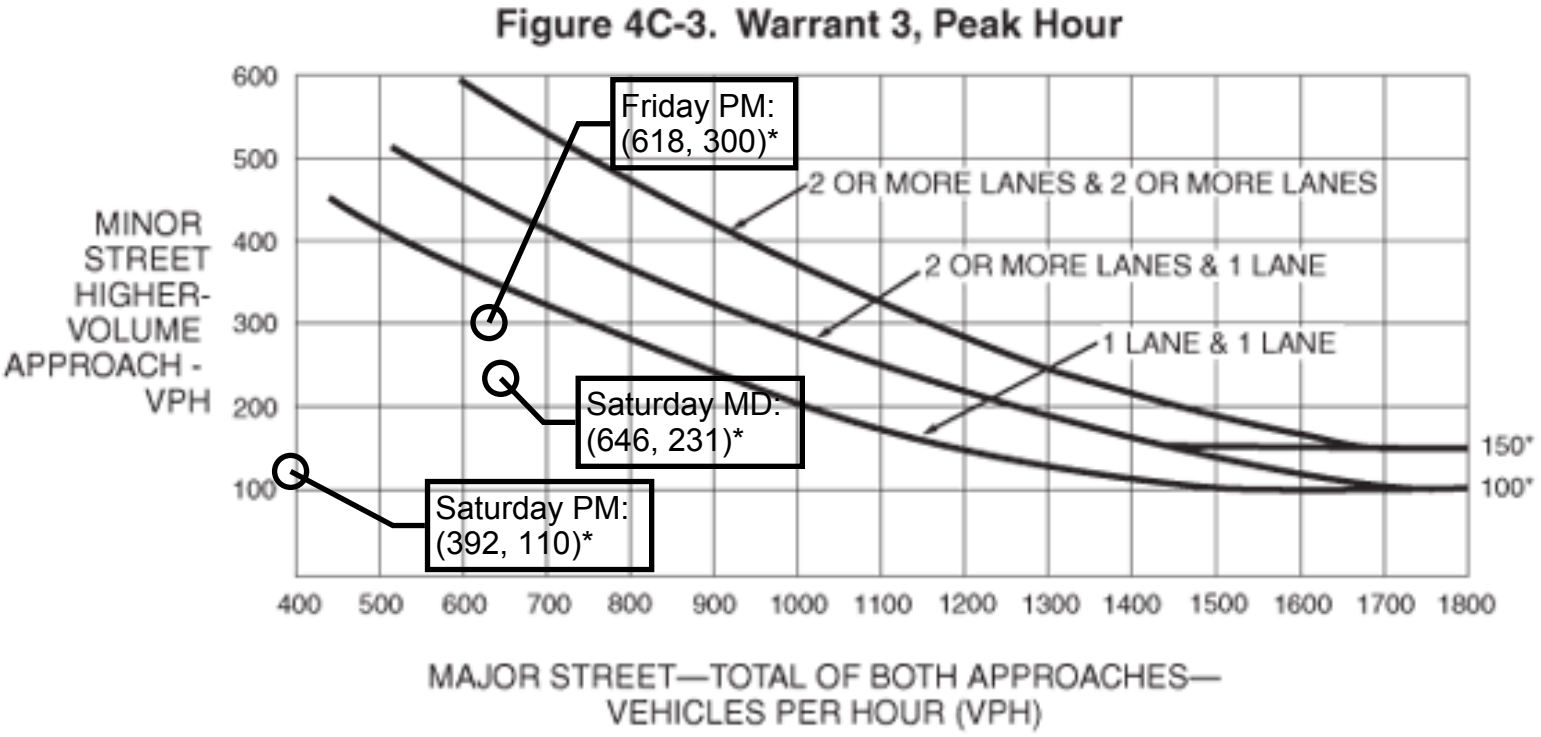
**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**SR-58 EB Ramps/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Horizon Year (2035) No Project**
**Signal Warrant Analysis**
**SR-58 WB Ramps/Tehachapi Boulevard**

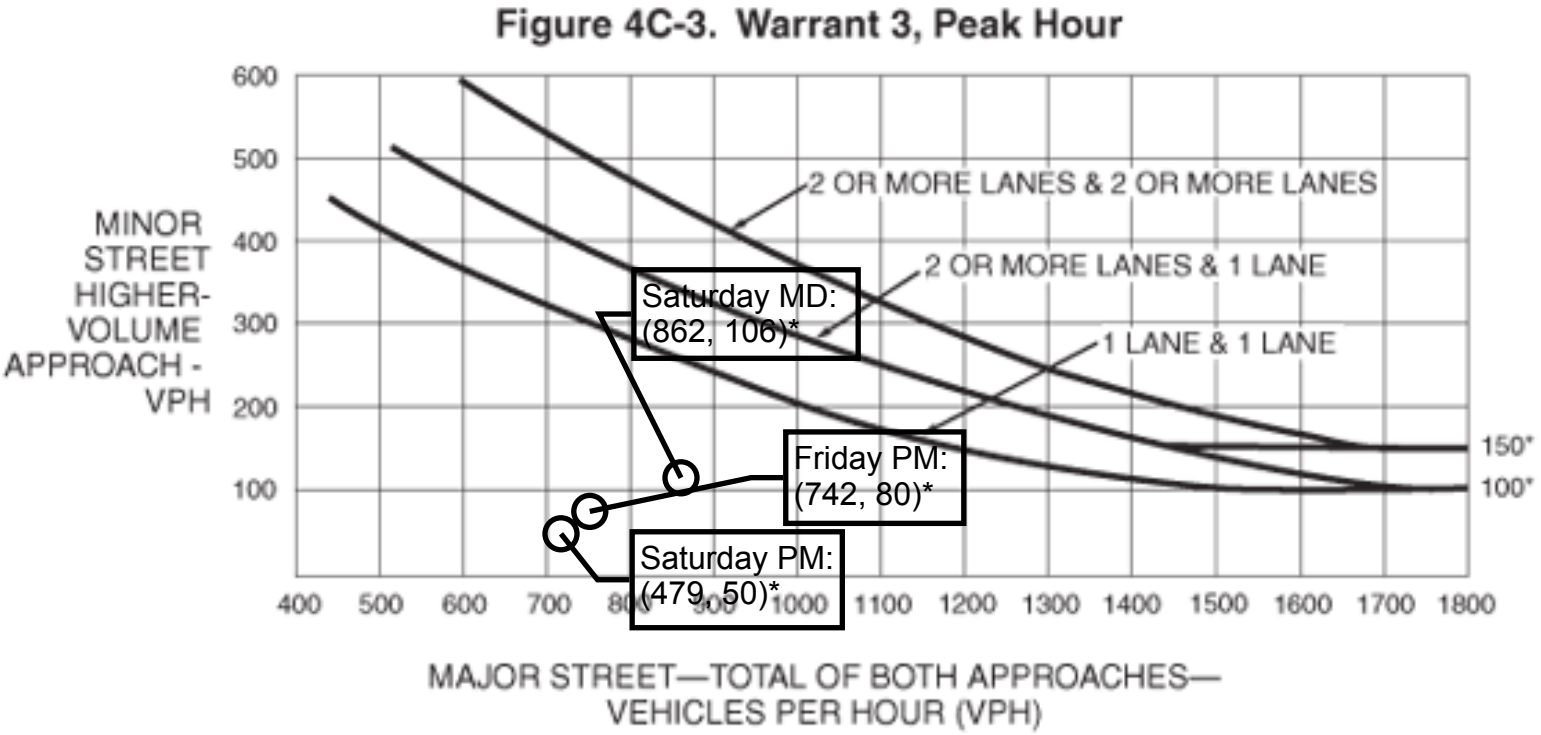



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

# Signal Warrant Analysis
# 2035 With Project Conditions

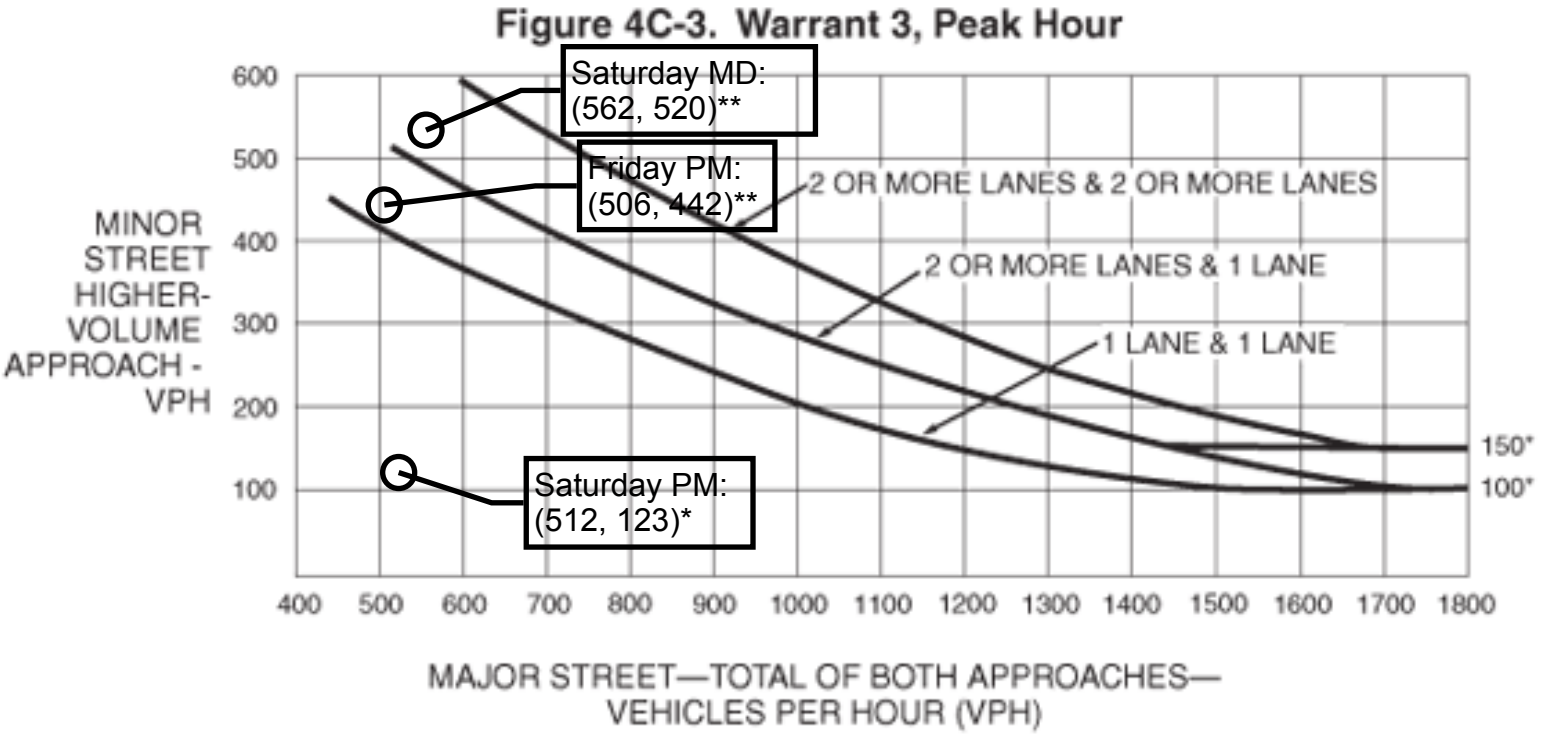
**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 WB Ramps**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**Mill Street/SR 58 EB Ramps**

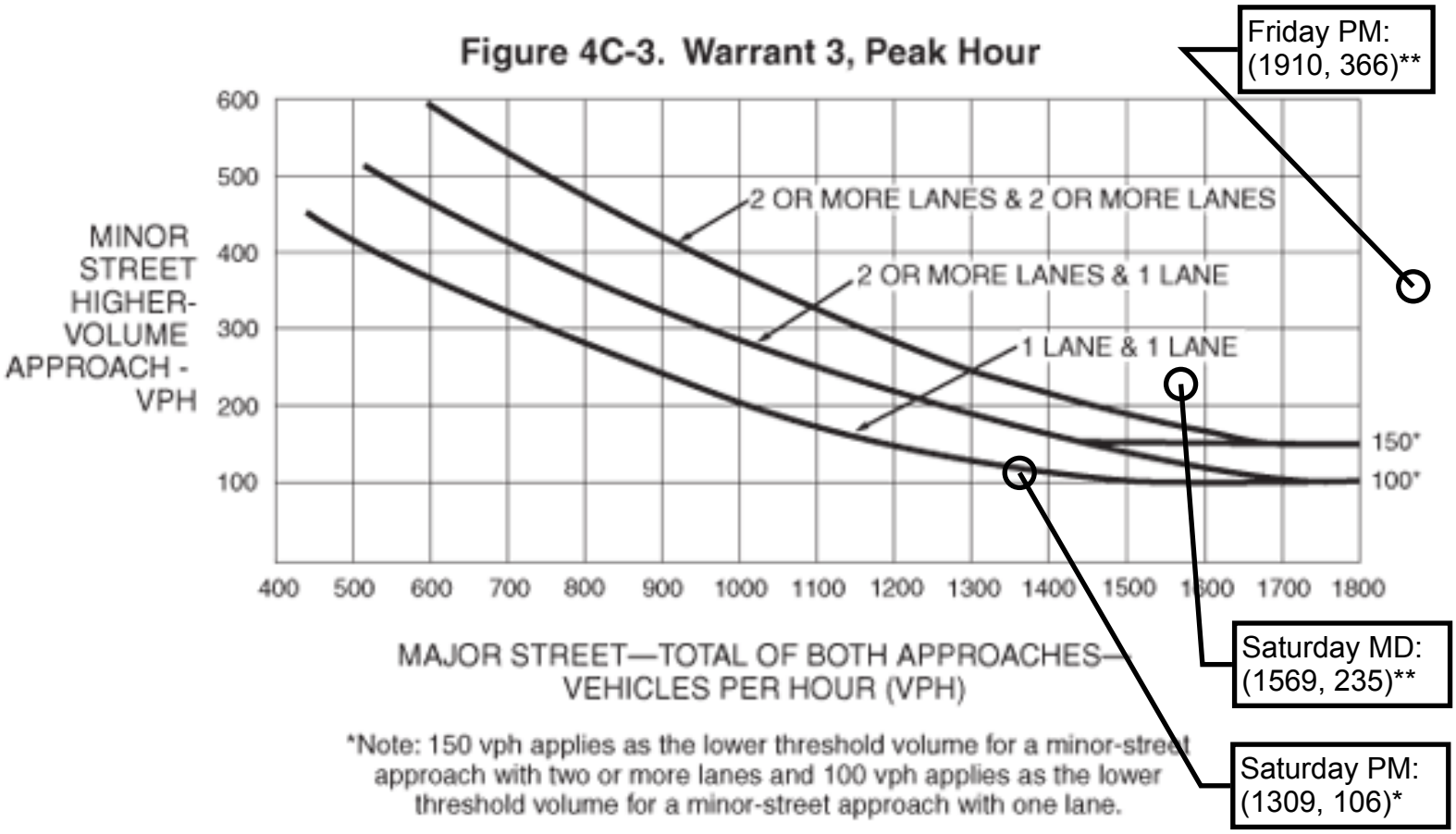



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM and Saturday MD)**

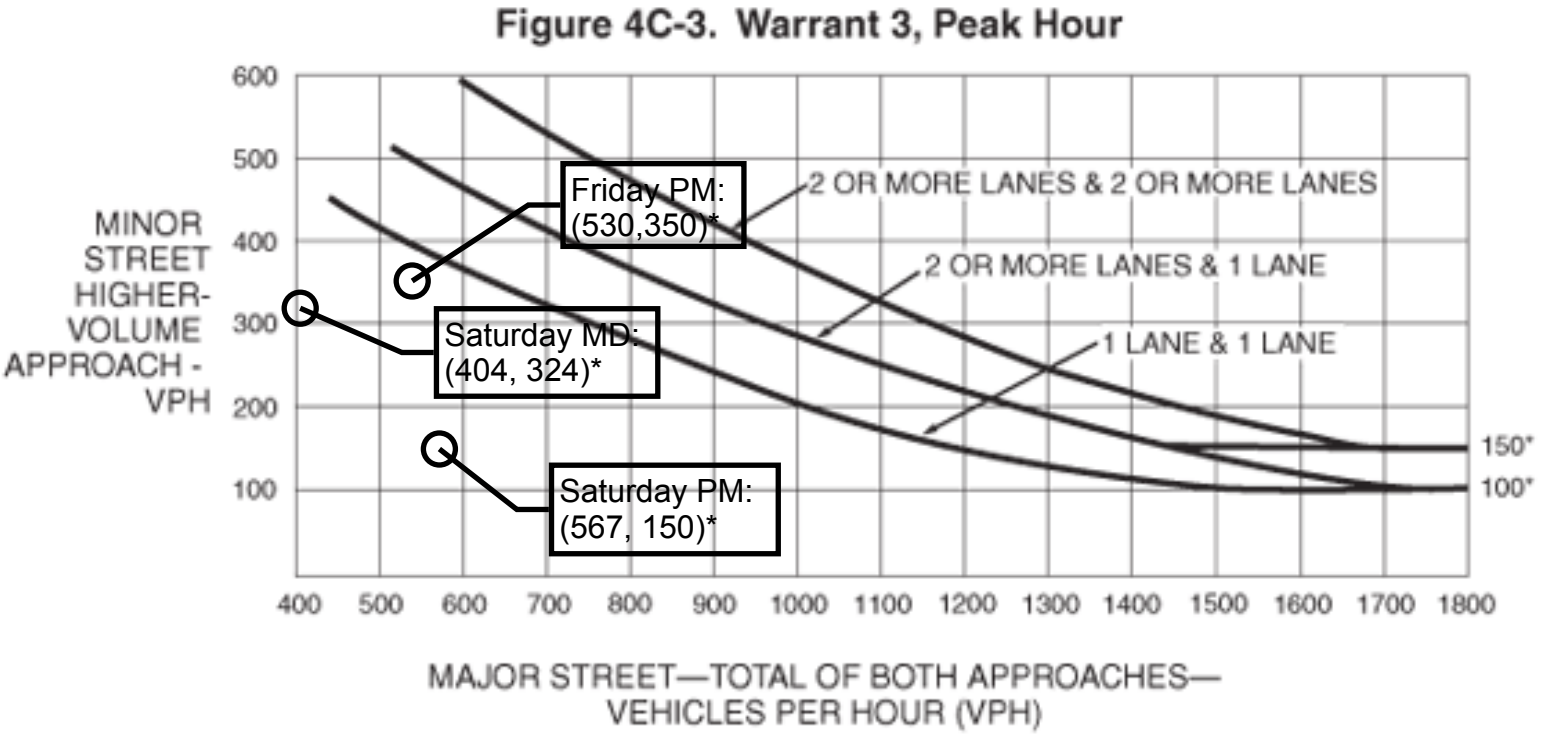
**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**Curry Street/Tehachapi Boulevard**




***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM and Saturday MD)**

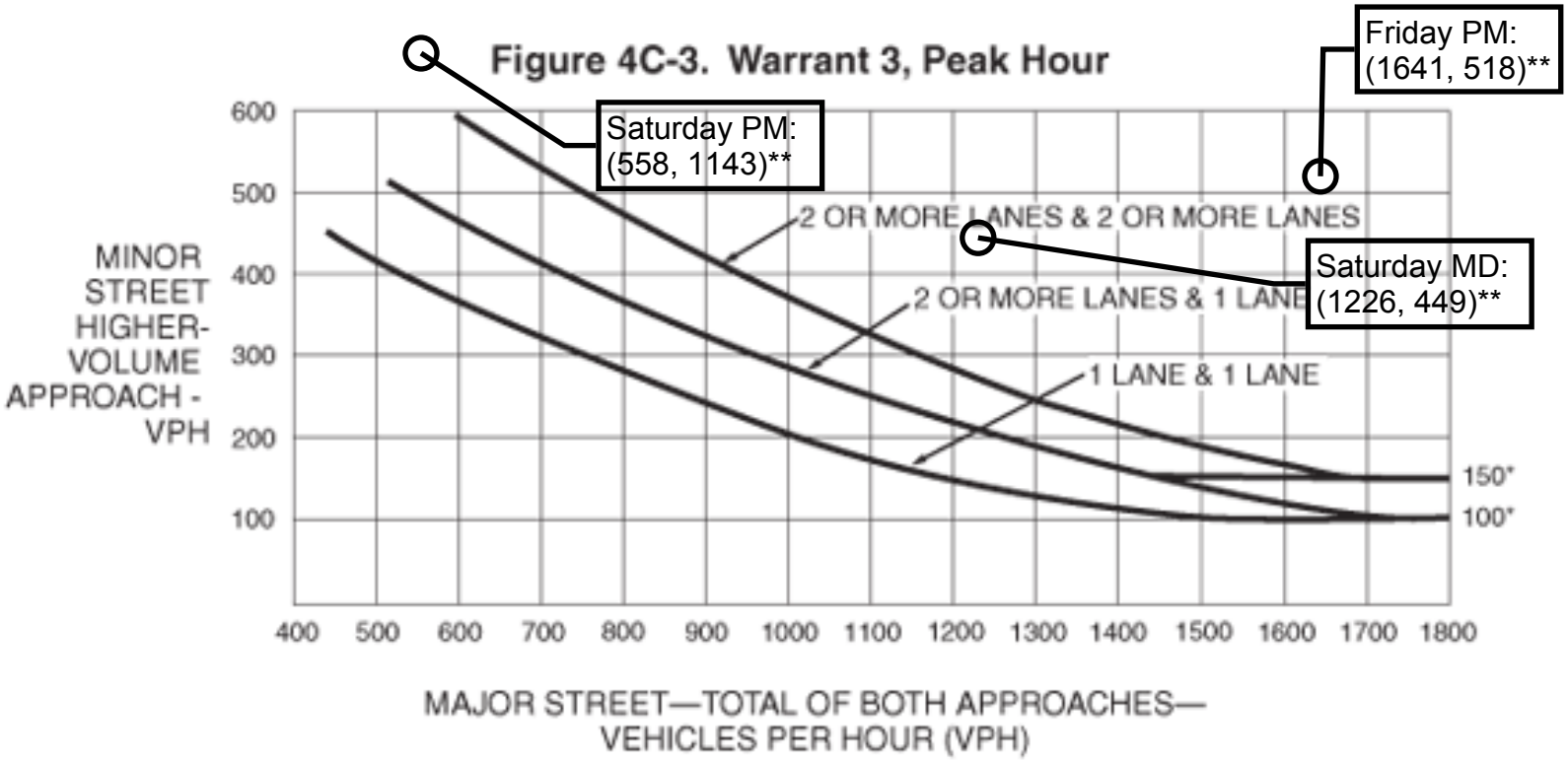
**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**Dennison Road/Valley Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**Dennison Road/Tehachapi Boulevard**

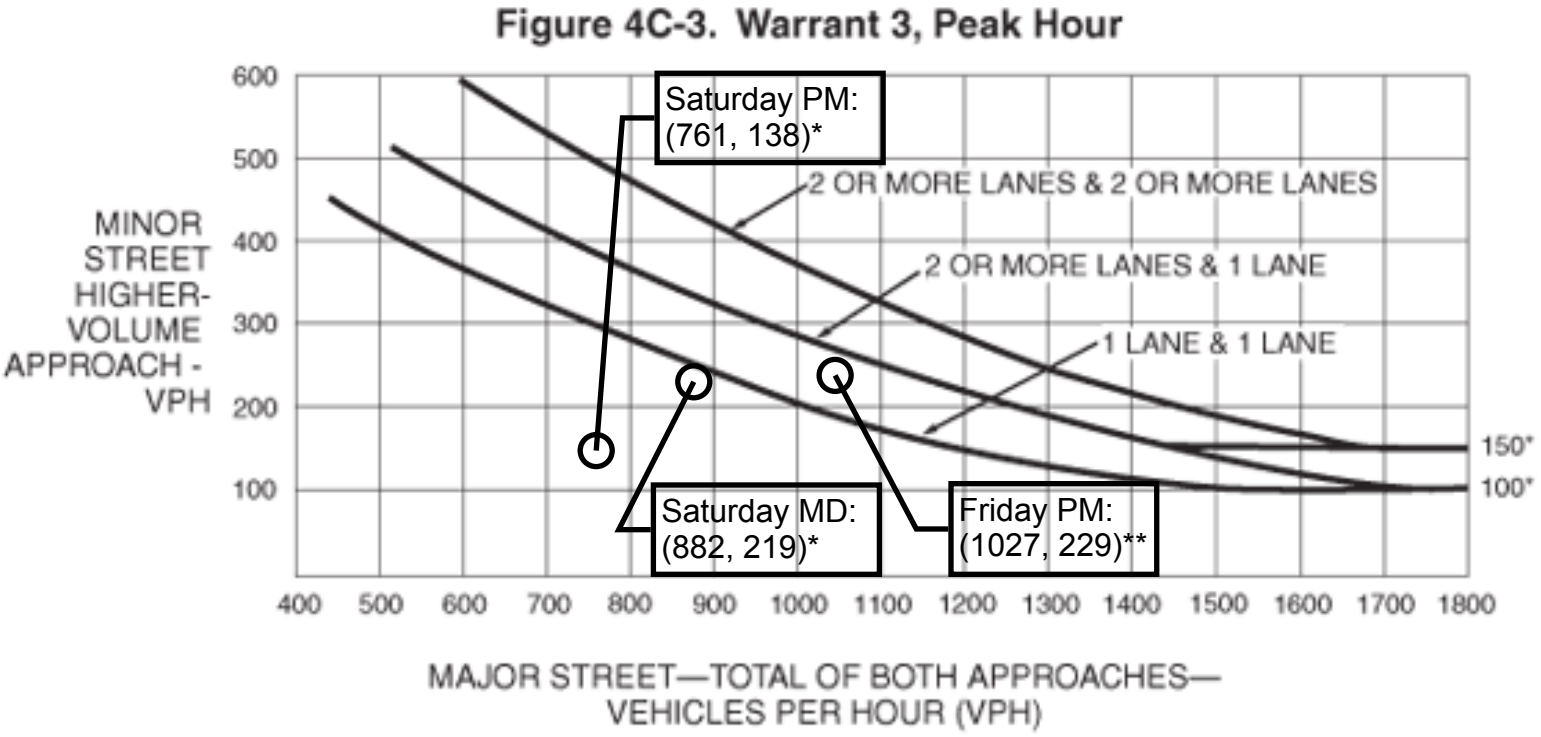



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM, Saturday MD, and Saturday PM)**

**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**SR-58 EB Ramps/Tehachapi Boulevard**

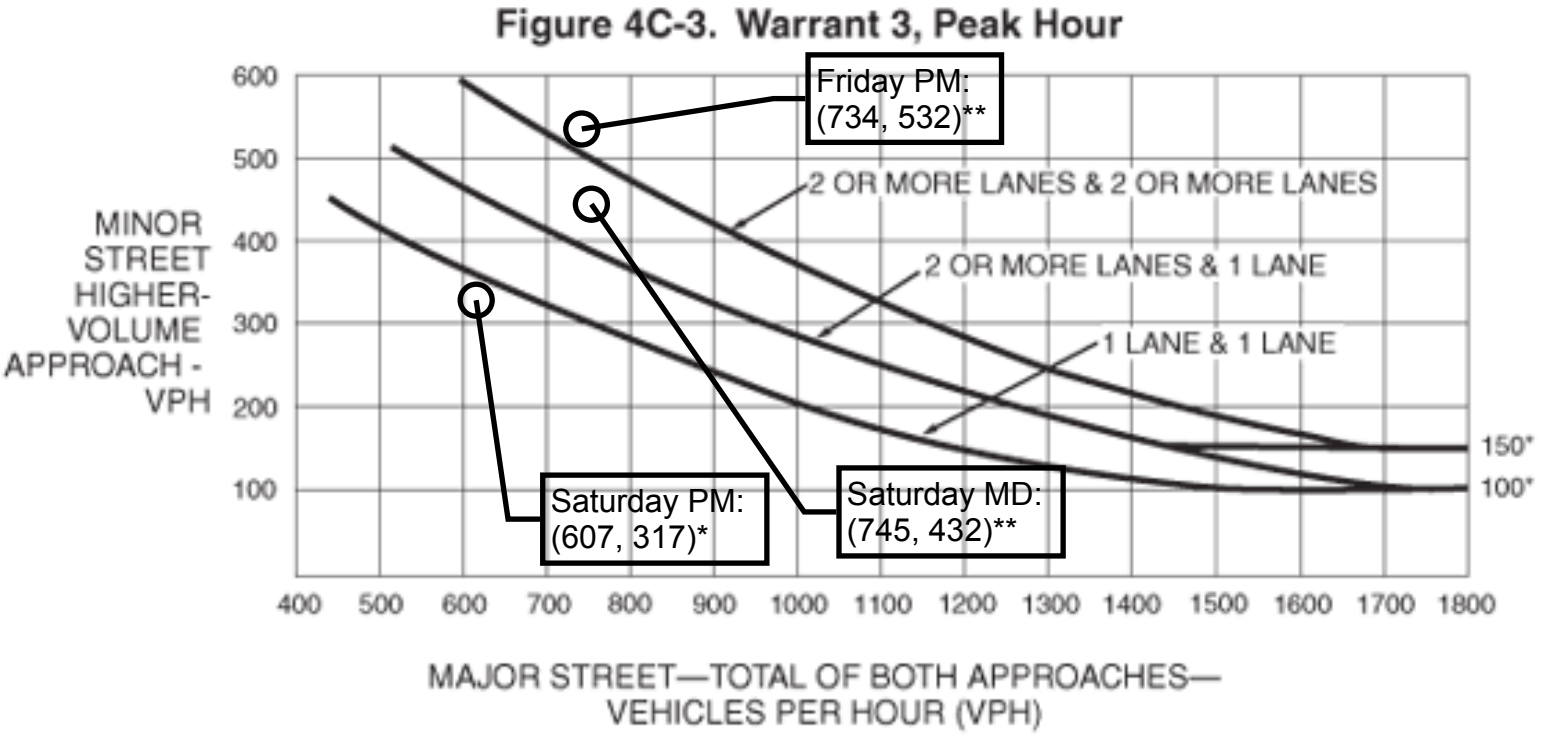



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM)**

**Horizon Year (2035) With Project**
**Signal Warrant Analysis**
**SR-58 WB Ramps/Tehachapi Boulevard**




*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

***Does not meet peak hour signal warrant criteria**

****MEETS peak hour signal warrant criteria (Friday PM and Saturday MD)**

# APPENDIX C

Noise Study

# ENVIRONMENTAL NOISE IMPACT ANALYSIS

FOR THE

# CITY OF TEHACHAPI

# EVENT CENTER & RODEO GROUNDS

Prepared for:

City of Tehachapi
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CADENCE
ENVIRONMENTAL CONSULTANTS

December 2014

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# ENVIRONMENTAL NOISE IMPACT ANALYSIS

FOR THE

# CITY OF TEHACHAPI

# EVENT CENTER & RODEO GROUNDS

## INTRODUCTION

This Environmental Noise Analysis has been prepared to evaluate environmental noise impacts associated with the proposed Event Center & Rodeo Grounds (proposed project) in the City of Tehachapi. The purpose of this analysis is to evaluate the construction-related and operational noise and ground-borne vibration impacts of the project on the surrounding (off-site) areas.

## SUMMARY

Construction activities associated with the proposed project would not conflict with City noise standards. The construction-related noise impacts of the proposed project would be less than significant to the single family homes to the east of the site during the site grading phase.

Construction of the proposed project would not expose persons to or generate excessive ground-borne vibration. The impacts of the proposed project would be less than significant.

Operation of the proposed project would not expose residents within within the vicinity of the project site to noise levels in excess of the standards established in the General Plan. Operation of the proposed project also would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The impact of the proposed project would be less than significant.

Operation of the proposed project would not expose persons to or generate excessive ground-borne vibration. The impacts of the proposed project would be less than significant.

The proposed project would not expose people residing or working in the project area to excessive noise levels within an area covered by an airport land use plan. No impact would occur.

The proposed project would not expose people residing or working in the project area to excessive noise levels in the vicinity of a private airstrip. No impact would occur.

Cumulative construction-related noise impacts would be less than significant.

Cumulative roadway noise impacts along two roadway segments with sensitive receptors would be significant. The contribution of the proposed project to the significant cumulative noise impacts would not be considerable or significant.

## PROJECT DESCRIPTION

The City of Tehachapi is considering improvements to its existing Event Center & Rodeo Grounds that would increase recreational opportunities at the facility. The Event Center & Rodeo Grounds is located at 601 South Dennison Road. Presently, the facility is limited to the existing Rodeo Grounds, which consists primarily of one rodeo arena, a few small buildings, and unimproved parking areas. The facility currently hosts rodeos, junior rodeos, and explorer competitions. Tehachapi Hill is located to the immediate west of the rodeo area and is the most visually prominent feature of the property. The remainder of the property is presently used as wastewater disposal fields.

The proposed Master Plan envisions an expansion of the rodeo grounds along with other new facilities at the property. The existing wastewater disposal fields would be abandoned, which would open up the majority of the property for development opportunities. The expanded rodeo grounds would include a new covered arena, two horse warm up areas, offices, restroom buildings, and dedicated parking areas. The eastern portion of the property would also include a water feature near the main entrance, a banquet hall, and both dedicated and temporary parking areas. The temporary parking areas would occur on multi-use fields. The western portion of the property would be developed with a motocross track along with additional dedicated parking.

The proposed Master Plan is illustrated as Figure 1.

Activities envisioned for the expanded Event Center & Rodeo Grounds would include larger scale rodeos and concerts (up to about 4,000 attendees), and smaller scale event such as motocross races, horse, dog, lama/alpaca, and gem/mineral shows (up to around 400 attendees). The motocross track would not be lighted and would be limited to daytime hours of operation. The motocross track would also be an official Off-Highway Motor Vehicle (OHV) facility and would subject to the Noise Limits Law under SEC. 45. Section 38370(h) of the California Vehicle Code. Activities are proposed to occur on Fridays and Saturdays. At the current time, only the smaller scale events are proposed to occur in the near term (around 2018). Larger scale and rodeos and concerts would occur at a later date in the future.

Access to the Event Center & Rodeo Grounds would continue to be provided from Dennison Road. While the majority of vehicles currently accessing the facility travel along Dennison Road from the south, the City recently completed the Challenger Street Extension Project, which now connects Challenger Drive to Dennison Road north of State Route (SR) 58. A number of vehicles are expected to access the facility from the north along Dennison Road.

FIGURE 1 - PROPOSED MASTER PLAN

## BACKGROUND INFORMATION

### Fundamentals of Sound and Environmental Noise

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources, such as an occasional aircraft or train passing by to virtually continuous noise sources like traffic on a major highway. Table 1 illustrates representative noise levels in the environment.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon people

is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

**TABLE 1 - REPRESENTATIVE ENVIRONMENTAL NOISE LEVELS**

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| | 110 | Rock Band |
| Jet Fly-Over at 100 Feet | 105 | |
| | 100 | |
| Gas Lawnmower at 3 Feet | 95 | |
| | 90 | |
| | 85 | Food Blender at 3 Feet |
| Diesel Truck Traveling at 50 MPH at 50 Feet | 80 | Garbage Disposal at 3 Feet |
| Noisy Urban Area during Daytime | 75 | |
| Gas Lawnmower at 100 Feet | 70 | Vacuum Cleaner at 10 Feet |
| Commercial Area | 65 | Normal Speech at 3 Feet |
| Heavy Traffic at 300 Feet | 60 | |
| | 55 | Large Business Office |
| Quiet Urban Area during Daytime | 50 | Dishwasher in Next Room |
| | 45 | |
| Quiet Urban Area during Nighttime | 40 | Theater, Large Conference Room (background) |
| Quiet Suburban Area during Nighttime | 35 | |
| | 30 | Library |
| Quiet Rural Area during Nighttime | 25 | Bedroom at Night, Concert Hall (background) |
| | 20 | |
| | 15 | Broadcast/Recording Studio |
| | 10 | |
| | 5 | |
| Lowest Threshold of Human Hearing | 0 | Lowest Threshold of Human Hearing |

Source of table data: California Department of Transportation, October 2009.

- $L_{eq}$ – The equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the $L_{eq}$ of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

- $L_{dn}$ – The Day-Night Level is a 24-hour average $L_{eq}$ with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour $L_{eq}$ would result in an $L_{dn}$ value of 66.4 dBA.

- CNEL – The Community Noise Equivalent Level is a 24-hour average $L_{eq}$ with a 4.77 dBA "weighting" added to noise during the evening hours of 7:00 p.m. and 10:00 p.m. and a 10 dBA "weighting" added to noise during the nighttime hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in both the evening and nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour $L_{eq}$ would result in a CNEL value of 66.7 dBA. CNEL and $L_{dn}$ are normally within one decibel of each other and typically may be used interchangeably.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. Environmental noise levels are generally considered low when the $L_{dn}$ is below 60 dBA, moderate in the 60–70 dBA range, and high above 70 dBA. Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

When evaluating changes in community noise levels, a difference of 3 dBA is a barely perceptible increase to most people. A 5 dBA increase is readily noticeable, while a difference of 10 dBA would be perceived as a doubling of loudness.

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and reflecting or shielding, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically "hard" locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically "soft" locations (i.e., the area between the source and receptor is earth or has vegetation, including grass). Noise from stationary or point sources is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer homes and office buildings is generally more than 30 dBA.

## Fundamentals of Environmental Ground-Borne Vibration

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., train operations, motor vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby, creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as ground-borne vibration. Ground-borne vibration is measured as peak particle velocity (PPV) in inches per second. The general human response to different levels of ground-borne vibration

velocity levels is described below in Table 2. Ground-borne vibration levels that could induce potential damage to buildings are identified in Table 3.

**TABLE 2 - HUMAN RESPONSE TO LEVELS OF GROUND-BORNE VIBRATION**

| Human Response | Maximum PPV in Inches per Second | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Barely Perceptible | 0.04 | 0.01 |
| Distinctly Perceptible | 0.25 | 0.04 |
| Strongly Perceptible | 0.9 | 0.1 |
| Severe | 2 | 0.4 |

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source of table data: Jones & Stokes, 2004.

**TABLE 3 - GROUND-BORNE VIBRATION DAMAGE POTENTIAL CRITERIA**

| Structure and Condition | Maximum PPV in Inches per Second | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Extremely Fragile Historic Buildings, Ruins, Ancient Monuments | 0.12 | 0.08 |
| Fragile Buildings | 0.2 | 0.1 |
| Historic and Some Old Buildings | 0.5 | 0.25 |
| Older Residential Structures | 0.5 | 0.3 |
| New Residential Structures | 1 | 0.5 |
| Modern Industrial/Commercial Buildings | 2 | 0.5 |

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source of table data: Jones & Stokes, 2004.

Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration from traffic is rarely perceptible.

## Noise Analysis Methodology

The analysis of the existing and future noise environments presented in this report is based on noise level measurements, noise prediction modeling, and empirical observations.

Noise modeling procedures involved the calculation of existing and future vehicular noise levels along individual roadway segments in the vicinity of the project site. This task was accomplished using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-7-108) and California Department of Transportation (Caltrans) Technical Noise Supplement (TeNS) methodologies. The FHWA Model was used to estimate existing peak traffic hour noise levels along roadway segments in the project vicinity that would be primarily affected by traffic generated by the proposed project. This model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data show that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. Methodologies from the Caltrans TeNS were used to estimate existing and future 24-hour noise levels based on the existing peak-hour noise levels.

Train operations along the Burlington Northern Santa Fe (BNSF)/Union Pacific Railroad (UPRR) lines that traverse Tehachapi are also a source of noise throughout the area. Five of the six modeling locations are located in close proximity to the rail lines that traverse Tehachapi. Existing and future railway noise levels were estimated for the five modeling locations using using the Federal Transit Administration (FTA) Noise Impact Assessment Spreadsheet (version 7/3/2007) and railway operational data provided in the BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project Draft Environmental Impact Report (EIR).[1] The railway noise levels were added to the roadway noise levels to identify composite ambient noise levels for the five applicable measurement locations.

# ENVIRONMENTAL SETTING

## Regulatory Setting

### *Applicable State Standards*

#### California Vehicle Code

Section 38370(h) of the California Vehicle Code identifies noise standards for off-highway motor vehicles operating within California State Parks. The motocross track is proposed to comply with the State standards for OHV operations. This section of the Vehicle Code requires that off-highway motor vehicles,when operating pursuant to Section 38001, shall at all times be equipped with a silencer, or other

[1] California Department of Transportation, 2013.

device, which limits noise emissions. Noise emissions of competition off-highway vehicles manufactured on or after January 1, 1998, shall be limited to not more than 96 dBA, and if manufactured prior to January 1, 1998, to not more than 101 dBA, when measured from a distance of 20 inches using test procedures established by the Society of Automotive Engineers under Standard J-1287, as applicable. Noise emissions of all other off-highway vehicles shall be limited to not more than 96 dBA if manufactured on or after January 1, 1986, and not more than 101 dBA if manufactured prior to January 1, 1986, when measured from a distance of 20 inches using test procedures established by the Society of Automotive Engineers under Standard J-1287, as applicable.

### *Applicable City Standards*

#### Tehachapi General Plan

The City of Tehachapi recently adopted its 2035 General Plan. The City General Plan applies to land within the City limits and land that is outside of the City limits but within its sphere of influence as determined by the Local Agency Formation Commission. The express purpose of the Plan's Noise Element is to "address the needs of people that must be considered in planning the location, type, and density of development relative to noise" in support of the diverse, pedestrian-oriented, small mountain town character of Tehachapi.

The City's General Plan identifies SR-58, SR-202 (Tucker Road), principal through-streets (e.g., Valley Boulevard, Tehachapi Boulevard, Highline Road, and Curry Street), railroad operations, and Tehachapi Municipal Airport as the major sources of noise in Tehachapi. The General Plan Noise Element adopts several policies that are applicable to this analysis:

- CS63: Incorporate noise considerations into planning and development decision-making, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent and nearby land uses.
- CS65: In the City's Noise Ordinance, (1) limit the maximum noise levels during evening hours from commercial/industrial developments to 75 dBA; (2) require placement of fixed equipment such as air conditioning units and condensers, inside or in the walls of new buildings or on rooftops of central units in order to reduce noise impacts on any nearby sensitive receptors; and require control of noise or mitigation measures for any noise-emitting construction equipment or activity.

The Noise Element acknowledges the California Office of Noise Control recommendations for land use compatibility, but does not adopt a noise standard for non-sensitive uses such as office and commercial buildings. The Noise Element also does not adopt any noise standards for construction activities and associated noise levels.

#### Tehachapi Municipal Code

Chapter 8.16 of the Tehachapi Municipal Code addresses sound equipment that is operated within the city limits. This chapter identifies noise standards for "commercial" and "noncommercial" purposes. Under section 8.16.010, a "commercial purpose" is one where the sound equipment is used specifically to

attract attention to a commercial use, including attracting attention for a performance, show, entertainment, exhibition or event. The sound equipment used at the Event Center & Rodeo Grounds would be to inform and entertain patrons at the facility. The use of sound equipment specifically for information and entertainment at a facility is not a commercial purpose under Chapter 8.16.

The sound equipment operating at the Event Center & Rodeo Grounds would be subject to the provisions of Sections 8.16.020, 8.16.030, 8.16.040, and 8.16.050 for a noncommercial use. The following rules and regulations for operation under Section 8.16.050 would be applicable to the proposed project:

A. The only sounds permitted are music or human speech.

B. Operations are permitted only between the hours of nine a.m. and six p.m. of each day.

E. The human speech or music amplified shall not be profane, lewd, indecent or slanderous.

F. The volume of sound shall be controlled so that it will not be audible for a distance in excess of one hundred fifty feet from the vehicle, or the exterior boundaries of the premises upon which the sound equipment is located, and so that the volume is not unreasonably loud, raucous, jarring, disturbing, or a nuisance to persons within the area of audibility.

## Existing Noise Levels

The Event Center & Rodeo Grounds is located along Dennison Road, north of Tehachapi Airport and south of SR-58. Industrial uses are located along Dennison Road east of the entrance and existing rodeo grounds. Residential uses in the Ashe Village are located to the south along Dennison Road. The land to the north of SR-58 is currently undeveloped. Residential and commercial uses are located south of Tehachapi Airport. The primary source of noise at the project site and the immediate vicinity is traffic along Dennison Road, SR-58, Tehachapi Municipal Airport and the BNSF/UPRR lines.

The Event Center & Rodeo Grounds currently hosts rodeos, junior rodeos, and explorer competitions. Sound levels are currently generated on the days when events occur and consist of vehicles traveling to and from the Event Center & Rodeo Grounds, loudspeakers within the rodeo arena, and general human and animal activity.

Existing ambient roadway and railway noise levels were calculated for existing noise-sensitive uses located along the roadways in the vicinity of the project site that would be affected by project-generated traffic. The existing railway noise levels assume a maximum of two trains per hour (based on 35 existing train trips per day - 33 6,000-foot trains and two 8,000 foot trains).2 Each train is assumed to travel at 25 miles per hour through Tehachapi. The 6,000-foot trains are assumed to have four locomotives and 113 rail cars and the 8,000-foot trains are assumed to have five locomotives and 140 rail cars. The calculations also assume that train horns and signaling devices would be used at the at-grade crossings of Dennison Street and Green Street.

[2] California Department of Transportation, 2013.

As discussed previously, activities at the Event Center & Rodeo Grounds are proposed to occur on Fridays and Saturdays. Therefore, the average 24-hour hour noise levels in these areas are presented in Table 4 for Fridays and Saturdays.

**TABLE 4 - EXISTING ROADWAY AND RAILWAY NOISE LEVELS**

| Roadway | Roadway Segment | Land Use | dBA CNEL |
|---|---|---|---|
| **Friday** | | | |
| Dennison Road | north of Tehachapi Blvd. | Residential | 58.7 |
| | south of Tehachapi Blvd. | Residential | 62.9 |
| Tehachapi Boulevard | east of Dennison Rd. | Commercial | 71.1 |
| | west of Dennison Rd. | Commercial | 71.3 |
| Mill Street | north of SR-58 WB Ramps | Commercial (Hotel) | 51.9 |
| | south of SR-58 EB Ramps | Residential | 58.3 |
| **Saturday** | | | |
| Dennison Road | north of Tehachapi Blvd. | Residential | 58.1 |
| | south of Tehachapi Blvd. | Residential | 62.8 |
| Tehachapi Boulevard | east of Dennison Rd. | Commercial | 71.1 |
| | west of Dennison Rd. | Commercial | 71.2 |
| Mill Street | north of SR-58 WB Ramps | Commercial (Hotel) | 49.8 |
| | south of SR-58 EB Ramps | Residential | 57.3 |

Calculation data and results are provided in Appendix A.

The Event Center & Rodeo Grounds and nearby residential areas are located within the planning area for Tehachapi Municipal Airport. Figure 4-74 of the County of Kern Airport Land Use Compatibility Plan (2011) shows that the Event Center & Rodeo Grounds site and nearby residential areas are exposed to noise levels associated with aircraft operations of less than 60 dBA CNEL.

### Existing Ground-Borne Levels

Aside from seismic events, the greatest regular source of ground-borne vibration in the vicinity of the Event Center & Rodeo Grounds is currently roadway truck traffic. Heavy trucks currently transport materials along the roadways in the vicinity of the facility. These trucks typically generate ground-borne vibration velocity levels of around 0.04 PPV, and these levels could reach 0.25 PPV where trucks pass over bumps in the road, although no such roadway dips were observed in the immediate vicinity of the Event Center & Rodeo Grounds.

## THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G to the State CEQA Guidelines, a project could have a potentially significant impact associated with noise if any of the following were to occur:

(a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;

(b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

(d) A substantial temporary or periodic increase in ambient noise levels in the project above levels existing without the project;

(e) Exposure of people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport; or

(f) Exposure of people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

## Construction-Related Impact Thresholds

### *Construction-Related Noise Impact Thresholds*

CEQA Guidelines Appendix G noise thresholds (a) and (d) would apply to the noise impacts generated during project construction activities. However, the State CEQA Guidelines do not define the levels at which temporary or periodic increases in noise levels are considered "substantial."

As discussed previously, the City's General Plan Noise Element does not adopt any noise standards for construction activities and associated noise levels The City has also not adopted any thresholds of significance for construction-related noise impacts. The practice of the City with other recent CEQA analyses has been to require restrictions on the hours of construction activities and the control of construction equipment and operations to minimize the associated noise levels.

When evaluating the potential impacts of a project when thresholds of significance have not been adopted by the lead agency for the project, the analysis may consider thresholds that have been adopted by other agencies. This is particularly relevant when those other agencies have jurisdiction within the local vicinity. In the case of projects near Tehachapi, this includes the County of Kern, the Caltrans, and the FTA. The regulations and policies of Kern County apply to the unincorporated areas surrounding Tehachapi. Caltrans has regulatory authority over the highways that traverse Tehachapi, and the FTA - along with Caltrans - has regulatory authority over the BNFF/UPRR railroad tracks that traverse Tehachapi.

Kern County's Noise Control Ordinance allows construction activities to take place between 6:00 a.m. and 9:00 p.m. Monday through Friday and 8:00 a.m. to 9:00 p.m. on weekends; activities scheduled for other

times would be required to obtain a permit and would be subject to specific requirements from the County.

The opinion of Caltrans is that "construction noise is only substantial in exceptional cases, such as pile driving and crack and seal pavement rehabilitation operations."[3] Section 14-8.02, Noise Control, of Caltrans standard specifications provides information that can be considered in determining whether construction would result in adverse noise impacts. The specification states:[4]

- Do not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer- recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

The FTA also provides Prescriptive Construction Noise Impact Guidelines that establish 90 dBA $L_{eq}$ 1-hour and 80 dBA $L_{eq}$ 8-hour construction noise exposure thresholds for residential and other similarly sensitive uses.[5] The FTA thresholds are used to evaluate construction noise impacts in the the vicinity of Tehachapi associated with the proposed BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project.[6]

Therefore, this analysis assumes that a significant impact would occur if 1-hour construction-related noise levels would exceed 90 dBA $L_{eq}$ or if 8-hour construction-related noise levels would exceed 80 dBA $L_{eq}$ at any off-site noise-sensitive location.

### *Construction-Related Ground-borne Vibration Impact Thresholds*

The State CEQA Guidelines do not define the levels at which ground-borne vibration or ground-borne noise are considered "excessive." In addition, the City of Tehachapi has not adopted any thresholds for ground-borne vibration impacts. However, Caltrans has adopted the vibration standards identified previously in Tables 2 and 3 to evaluate potential impacts related to construction activities. This analysis utilizes the Caltrans thresholds to evaluate the construction-related impacts of the proposed project. Therefore, this analysis assumes that a significant impact would occur if the nearby residential buildings are exposed to vibration levels of 0.3 inches per second PPV. The potential for nearby residents to be annoyed by ground-borne vibration would be significant if vibration levels reach 0.10 inches per second PPV.

[3] California Department of Transportation 2012.

[4] California Department of Transportation 2011.

[5] Harris Miller Miller & Hanson Inc., 2006.

[6] California Department of Transportation 2013.

## Operational Impact Thresholds

### *Operational Noise Impact Thresholds*

CEQA Guidelines Appendix G noise thresholds (a) and (c) would apply to the operational noise impacts generated associated with the proposed project. Threshold (a) objectively compares the project's impact with standards set by the local general plan or noise ordinance. Threshold (c) effectively asks whether the increase in ambient noise levels attributable to the project is substantial even if government standards are not exceeded. If noise does not exceed government standards, the CEQA Guidelines do not define the levels at which a permanent increase in ambient noise is considered "substantial." The determination of what quantum of noise is substantial is entrusted to the lead agency's discretion.

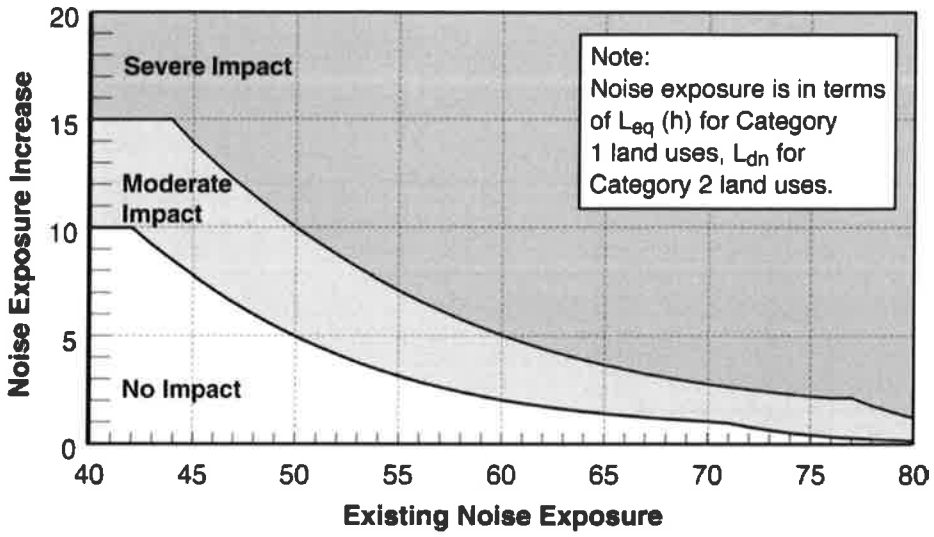
For residential and other noise-sensitive uses, the standard within the City limits is 65 dBA CNEL.

With regard to a permanent increase in noise levels, the City has not adopted any thresholds of significance for operational noise impacts. As with the construction-related thresholds of significance discussed above, the analysis may consider thresholds that have been adopted by other agencies.

Under CEQA Guidelines Appendix G threshold (c), if the total ambient noise, with the project included, is less than the applicable standard, or if baseline noise is already above the standard, the FTA's Transit Noise and Vibration Impact Assessment manual is a useful aid in determining how much incremental noise is substantial, or how much noise is excessive, for noise-sensitive uses.[7] For rail and bus facilities, including such stationary traffic magnets as passenger stations and terminals, the FTA developed a threshold of significance that incorporates both absolute and relative criteria that consider annoyance due to the change in the noise environment caused by the project. The FTA's threshold uses the $L_{dn}$ value for noise-sensitive uses like the ones in the study are - residences and buildings where people normally sleep - which it refers to as Land Use Category 2. Figure 2 is drawn from the FTA manual, and sets forth the FTA's thresholds of significance. As discussed previously, $L_{dn}$ and CNEL both address land uses where nighttime sensitivity is a factor and the difference between the two is so slight that they are comparable to each other. As such, the FTA's thresholds are also usable for this analysis as CNEL.

[7] Harris Miller Miller & Hanson Inc., 2006.

FIGURE 2 - FTA INCREASE IN CUMULATIVE NOISE CRITERIA




The complex shapes of the curves are based on documented criteria and research into human response to community noise. The horizontal axis in Figure 2 is the baseline noise exposure, while the vertical axis is the incremental increase in ambient noise caused by the project. Within the "No Impact" area of Figure 2, the impact caused by a project is not significant. As the existing level of baseline noise increases from left to right on the horizontal axis, the total allowable increase in ambient noise becomes progressively smaller until it effectively reaches zero. At approximately 80 dBA, any increase in noise is significant.

The City of Tehachapi, as the lead agency, has determined that a sliding scale similar to the FTA threshold is appropriate for assessing the operational noise impact of the proposed project on noise-sensitive uses. Therefore, this analysis assumes that an increase in noise levels would be substantial and significant if any of the following thresholds are met at noise-sensitive locations:

- An increase of 3 or more dBA if the baseline (existing) exterior noise level is 56 dBA or more.
- An increase of 2 or more dBA if the baseline (existing) exterior noise level is 60 dBA or more.
- An increase of 1.5 or more dBA if the baseline (existing) exterior noise level is 65 dBA or more.
- An increase of 1 or more dBA if the baseline (existing) exterior noise level is 72 dBA or more.
- An increase of 0.5 or more dBA if the baseline (existing) exterior noise level is 75 dBA or more.
- Above 80 dBA, any increase in the baseline noise exposure is considered to be substantial and significant.

The FTA thresholds are used to evaluate operational noise impacts in the the vicinity of Tehachapi associated with the proposed BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project.[8] These thresholds were also used recently by the City of Tehachapi to evaluate the operational noise impacts associated with the Tehachapi Walmart project.[9]

As discussed previously, the City focuses its noise control efforts on sensitive uses such as residential areas, schools, convalescent and acute care hospitals, parks, recreational areas, and churches. Both of these agencies do not consider uses such as offices and commercial buildings to be sensitive to community noise levels. Most commercial areas, such as those in the vicinity of the proposed project site, rely on traffic to bring customers and visibility from the roadways so that drivers can be aware of the commercial offerings. Therefore, the thresholds of significance identified above, only apply to sensitive receptors in the City and any potential increase in roadway noise levels at commercial uses is not considered to be significant.

### *Operational Ground-borne Vibration Impact Thresholds*

The State CEQA Guidelines do not define the levels at which ground-borne vibration or ground-borne noise are considered "excessive." In addition, the City of Tehachapi has not adopted any thresholds for ground-borne vibration impacts. Instead, this analysis utilizes the Caltrans thresholds to evaluate the operational impacts of the proposed project. Therefore, this analysis assumes that a significant impact would occur if the nearby residential buildings are exposed to vibration levels of 0.3 inches per second PPV. The potential for nearby residents to be annoyed by ground-borne vibration would be significant if vibration levels reach 0.10 inches per second PPV.

## PROJECT IMPACTS AND MITIGATION MEASURES

### Construction-Related Noise Impacts

**Threshold**: Would the proposed project expose persons to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies.

**Threshold**: Would the proposed project generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

**Impact**: Construction activities associated with the proposed project would not conflict with City noise standards. The construction-related noise impacts of the proposed project would be less than significant to the single family homes to the east of the site during the site grading phase.

[8] California Department of Transportation 2013.

[9] EcoTierra Consulting, 2013.

### *Impact Analysis*

Construction activities associated with the proposed project would require the use of heavy equipment for site grading and building construction. Noise from smaller power tools, generators, and other sources of noise would also be associated with construction of the proposed project. During each stage of development, there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of the activity. However, the construction activities are proposed to only occur during the daytime between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday. In general, construction activities usually end by 4:00 or 5:00 p.m. Construction activities would not occur on Sundays or Federal holidays.

The nearest residential uses that would be exposed to construction noise levels from the project site are the residences to the east of the project site along Dennison Road. The loudest and closest construction activities to these homes would be grading activities for the multi-use/temporary parking fields in the southeastern corner of the site. The maximum daytime noise levels that would be expected to occur as a result of grading activities have been calculated for be approximately 70 dBA $L_{eq}$ for these residential receptor locations. Noise levels at these receptors would be lower when construction activities occur elsewhere within the site further from the site perimeter. The 70 dBA $L_{eq}$ noise level would not exceed the 1-hour 90 dBA $L_{eq}$ and 8-hour 80 dBA $L_{eq}$ threshold of significance. Therefore, the construction-related noise impacts of the proposed project would be less than significant.

## Construction-Related Ground-borne Vibration Impacts

**Threshold**: Would the proposed project expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

**Impact**: Construction of the proposed project would not expose persons to or generate excessive ground-borne vibration. The impacts of the proposed project would be less than significant.

### *Impact Analysis*

Construction activities that would occur at the project site have the potential to generate low levels of ground-borne vibration. The nearest existing uses that could be exposed to ground-borne vibration from construction at the project site are the residences to the east of the project site along Dennison Road. These homes are located at least 170 feet from the edge of the nearest grading area.

Table 5 identifies various vibration velocity levels for the types of construction equipment that would operate at the project site during construction. Based on the information presented in Table 5, vibration levels could reach as high as approximately 0.011 inches per second PPV within 100 feet of an operating large bulldozer. The maximum vibration level of 0.011 inches per second PPV would be below the thresholds of significance for both potential building damage and human annoyance. Therefore, the potential impacts associated with construction vibration would be less than significant.

**TABLE 5 - VIBRATION LEVELS FOR TYPICAL CONSTRUCTION EQUIPMENT**

| Equipment | Approximate PPV (inches per second) | | | | |
|---|---|---|---|---|---|
| | 25 Feet | 50 Feet | 60 Feet | 75 Feet | 100 Feet |
| Large Bulldozer | 0.089 | 0.031 | 0.024 | 0.017 | 0.011 |
| Loaded Trucks | 0.076 | 0.027 | 0.020 | 0.015 | 0.010 |
| Jackhammer | 0.035 | 0.012 | 0.009 | 0.007 | 0.004 |
| Small Bulldozer | 0.003 | 0.001 | 0.001 | 0.001 | 0.000 |

Sources of table data: Jones & Stokes, 2004 and Cadence Environmental Consultants.

## Operational Noise Impacts

**Threshold**: Would the proposed project expose persons to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies.

**Threshold**: Would the proposed project generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

**Impact**: Operation of the proposed project would not expose residents within within the vicinity of the project site to noise levels in excess of the standards established in the General Plan. Operation of the proposed project also would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The impact of the proposed project would be less than significant.

### *Impact Analysis*

#### Roadway Noise Impacts

Locations in the vicinity of the project site would experience a slight increase in noise resulting from the additional traffic generated by the proposed project and the increased activity at the project site. The changes in existing noise levels along the study-area roadway segments in the project vicinity are identified in Table 6 for standard events Fridays and Saturdays, and Table 7 for large events on Fridays and Saturdays.

As shown in Table 6, the increase in traffic noise associated with the proposed project under a standard event would not cause total exterior noise levels to exceed the 65 dBA CNEL standard at the residential uses along the Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps. Although the hotel along Mill Street north of the SR-58 ramps is a commercial use, the project under a standard event would not cause cause total exterior noise levels to exceed the 65 dBA CNEL standard for sensitive uses where people sleep. The maximum increase at any residential or sensitive location under a standard event would be 0.3 dBA CNEL, which would be below the applicable substantial threshold criteria. The land uses along Tehachapi Boulevard east and west of Dennison Road are commercial and the project would not cause a measurable increase in noise levels along these

roadway segments under a standard event. Therefore, the impact of the proposed project on these locations would be less than significant under a standard event.

**TABLE 6 - PROJECT ROADWAY NOISE IMPACTS - STANDARD EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 58.9 | 0.2 | No | No |
| | south of Tehachapi Bl. | 62.9 | 63.0 | 0.1 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.2 | 0.0 | No | No |
| | east of Dennison Rd. | 71.3 | 71.3 | 0.0 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 52.2 | 0.2 | No | No |
| | south of SR-58 Ramps | 58.3 | 58.3 | 0.0 | No | No |
| **Saturday** | | | | | | |
| Dennison Road | north of Tehachapi | 58.1 | 58.3 | 0.2 | No | No |
| | south of Tehachapi | 62.8 | 62.8 | 0.0 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.1 | 0.0 | No | No |
| | east of Dennison Rd. | 71.2 | 71.2 | 0.0 | No | No |
| Mill Street | north of SR-58 | 49.8 | 50.1 | 0.3 | No | No |
| | south of SR-58 | 57.3 | 57.3 | 0.0 | No | No |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A.

As shown in Table 7, the increase in traffic noise associated with the proposed project under a large event would not cause total exterior noise levels to exceed the 65 dBA CNEL standard for residential uses and sensitive uses where people sleep at the residential uses along Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps, or the the hotel along Mill Street north of the SR-58 ramps. The maximum increase at any residential or sensitive location under a large event would be 1.8 dBA CNEL, which would be below the applicable substantial threshold criteria. A large event would only cause an increase of 0.1 dBA CNEL at the commercial uses along Tehachapi Boulevard. Therefore, the impact of the proposed project on these locations would be less than significant under a large event.

**TABLE 7 - PROJECT ROADWAY NOISE IMPACTS - LARGE EVENT**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | Existing + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 59.6 | 0.9 | No | No |
| | south of Tehachapi Bl. | 62.9 | 63.3 | 0.3 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.2 | 0.0 | No | No |
| | east of Dennison Rd. | 71.3 | 71.3 | 0.1 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 53.3 | 1.3 | No | No |
| | south of SR-58 Ramps | 58.3 | 58.5 | 0.2 | No | No |
| **Saturday** | | | | | | |
| Dennison Road | north of Tehachapi | 58.1 | 59.2 | 1.0 | No | No |
| | south of Tehachapi | 62.8 | 63.1 | 0.3 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 71.1 | 0.0 | No | No |
| | east of Dennison Rd. | 71.2 | 71.2 | 0.0 | No | No |
| Mill Street | north of SR-58 | 49.8 | 51.6 | 1.8 | No | No |
| | south of SR-58 | 57.3 | 57.5 | 0.3 | No | No |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A.

**On-Site Noise Source Impacts**

The two primary sources of noise generated within the Event Center & Rodeo Grounds facility would be motorcycles operating at the motocross track and loudspeakers for events and concerts at the rodeo arena. As discussed previously, sound levels are currently generated by loudspeakers within the rodeo arena on the days when events occur at the Event Center & Rodeo Grounds. Therefore, the proposed project would result in no change associated with this source.

Motorcycles represent the most consistent source of noise that would occur within the project site since the motocross track may be open on many Fridays and Saturdays. In order to estimate the sound levels that could be generated at the motocross track and affect nearby residents, sound levels were measured measured at an existing motocross facility that is similar to the one proposed for the Event Center & Rodeo Grounds. The facility selected for this analysis was the AV Motoplex in the City of Lancaster. Sound levels were measured on Saturday, November 14, 2014 using a Larson•Davis Model 820 sound level meter, which meets and exceeds the minimum industry performance requirements for "Type 1" standard instruments as defined in the American National Standards Institute (ANSI) S1.4. The sound level meter was programmed to measure using the "A" weighting scale and the "fast" detector response as recommended by Caltrans. The sound level meter was calibrated immediately prior to the first

measurement to a sound level of 114 dB with a Larson•Davis Precision Acoustic Calibrator Model CAL200. Two 20-minute measurements were conducted and the number of motorcycle pass-bys were counted during each measurement. The first measurement included 99 pass-bye and the second measurement included 67 pass-bys. Both measurement averaged approximately 69.0 dBA $L_{eq}$ at a measurement of approximately 100 feet north of the motocross track.

The nearest homes to the proposed motocross track are located at the northern end of Mojave Road to the immediate south of Tehachapi Municipal Airport. Very little roadway traffic occurs on this roadway segment, but this area is exposed to noise levels from the airport, other nearby roadways, and the BNSF/ UPRR lines. Daytime noise levels measured at this location over a 20-minute period on Saturday, November 14, 2014 averaged approximately 55 dBA $L_{eq}$. The homes at this location are located at least 1,020 feet from the edge of the proposed motocross track. The sound levels measured at 100 feet from the AV Motoplex track would average approximately 49 dBA $L_{eq}$ at these homes. These sound levels are lower than the daytime noise levels measured at this location and would result in less than a 1.0 dBA increase in daytime noise levels. The motocross track would not operate at night, so the increase in noise levels would only occur during daytime hours. Therefore, the proposed project would not cause a substantial increase in noise levels at the homes nearest the motocross track.

The existing homes located along Dennison Road are located at least 2,540 feet from the edge of the proposed motocross track. Parts of the track would also be shielded from these homes by the tower hill that is in the approximately center of the site. Even without any reduction in noise levels from the tower hill, the sound levels measured at 100 feet from the AV Motoplex track would average approximately 41 dBA $L_{eq}$ at these homes. This is well below the the daytime noise levels at homes and would result in less than a 1.0 dBA increase in daytime noise levels. Therefore, the proposed project would not cause a substantial increase in noise levels at the homes along Dennison Road.

Sound levels would also be generated during concert events at the rodeo arena. The potential noise levels are unknown and would be dependent on the type of music being performed, the type of sound equipment, the placement of the sound equipment, and the sound levels controlled by the audio technician. Each performing act would provide their own equipment and and audio tech. However, as discussed previously, the sound equipment operating at the Event Center & Rodeo Grounds would currently be subject to the provisions of Tehachapi Municipal Code Sections 8.16.020, 8.16.030, 8.16.040, and 8.16.050 for a noncommercial use. Under the current Municipal Regulations, amplified sound equipment can only be used between the hours of nine a.m. and six p.m. of each day and the volume of the sound shall be controlled so that it will not be audible for a distance in excess of one hundred fifty feet from the exterior boundaries of the Event Center & Rodeo Grounds. These regulations would result in no increase in noise at the nearest homes to the Event Center & Rodeo Grounds.

Based on this information, operation of the proposed project would not generate a substantial permanent increase in ambient noise levels in the project vicinity above levels at the homes nearest the project site. The impact of the proposed project would be less than significant.

## Operational Ground-borne Vibration Impacts

**Threshold**: Would the proposed project expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

**Impact**: Operation of the proposed project would not expose persons to or generate excessive ground-borne vibration. The impacts of the proposed project would be less than significant.

### *Impact Analysis*

The proposed project does not include uses that are expected to generate measurable levels of ground-borne vibration during operation of the proposed project. Therefore, the greatest regular source of project-related ground-borne vibration would be from local trucks making deliveries to the project site and larger garbage trucks picking-up project-related refuse material. The vibration levels associated with these trucks would be less than the levels associated with large construction equipment. Therefore, the operational impacts associated with ground-borne vibration would be less than significant at nearby sensitive uses.

## Public Airport Noise

**Threshold**: Would the proposed project expose people residing or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport.

**Impact**: The proposed project would not expose people residing or working in the project area to excessive noise levels within an area covered by an airport land use plan. No impact would occur.

### *Impact Analysis*

The Event Center & Rodeo Grounds is located to the immediate north of Tehachapi Municipal Airport, which is a general aviation, public use airport. While noise from aircraft arrival and departures can be disruptive to noise-sensitive uses, the uses for the site are not considered to be sensitive to noise. As discussed previously, the Event Center & Rodeo Grounds is located beyond the airport's 60 dBA CNEL noise contour. As such, airport-related noise levels would not expose people working at the project site to excessive noise levels. This impact would be less than significant.

## Private Airstrip Noise

**Threshold**: Would the proposed project expose people residing or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

**Impact**: The proposed project would not expose people residing or working in the project area to excessive noise levels in the vicinity of a private airstrip. No impact would occur.

### *Impact Analysis*

The project site is not located within the vicinity of a private airstrip. No such facilities are located in the vicinity of the project site. No impact would occur.

## CUMULATIVE IMPACTS

CEQA requires that environmental analyses evaluate a project's cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of other related past, present, and reasonably foreseeable future projects. As set forth in the State CEQA Guidelines, the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. This cumulative impact analysis considers development of the proposed project in combination with ambient growth and other development projects within the vicinity of the proposed project site. As noise is a localized phenomenon, and drastically reduces in magnitude as distance from the source increases, only projects and ambient growth in the nearby area could combine with the proposed project to result in cumulative noise impacts.

Section 15130 of the State CEQA Guidelines provides that an adequate discussion of significant cumulative impacts requires, among other things, either (1) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, projects that are outside of the agency's control; or (2) a summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. This analysis evaluates cumulative noise impacts based upon a list of other proposed projects and ambient growth as identified in the Traffic/Circulation Study prepared for the proposed project.[10] The roadway traffic volumes utilized to calculate cumulative roadway noise impacts were identified in the Traffic/Circulation Study.

Another related project that is considered in the evaluation of cumulative noise impacts is the BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project. The Draft EIR for this project was published in August 2013. As discussed previously, there were about 35 trains (33 6,000-foot trains and two 8,000 foot trains) traveling through the Tehachapi Pass on a daily basis in 2012 and the train volume in 2013 would average 37 trains per day. Under this related project, two single-track segments in the Tehachapi Pass would be double-tracked to help accommodate more and longer trains. The improvements provided under the BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project would accommodate an average of 40 trains per day (34 6,000-foot trains and six 8,000 foot trains); an increase of 5 trains above 2012 levels.

[10] AECOM, 2014.

## Construction-Related Cumulative Impacts

The project applicant has no control over the timing or sequencing of the related projects that have been identified within the proposed project study area. Therefore, any quantitative analysis that assumes multiple, concurrent construction projects would be entirely speculative. Construction-period noise and ground-borne vibration for the proposed project and each related project (that has not yet been built) would be localized. The nearest related projects are located at the intersection of Tehachapi Boulevard and Steuber Road. As discussed previously, the proposed project is not expected to create any significant construction-related noise levels or ground-borne vibration impacts at the homes nearest to the project site. The related projects are located far enough from the Event Center & Rodeo Grounds that noise construction of those projects are not expected to generate substantial noise levels at the homes along Dennison Road. No other projects are currently proposed in close proximity to the project site that could affect the same sensitive receptors as the proposed project. Therefore, the proposed project would not contribute to significant short-term cumulative construction-related noise impacts in the immediate vicinity of the project site.

## Operational Cumulative Noise Impacts

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed project and related projects within the study area. Therefore, cumulative traffic-generated noise impacts have been assessed based on the difference between existing weekday roadway noise levels and future noise levels with the proposed project and cumulative development. The weekday was selected since weekday traffic volumes in Tehachapi are higher than weekend volumes and the Tehachapi General Plan Community Safety Element noise contour maps are based upon weekday traffic volumes.

As discussed previously, only the smaller scale events are proposed to occur in the near term (around 2018). Larger scale and rodeos and concerts would occur at a later date in the future. Therefore, cumulative operational noise impacts have been evaluated for year 2018 with standard events and year 2035 with large events consistent with the evaluation of impacts in the Traffic/Circulation Study.

### *Year 2018 Cumulative Noise Impacts*

The noise levels associated with existing traffic and railway volumes and future year 2018 traffic and railway volumes with the proposed project are identified in Table 8. As shown, cumulative development would not cause total exterior noise levels to exceed the 65 dBA CNEL standard for residential uses and sensitive uses where people sleep at the residential uses along Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps, or the the hotel along Mill Street north of the SR-58 ramps. Therefore the cumulative impact associated with causing an exceedance of an applicable noise standard would be less than significant.

The maximum short-term cumulative noise level increase at a residential location would be 2.8 dBA CNEL along Mill Street south of the SR-58 ramps, which would be below the applicable 3.0 dBA substantial threshold criteria for that location. The maximum increase at any other residential location

would be 1.4 dBA, which would be below the applicable 3.0 dBA substantial threshold criteria for that location. The 5.1 dBA CNEL increase at the hotel along Mill Street north of the SR-58 ramps represents a substantial increase in from existing noise levels and would be a significant cumulative impact.

**TABLE 8 - 2018 CUMULATIVE ROADWAY AND RAILWAY NOISE IMPACTS**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | 2018 + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 59.0 | 0.3 | No | No |
| | south of Tehachapi Bl. | 62.9 | 64.3 | 1.4 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 72.2 | 1.1 | No | No |
| | east of Dennison Rd. | 71.3 | 72.3 | 1.0 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 57.1 | 5.1 | No | Yes |
| | south of SR-58 Ramps | 58.3 | 61.1 | 2.8 | No | No |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A.

Short-term cumulative development would cause a maximum increase of 1.1 dBA CNEL at the commercial uses along Tehachapi Boulevard. This increase is a result of the increased railway activity expected under the BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project.

Under section 15130 of the State CEQA Guidelines, there are three possible outcomes of any cumulative impacts analysis:

(1) The cumulative impact is significant and the project's incremental effect is cumulatively considerable. In that event, the project's cumulative impact is significant. Discussion of the cumulative impact is mandatory.

(2) The cumulative impact is significant, but the proposed project's incremental effect will not be cumulatively considerable, and thus is not significant. In that case, the lead agency must identify facts and analysis supporting its conclusion and briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

(3) The cumulative impact is not significant. In that case, the proposed project's impact is not cumulatively considerable, and the agency need merely indicate why the cumulative impact is not significant and is not discussed in further detail.

Here, significant short-term cumulative roadway noise impacts have been identified at the hotel along Mill Street north of the SR-58 ramps. The question presented is whether the proposed project's incremental contribution to the cumulative impact at this location is cumulatively considerable.

"Cumulatively considerable," as defined in the State CEQA Guidelines, "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The issue when a significant cumulative impact is identified is determining the amount of additional noise can be less than cumulatively considerable. The FTA criteria provide assistance in answering this question.

Table 9 is the relevant portion of Table 3-1 in the FTA Transit Noise and Vibration Impact Assessment manual. It addresses the sound output of an additional source that, when combined with the existing level, will not exceed Figure 3-2's No Impact classification.[11] To assist the analysis of whether the project's effect is cumulatively considerable with respect to significantly impacted receptors, the City considered whether the noise caused by the proposed project, when added to the combined noise level produced by the baseline plus other cumulative projects, would result in No Impact under the FTA criteria. If it would, then the additional traffic noise generated by the project would cause no incremental impact on persons at the affected location. The project would effectively add nothing to the cumulative impact.[12] This provides an objective standard by which to measure the extent to which the proposed project's incremental contribution to a significant cumulative effect is cumulatively considerable.

The baseline noise at the hotel along Mill Street north of the SR-58 ramps is 51.9 dBA CNEL. Short-term cumulative noise, including the baseline, the project, ambient growth, and the related projects, is 57.1 dBA. Noise at this location would thus remain well below the applicable standard of 65 dBA CNEL for sensitive uses where people sleep. The increase in combined noise is 5.1 dBA. Cumulative noise, excluding the project's contribution, would equal 57.0 dBA, thus the project would contribute 0.1 dBA (rounded to the nearest tenth) to the combined noise level and the cumulative impact would occur with or without the proposed project. Under Table 3-1 of the FTA manual, the addition of a noise source producing less than 57 dBA to a noise level of 57.0 dBA (baseline plus cumulative, excluding the project) would result in No Impact. The traffic noise caused by the proposed project would be 47.4 dBA CNEL. Therefore, the project's incremental effect is not considerable or significant when viewed in connection with the effects of past, current, and probable future projects.

[11] Table 3-1 of the FTA Transit Noise and Vibration Impact Assessment manual is consistent with Figure 2 shown previously. Figure 2 addresses the amount by which combined noise levels can increase without causing any impact. Table 3-1 addresses the sound output of the additional source that, when combined with the existing level, will produce an increase in combined noise level that does not exceed Figure 2's No Impact classification.

[12] It is important to note that two sound levels expressed as decibels cannot be directly added together ; they must be converted into their respective acoustic energies and the energies must be added together and then converted back into decibels. For example, 72 dBA plus 72 dBA equals 75 dBA and 72 dBA plus 66 dBA equals 73 dBA.

**TABLE 9 - FTA MANUAL, TABLE 3-1 EXCERPT: NOISE LEVELS DEFINING IMPACT FOR TRANSIT PROJECTS FOR CATEGORY 2 SITES**

| Existing Noise Exposure in dBA $L_{dn}$ | Project Noise Exposure in dBA $L_{dn}$ | |
|---|---|---|
| | No Impact | Moderate Impact |
| 50 | <54 | 54-59 |
| 51 | <54 | 54-60 |
| 52 | <55 | 55-60 |
| 53 | <55 | 55-60 |
| 54 | <55 | 55-61 |
| 55 | <56 | 56-61 |
| 56 | <56 | 56-62 |
| 57 | <57 | 57-62 |
| 58 | <57 | 57-62 |
| 59 | <58 | 58-63 |
| 60 | <58 | 58-63 |
| 61 | <59 | 59-64 |
| 62 | <59 | 59-64 |
| 63 | <60 | 60-65 |
| 64 | <61 | 61-65 |
| 65 | <61 | 61-66 |
| 66 | <62 | 62-67 |
| 67 | <63 | 63-67 |
| 68 | <63 | 63-68 |
| 69 | <64 | 64-69 |

Source of table data: Harris Miller Miller & Hanson Inc., 2006.

### *Year 2035 Cumulative Noise Impacts*

The noise levels associated with existing traffic and railway volumes and future year 2035 traffic and railway volumes with the proposed project are identified in Table 10. As shown, cumulative development would not cause total exterior noise levels to exceed the 65 dBA CNEL standard for residential uses and sensitive uses where people sleep at the residential uses along Dennison Road north and south of Tehachapi Boulevard, and Mill Street south of the SR-58 ramps, or the the hotel along Mill Street north of the SR-58 ramps.

**TABLE 10 - 2035 CUMULATIVE ROADWAY AND RAILWAY NOISE IMPACTS**

| Roadway | Roadway Segment | Noise Levels in dBA CNEL | | | Cause Exceedance of Applicable Standard? | Cause a Substantial Increase? |
|---|---|---|---|---|---|---|
| | | Existing Traffic Volumes | 2018 + Project Traffic | Increase | | |
| **Friday** | | | | | | |
| Dennison Road | north of Tehachapi Bl. | 58.7 | 60.2 | 1.4 | No | No |
| | south of Tehachapi Bl. | 62.9 | 64.8 | 1.8 | No | No |
| Tehachapi Boulevard | east of Dennison Rd. | 71.1 | 72.3 | 1.1 | No | No |
| | east of Dennison Rd. | 71.3 | 72.4 | 1.1 | No | No |
| Mill Street | north of SR-58 Ramps | 51.9 | 57.9 | 6.0 | No | Yes |
| | south of SR-58 Ramps | 58.3 | 61.7 | 3.4 | No | Yes |

Increase may appear not to add properly due to rounding in the noise level model.

Calculation data and results are provided in Appendix A.

The maximum long-term cumulative noise level increase along Dennison Road would be 1.8 dBA CNEL, which would be below the applicable 2.0 dBA substantial threshold criteria for the homes south of Tehachapi Boulevard.

Long-term cumulative development would cause a maximum increase of 1.1 dBA CNEL at the commercial uses along Tehachapi Boulevard. This increase is a result of the increased railway activity expected under the BNSF/UPRR Mojave Subdivision Tehachapi Rail Improvement Project.

The 6.0 dBA CNEL increase at the hotel along Mill Street north of the SR-58 ramps represents a substantial increase in from existing noise levels. Cumulative noise, excluding the project's contribution, would equal 57.5 dBA. Thus the project would contribute 0.4 dBA (rounded to the nearest tenth) to the combined noise level and the cumulative impact would occur with or without the proposed project. Under Table 3-1 of the FTA manual, the addition of a noise source producing less than 57 dBA to a noise level of 57.0 dBA (baseline plus cumulative, excluding the project) would result in No Impact. The traffic noise caused by the proposed project would be 47.4 dBA CNEL. Therefore, the project's incremental effect is not considerable or significant when viewed in connection with the effects of past, current, and probable future projects.

The 3.4 dBA CNEL increase at the residences along Mill Street south of the SR-58 ramps also represents a substantial increase in from existing noise levels. The baseline noise at these homes is 58.3 dBA CNEL. Long-term cumulative noise, including the baseline, the project, ambient growth, and the related projects, is 61.7 dBA. Noise at this location would thus remain well below the applicable standard of 65 dBA CNEL for residential uses. Cumulative noise, excluding the project's contribution, would equal 61.6 dBA, thus the project would contribute 0.1 dBA (rounded to the nearest tenth) to the combined noise level and the cumulative impact would occur with or without the proposed project. Under Table 3-1 of the FTA manual, the addition of a noise source producing less than 59 dBA to a noise level of 61 dBA (baseline

plus cumulative, excluding the project) would result in No Impact. The traffic noise caused by the proposed project would be 44.9 dBA CNEL. Therefore, the project's incremental effect is not considerable or significant when viewed in connection with the effects of past, current, and probable future projects.

### *Cumulative Noise Impacts Summary*

In summary, the project's cumulative operational roadway noise impacts are shown in Table 11.

**TABLE 11 - PROJECT CUMULATIVE ROADWAY NOISE IMPACTS**

| Roadway | Roadway Segment | Significant Cumulative Impact? | Cumulatively Considerable Contribution? | Project's Cumulative Impact |
|---|---|---|---|---|
| **Year 2018 Cumulative Noise Impacts** | | | | |
| Dennison Road | north of Tehachapi Bl. | No | No | Not Significant |
| | south of Tehachapi Bl. | No | No | Not Significant |
| Tehachapi Boulevard | east of Dennison Rd. | No | No | Not Significant |
| | east of Dennison Rd. | No | No | Not Significant |
| Mill Street | north of SR-58 Ramps | Yes | No | Not Significant |
| | south of SR-58 Ramps | No | No | Not Significant |
| **Year 2035 Cumulative Noise Impacts** | | | | |
| Dennison Road | north of Tehachapi Bl. | No | No | Not Significant |
| | south of Tehachapi Bl. | No | No | Not Significant |
| Tehachapi Boulevard | east of Dennison Rd. | No | No | Not Significant |
| | east of Dennison Rd. | No | No | Not Significant |
| Mill Street | north of SR-58 Ramps | Yes | No | Not Significant |
| | south of SR-58 Ramps | Yes | No | Not Significant |

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# APPENDIX A - NOISE LEVEL CALCULATION DATA

# Roadway and Highway Traffic Noise Levels

CADENCE

**Project Name:** City of Tehachapi Event Center & Rodeo Grounds

**Background Information**

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emissions Levels and Caltrans Technical Noise Supplement (November 2009) methodologies.
Analysis Scenarios: Existing and Future Traffic Volumes.
Source of Traffic Volumes: AECOM, October 30, 2014.

| Assumed 24-Hour Traffic Distribution | Day | Evening | Night |
|---|---|---|---|
| **Medium-Duty Trucks** | 87.43% | 5.05% | 7.52% |
| **Heavy Duty Trucks** | 89.10% | 2.84% | 8.06% |

**Existing Traffic Volumes - Friday**

| Roadway Segment | Land Use | Lanes | Median Width | Peak Hour Volume | ADT Volume | Design Speed (mph) | Dist. from Center to Receptor1 | Alpha Factor | Medium-Duty Trucks | Heavy-Duty Trucks | % Day | % Eve | % Night | Barrier Atten. dBA | Peak Hour dBA Leq | 24-Hour dBA CNEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 4 | 0 | 363 | 3,630 | 35 | 85 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | -4.0 | 54.9 | 53.9 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 57.0 |
| | | | | | | | | | | | | | | | **Total Noise Level:** | **58.7** |
| Dennison Road - south of Tehachapi Bl. | Residential | 2 | 0 | 201 | 2,010 | 35 | 30 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | -4.0 | 56.8 | 55.9 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 62.0 |
| | | | | | | | | | | | | | | | **Total Noise Level:** | **62.9** |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 2 | 0 | 330 | 3,300 | 35 | 110 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | 0.0 | 57.3 | 56.3 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 71.0 |
| | | | | | | | | | | | | | | | **Total Noise Level:** | **71.1** |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 2 | 0 | 480 | 4,800 | 35 | 85 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | 0.0 | 60.0 | 59.0 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 71.0 |
| | | | | | | | | | | | | | | | **Total Noise Level:** | **71.3** |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 4 | 40 | 139 | 1,390 | 35 | 135 | 0 | 1.8% | 0.7% | 82.9% | 10.9% | 6.2% | 0.0 | 52.8 | **51.9** |
| Mill Street - south of SR-58 EB Ramps | Residential | 2 | 20 | 230 | 2,300 | 35 | 80 | 0 | 1.8% | 0.7% | 82.9% | 10.9% | 6.2% | 0.0 | 57.2 | 56.3 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 54.0 |
| | | | | | | | | | | | | | | | **Total Noise Level:** | **58.3** |

**Existing + Standard Event Traffic Noise Impacts - Friday**

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Project ADT Volume | Existing + Project ADT | Existing + Project 24-Hour CNEL | Project Change | Project Only CNEL |
|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 406 | 4,036 | 54.4 | | 44.4 |
| Union Pacific Railroad | | | 57.0 | | | 57.0 | | |
| | | **Total Noise Level:** | **58.7** | | | **58.9** | 0.2 | |
| Dennison Road - south of Tehachapi Bl. | Residential | 2,010 | 55.9 | 121 | 2,131 | 56.1 | | 43.6 |
| Union Pacific Railroad | | | 62.0 | | | 62.0 | | |
| | | **Total Noise Level:** | **62.9** | | | **63.0** | 0.1 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 143 | 3,443 | 56.5 | | 42.7 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | **Total Noise Level:** | **71.1** | | | **71.2** | 0.0 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 4,800 | 59.0 | 143 | 4,943 | 59.2 | | 43.8 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | **Total Noise Level:** | **71.3** | | | **71.3** | 0.0 | |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 72 | 1,462 | **52.2** | 0.2 | 39.1 |
| Mill Street - south of SR-58 EB Ramps | Residential | 2,300 | 56.3 | 24 | 2,324 | 56.4 | | 36.5 |
| Union Pacific Railroad | | | 54.0 | | | 54.0 | | |
| | | **Total Noise Level:** | **58.3** | | | **58.3** | 0.0 | |

**Existing + Large Event Traffic Noise Impacts - Friday**

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Project ADT Volume | Existing + Project ADT | Existing + Project 24-Hour CNEL | Project Change | Project Only CNEL |
|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 2,515 | 6,145 | 56.2 | | 52.3 |
| Union Pacific Railroad | | | 57.0 | | | 57.0 | | |
| | | **Total Noise Level:** | **58.7** | | | **59.6** | 0.9 | |
| Dennison Road - south of Tehachapi Bl. | Residential | 2,010 | 55.9 | 823 | 2,833 | 57.4 | | 52.0 |
| Union Pacific Railroad | | | 62.0 | | | 62.0 | | |
| | | **Total Noise Level:** | **62.9** | | | **63.3** | 0.3 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 988 | 4,288 | 57.4 | | 51.1 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | **Total Noise Level:** | **71.1** | | | **71.2** | 0.0 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 4,800 | 59.0 | 988 | 5,788 | 59.9 | | 52.2 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | **Total Noise Level:** | **71.3** | | | **71.3** | 0.1 | |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 494 | 1,884 | **53.3** | 1.3 | 47.4 |
| Mill Street - south of SR-58 EB Ramps | Residential | 2,300 | 56.3 | 165 | 2,465 | 56.6 | | 44.9 |
| Union Pacific Railroad | | | 54.0 | | | 54.0 | | |
| | | **Total Noise Level:** | **58.3** | | | **58.5** | 0.2 | |

### Year 2018 Cumulative Traffic Noise Impacts

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Year 2018 + Project ADT | 2018 + Project 24-Hour CNEL | Cumulative Change |
|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 4,386 | 54.7 | |
| Union Pacific Railroad | | | 57.0 | | 57.0 | |
| | | **Total Noise Level:** | **58.7** | | **59.0** | 0.3 |
| Dennison Road - north of Tehachapi Bl. | Residential | 2,010 | 55.9 | 3,661 | 58.5 | |
| Union Pacific Railroad | | | 62.0 | | 63.0 | |
| | | **Total Noise Level:** | **62.9** | | **64.3** | 1.4 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 5,833 | 58.8 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | |
| | | **Total Noise Level:** | **71.1** | | **72.2** | 1.1 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 4,800 | 59.0 | 6,653 | 60.5 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | |
| | | **Total Noise Level:** | **71.3** | | **72.3** | 1.0 |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 4,522 | **57.1** | 5.1 |
| Mill Street - south of SR-58 EB Ramps | Residential | 2,300 | 56.3 | 5,204 | 59.9 | |
| Union Pacific Railroad | | | 54.0 | | 55.0 | |
| | | **Total Noise Level:** | **58.3** | | **61.1** | 2.8 |

### Project Contribution to Year 2018 Cumulative Traffic Noise Impacts

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Year 2018 - Project ADT | 2018 - Project 24-Hour CNEL | 2018 + Project 24-Hour CNEL | Project Contribution |
|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 3,980 | 54.3 | 54.7 | |
| Union Pacific Railroad | | | 57.0 | | 57.0 | 57.0 | |
| | | **Total Noise Level:** | **58.7** | | **58.9** | **59.0** | 0.2 |
| Dennison Road - south of Tehachapi Bl. | Residential | 2,010 | 55.9 | 3,540 | 58.3 | 58.5 | |
| Union Pacific Railroad | | | 62.0 | | 63.0 | 63.0 | |
| | | **Total Noise Level:** | **62.9** | | **64.3** | **64.3** | 0.0 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 5,690 | 58.7 | 58.8 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | 72.0 | |
| | | **Total Noise Level:** | **71.1** | | **72.2** | **72.2** | 0.0 |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 4,800 | 59.0 | 6,510 | 60.4 | 60.5 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | 72.0 | |
| | | **Total Noise Level:** | **71.3** | | **72.3** | **72.3** | 0.0 |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 4,450 | **57.0** | **57.1** | 0.1 |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 2,300 | 56.3 | 5,180 | 59.8 | 59.9 | |
| Union Pacific Railroad | | | 54.0 | | 55.0 | 55.0 | |
| | | **Total Noise Level:** | **58.3** | | **61.1** | **61.1** | 0.0 |

### Year 2035 Cumulative Traffic Noise Impacts

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Year 2035 + Project ADT | 2035 + Project 24-Hour CNEL | Cumulative Change |
|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 7,975 | 57.3 | |
| Union Pacific Railroad | | | 57.0 | | 57.0 | |
| | | **Total Noise Level:** | **58.7** | | **60.2** | 1.4 |
| Dennison Road - north of Tehachapi Bl. | Residential | 2,010 | 55.9 | 5,203 | 60.0 | |
| Union Pacific Railroad | | | 62.0 | | 63.0 | |
| | | **Total Noise Level:** | **62.9** | | **64.8** | 1.8 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 8,038 | 60.2 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | |
| | | **Total Noise Level:** | **71.1** | | **72.3** | 1.1 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 4,800 | 59.0 | 9,458 | 62.0 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | |
| | | **Total Noise Level:** | **71.3** | | **72.4** | 1.1 |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 5,514 | **57.9** | 6.0 |
| Mill Street - south of SR-58 EB Ramps | Residential | 2,300 | 56.3 | 6,285 | 60.7 | |
| Union Pacific Railroad | | | 54.0 | | 55.0 | |
| | | **Total Noise Level:** | **58.3** | | **61.7** | 3.4 |

### Project Contribution to Year 2035 Cumulative Traffic Noise Impacts

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Year 2035 - Project ADT | 2035 - Project 24-Hour CNEL | 2035 + Project 24-Hour CNEL | Project Contribution |
|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 3,630 | 53.9 | 5,460 | 55.7 | 57.3 | |
| Union Pacific Railroad | | | 57.0 | | 57.0 | 57.0 | |
| | | **Total Noise Level:** | **58.7** | | **59.4** | **60.2** | 0.8 |
| Dennison Road - south of Tehachapi Bl. | Residential | 2,010 | 55.9 | 4,380 | 59.3 | 60.0 | |
| Union Pacific Railroad | | | 62.0 | | 63.0 | 63.0 | |
| | | **Total Noise Level:** | **62.9** | | **64.5** | **64.8** | 0.2 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,300 | 56.3 | 7,050 | 59.6 | 60.2 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | 72.0 | |
| | | **Total Noise Level:** | **71.1** | | **72.2** | **72.3** | 0.0 |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 4,800 | 59.0 | 8,470 | 61.5 | 62.0 | |
| Union Pacific Railroad | | | 71.0 | | 72.0 | 72.0 | |
| | | **Total Noise Level:** | **71.3** | | **72.4** | **72.4** | 0.0 |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 1,390 | **51.9** | 5,020 | **57.5** | **57.9** | 0.4 |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 2,300 | 56.3 | 6,120 | 60.6 | 60.7 | |
| Union Pacific Railroad | | | 54.0 | | 55.0 | 55.0 | |
| | | **Total Noise Level:** | **58.3** | | **61.6** | **61.7** | 0.1 |

Note: Project and Cumulative Change and Contribution numbers may not appear to add correctly due to rounding in the spreadsheet model.

# Roadway and Highway Traffic Noise Levels

CADENCE

**Project Name:** City of Tehachapi Event Center & Rodeo Grounds

**Background Information**

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emissions Levels and Caltrans Technical Noise Supplement (November 2009) methodologies.
Analysis Scenarios: Existing and Future Traffic Volumes.
Source of Traffic Volumes: AECOM, October 30, 2014.

| Assumed 24-Hour Traffic Distribution | Day | Evening | Night |
|---|---|---|---|
| Medium-Duty Trucks | 87.43% | 5.05% | 7.52% |
| Heavy Duty Trucks | 89.10% | 2.84% | 8.06% |

**Existing Traffic Volumes - Saturday**

| Roadway Segment | Land Use | Lanes | Median Width | Peak Hour Volume | ADT Volume | Design Speed (mph) | Dist. from Center to Receptor1 | Alpha Factor | Medium-Duty Trucks | Heavy-Duty Trucks | % Day | % Eve | % Night | Barrier Atten. dBA | Peak Hour dBA Leq | 24-Hour dBA CNEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 4 | 0 | 223 | 2,230 | 35 | 85 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | -4.0 | 52.8 | 51.8 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 57.0 |
| | | | | | | | | | | | | | | | Total Noise Level: | 58.1 |
| Dennison Road - south of Tehachapi Bl. | Residential | 2 | 0 | 157 | 1,570 | 35 | 30 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | -4.0 | 55.8 | 54.8 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 62.0 |
| | | | | | | | | | | | | | | | Total Noise Level: | 62.8 |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 2 | 0 | 216 | 2,160 | 35 | 110 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | 0.0 | 55.4 | 54.5 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 71.0 |
| | | | | | | | | | | | | | | | Total Noise Level: | 71.1 |
| Tehachapi Blvd - west of Dennison Rd. | Commercial | 2 | 0 | 318 | 3,180 | 35 | 85 | 0 | 1.8% | 0.7% | 84.0% | 10.0% | 6.0% | 0.0 | 58.2 | 57.3 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 71.0 |
| | | | | | | | | | | | | | | | Total Noise Level: | 71.2 |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 4 | 40 | 84 | 840 | 35 | 135 | 0 | 1.8% | 0.7% | 82.9% | 10.9% | 6.2% | 0.0 | 50.6 | 49.8 |
| Mill Street - south of SR-58 EB Ramps | Residential | 2 | 20 | 152 | 1,520 | 35 | 80 | 0 | 1.8% | 0.7% | 82.9% | 10.9% | 6.2% | 0.0 | 55.4 | 54.5 |
| Union Pacific Railroad | | | | | | | | | | | | | | | | 54.0 |
| | | | | | | | | | | | | | | | Total Noise Level: | 57.3 |

**Existing + Standard Event Traffic Noise Impacts - Saturday**

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Project ADT Volume | Existing + Project ADT | Existing + Project 24-Hour CNEL | Project Change | Project Only CNEL |
|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 2,230 | 51.8 | 372 | 2,602 | 52.5 | | 44.0 |
| Union Pacific Railroad | | | 57.0 | | | 57.0 | | |
| | | Total Noise Level: | 58.1 | | | 58.3 | 0.2 | |
| Dennison Road - south of Tehachapi Bl. | Residential | 1,570 | 54.8 | 109 | 1,679 | 55.1 | | 43.2 |
| Union Pacific Railroad | | | 62.0 | | | 62.0 | | |
| | | Total Noise Level: | 62.8 | | | 62.8 | 0.0 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 2,160 | 54.5 | 131 | 2,291 | 54.7 | | 42.3 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | Total Noise Level: | 71.1 | | | 71.1 | 0.0 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,180 | 57.3 | 131 | 3,311 | 57.4 | | 43.4 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | Total Noise Level: | 71.2 | | | 71.2 | 0.0 | |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 840 | 49.8 | 66 | 906 | 50.1 | 0.3 | 38.7 |
| Mill Street - south of SR-58 EB Ramps | Residential | 1,520 | 54.5 | 22 | 1,542 | 54.6 | | 36.2 |
| Union Pacific Railroad | | | 54.0 | | | 54.0 | | |
| | | Total Noise Level: | 57.3 | | | 57.3 | 0.0 | |

**Existing + Large Event Traffic Noise Impacts - Saturday**

| Roadway Segment | Land Use | Existing ADT Volume | Existing 24-Hour CNEL | Project ADT Volume | Existing + Project ADT | Existing + Project 24-Hour CNEL | Project Change | Project Only CNEL |
|---|---|---|---|---|---|---|---|---|
| Dennison Road - north of Tehachapi Bl. | Residential | 2,230 | 51.8 | 2,495 | 4,725 | 55.1 | | 52.3 |
| Union Pacific Railroad | | | 57.0 | | | 57.0 | | |
| | | Total Noise Level: | 58.1 | | | 59.2 | 1.0 | |
| Dennison Road - south of Tehachapi Bl. | Residential | 1,570 | 54.8 | 792 | 2,362 | 56.6 | | 51.8 |
| Union Pacific Railroad | | | 62.0 | | | 62.0 | | |
| | | Total Noise Level: | 62.8 | | | 63.1 | 0.3 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 2,160 | 54.5 | 919 | 3,079 | 56.0 | | 50.7 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | Total Noise Level: | 71.1 | | | 71.1 | 0.0 | |
| Tehachapi Blvd - east of Dennison Rd. | Commercial | 3,180 | 57.3 | 901 | 4,081 | 58.3 | | 51.8 |
| Union Pacific Railroad | | | 71.0 | | | 71.0 | | |
| | | Total Noise Level: | 71.2 | | | 71.2 | 0.0 | |
| Mill Street - north of SR-58 WB Ramps | Commercial (Hotel) | 840 | 49.8 | 440 | 1,280 | 51.6 | 1.8 | 46.9 |
| Mill Street - south of SR-58 EB Ramps | Residential | 1,520 | 54.5 | 175 | 1,695 | 55.0 | | 45.1 |
| Union Pacific Railroad | | | 54.0 | | | 54.0 | | |
| | | Total Noise Level: | 57.3 | | | 57.5 | 0.3 | |

# Construction Noise Estimates

CADENCE

**Project Name:** City of Tehachapi Event Center & Rodeo Grounds

**Analysis Location:** Residential homes to the east of the project site along Dennison Road

Construction Equipment Noise Levels = A - 20 log (B / 50) + 10 log (C)

Pursuant to calculation methodology presented in the Caltrans Technical Noise Supplement (2009), only the noise levels from the two or three loudest pieces of equipment are summed when more than one piece of equipment is in operation in the same location.

**Grading**

| | A | B | C | |
|---|---|---|---|---|
| **Equipment Type** | **dBA $L_{max}$ at 50 Feet** | **Distance to Receiver (feet)** | **Usage Factor (%)** | **Hourly dBA $L_{eq}$ at Receiver** |
| Grader | 85 | 320 | 40 | 64.9 |
| Rubber Tired Dozer | 85 | 320 | 40 | 64.9 |
| Scraper | 85 | 320 | 40 | 64.9 |
| Scraper | 85 | 320 | 40 | 64.9 |
| Tractor/Loader/Backhoe | 80 | 320 | 40 | 59.9 |
| **Overall Equipment Noise Level of Loudest Three Equipment** | | | | **69.7** |

# APPENDIX B - NOISE LEVEL MEASUREMENT DATA

C:\LARDAV\SLMUTIL\15NOV_11.bin  Interval Data

| Site Location | Meas Number | Date | Time | Duration | Leq | Lmax | Lmin |
|---|---|---|---|---|---|---|---|
| AV Motoplex | 1 | 15Nov 14 | 11:29:48 | 1200.0 | 69.7 | 86.8 | 50.5 |
| AV Motoplex | 2 | 15Nov 14 | 11:51:00 | 1200.0 | 69.0 | 87.3 | 47.6 |
| Mojave Road | 3 | 15Nov 14 | 15:49:17 | 1200.0 | 55.4 | 77.5 | 44.5 |

# APPENDIX D

Cultural Resources Survey

AECOM
1220 Avenida Acaso
Camarillo, CA 93012

(805)388-3775 tel
(805)388-3577 fax

# Memorandum

| | | |
|---|---|---|
| To | David James, City of Tehachapi | Page 1 |
| CC | Tom Glagow, Tehachapi Municipal Airport Manager | |
| Subject | Cultural Resources Constraints for Planned Improvements at the Tehachapi Airport Project in Tehachapi, Kern County, California | |
| Attachments | Exhibit 1 (Project Location, Archaeological Survey Area, and Site Location Map) | |
| From | Alan Gold, PhD | |
| Date | June 14, 2011 | |

This Technical Memorandum reports on cultural resource evaluations and documentation for proposed improvements at the Tehachapi Municipal Airport. The purpose of this evaluation is to identify potential cultural resources constraints for the proposed development activities, as described below. Because the proposed project is subject to review under Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act, AECOM cultural resources staff has conducted this cultural resources investigation.

**Proposed Project**

The 264-acre Tehachapi Municipal Airport (Airport) is located in the northern portion of the City of Tehachapi (City). The near-term project proposed by the City involves relocating the existing taxiway 28 feet to the south of its current location for safety of aircraft operations. The scope of this cultural resources investigation encompasses the entire 246-acre Airport property.

**Project Location**

The Airport is located in the Tehachapi Valley, with the Tehachapi Mountains to the southeast. Although the runway, taxiway, and other aviation related structures are on relatively flat terrain in the southern portions of the property, there is a large rock outcrop to the north of the of the runway (in the northernmost area of the property) known as Tehachapi Hill (see Exhibit1). The area north of the runway also includes fields used for the disposal of treated water from the City of Tehachapi Wastewater Treatment Plant, and the area in the northeast is used to house a small rodeo arena that is used intermittently for cattle grazing. A levied channel carries storm water through the property from the southeast to the northwest along a fence line that divides the property. In addition, there is an open ditch and culvert drainage system used to convey localized storm flows.

Most of the property has been heavily disturbed by development activities. However the Tehachapi Hill area appears to have a modicum of natural integrity and is considered the most likely area for the presence of both historic and prehistoric archaeological sites.

## Regulatory Context

### Federal Regulations

*National Historic Preservation Act*

Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations (36 Code of Federal Regulations [CFR] 800, as amended) require Federal agencies to consider the effects of their undertakings, or those they fund or permit, on properties that may be eligible for listing, or that are listed on the National Register of Historic Places (NRHP). The 36 CFR Part 60.4 regulations describe the criteria to evaluate cultural resources for inclusion in the NRHP. Cultural resources can be significant on the national, State, or local level. Such resources are required to retain integrity and must exhibit an association with broad patterns of our history, be associated with an important person, embody a distinctive characteristic, or yield information important to prehistory or history.

The 36 CFR Part 800 regulations, implementing Section 106, call for considerable consultation with the State Historic Preservation Officer (SHPO), Indian tribes, and interested members of the public throughout the process. The four principal steps are as follows:

1. Initiate the Section 106 process (36 CFR Part 800.3) in consultation with SHPO.
2. Identify historic properties, resources eligible for inclusion in the NRHP (36 CFR Part 800.4).
3. Assess the effects of the undertaking to historic properties in the Area of Potential Effect (36 CFR Part 800.5).
4. Resolve adverse effects (36 CFR Part 800.6).

Adverse effects on historic properties often are resolved through preparation of a memorandum of agreement or a programmatic agreement developed in consultation between the lead Federal agency, the SHPO, Indian tribes, and interested members of the public. The Advisory Council on Historic Preservation (ACHP) is also invited to participate.

### State Regulations

Under the California Environmental Quality Act (CEQA), public agencies must consider the effects of their actions on "historical resources." CEQA defines a "historical resource" as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the NRHP. Pursuant to Public Resources Code, Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

Under the State CEQA statutes, an impact on a cultural resource is considered significant if a project would result in an effect that may change the significance of the resource (Public Resources Code [PRC] Section 21084.1). Demolition, replacement, substantial alteration, and relocation of historic properties are actions that would change the significance of an historic resource (California Code of Regulations, Title 14, 15064.5). Before the level of significance of impacts can be determined and appropriate mitigation measures developed, the significance of cultural resources must be determined. The following steps are normally taken in a cultural resources investigation to comply with CEQA:

- Identify cultural resources.
- Evaluate the significance of the cultural resources based on established thresholds of significance.
- Evaluate the effects of a project on all cultural resources.
- Develop and implement measures to mitigate the effects of the project on significant cultural resources.

**Field Survey and Project Review**

An archaeological pedestrian survey was initiated by Dr. Alan Gold, Ph.D., R.P.A., on May 12, 2011. On May 23, 2011, Dr. Gold was joined by Mr. Benjamin Vargas, R.P.A., to more closely inspect Tehachapi Hill, the area with the greatest potential for the presence of cultural resources. Dr. Gold completed surveying the remainder of the property on June 2, 2011.

During all of the survey dates weather conditions were clear with mild temperatures. As noted above, the entire property was inspected for the occurrence of prehistoric and historic archaeological materials although much of the property is already heavily disturbed due to previous development. This heavy disturbance makes the discovery of cultural materials very unlikely. It also should be noted that significant portions of the Property do not allow inspection of the ground surface as they are paved (runway, taxiway) or have structures on them (offices, hangers, etc.).

**Native American Coordination and Consultation**

No Native American Coordination or Consultation was conducted as part of this constraints evaluation.

**Historical Architectural Studies and Airport History**

The study did not include a review to specifically identify buildings and structures older than 45 years that could be considered historic resources. However, discussions with Airport staff indicate that there is at least one (and possibly more) structures that date to the late 1930s. The Airport appears to have been established in the late 1920s and the City acquired it in 1952. The first airport hanger, built in 1939, is still in existence. This structure is located on the property and may retain a fair degree of integrity.

**Previous Cultural Resource Studies**

AECOM conducted a cultural resources records search (RS# 11-180) for the Airport and surrounding area at the Southern San Joaquin Information Center (SSJIC) of the California Historical Resources Information System located on the campus of California State University, Bakersfield on May 11, 2011. The SSJIC records search indicated that no archaeological resources or historic sites have been previously identified on the property. AECOM found that no previous cultural resource surveys have been completed within the property.

There are no previously identified cultural resources within the property that are listed in the National Register of Historic Places, California Register, California Inventory of Historic Resources, California Points of Historical Interest, or California State Historic Landmarks.

A 0.5-mile radius surrounding the property was also reviewed for previous cultural resource studies. Eleven cultural resource studies had been conducted within that area (KE- 107, 420, 765, 1873, 2821, 3265, 3359, 3360, 3361, 3685, and 3721) and four cultural resource sites have been

discovered ( P-15- 1316, 9611, 10072, and 11130). None of those resources are located within the Property.

**Results**

The AECOM investigation discovered three previously unknown cultural resource sites within the property. All three archaeological sites are located adjacent to and on the skirt of Tehachapi Hill. One site is a locus of prehistoric activity and the other two contain exclusively historic remains. AECOM did not perform a detailed recordation of these three sites as part of this constraints evaluation; the information below represents a preliminary and superficial identification of the nature of the cultural materials identified.

The prehistoric site (TA-1) is located just west of the rodeo grounds along the base of Tehachapi Hill. The site is located in an area about 125 meters in length and 15 meters in width, and contains at least four distinct granite boulders where a number of bedrock milling features exist. The first boulder contained a single bedrock mortar. The other three boulders had several individual milling slicks (bedrock milling basins). There are hundreds of individual granite boulders on Tehachapi Hill that potentially could contain milling features. Additionally, in this same area, AECOM discovered a fragmentary white chert biface roughout (preform). It is likely that other prehistoric features and cultural materials could be identified in association with this site.

An historic archaeological site (TA-2) is located on the southwestern side of Tehachapi Hill. It is apparent that during the early 1900s a granite quarry or some type of mining operation was established in this location. Stone debris from the quarrying/mining activities is noticeable. A substantial portion of the hill has been extracted and granite debris (detritus from the extraction operation) litters the base of the prominence. Other possibly related historic metal and wood artifacts also are scattered about the site area. It may be possible to date the stone quarrying/mining operation through archival research.

Another historic archaeological site (TA-3) was discovered on the north side of Tehachapi Hill. This site is a refuse scatter or can dump and is located on a small bench. The locus consists of a diffuse array of various metal containers that include hole in the top tin cans that would appear to date the materials to the pre-World War 1 era.

The locations of these sites are shown on Exhibit 1 (attached).

**Cultural Resource Recommendations**

As required for compliance with Section 106 of the NHPA, AECOM recommends that the following steps be taken:

1. Prepare an Area of Potential Effects (APE) map that indicates the geographical extent of proposed project construction, grading, paving, and staging areas. Because no proposed project activities are planned in the area where the three cultural resource sites were discovered, those sites would be unlikely to be within the APE, pending FAA approval of the APE map.
2. Section 106 of the NHPA requires Native American coordination and consultation. A Sacred Lands File search and a Native American Contacts List request should be submitted to the California Native American Heritage Commission (NAHC). Each organization or individual identified by the NAHC should be contacted by letter (with follow-up e-mail, and/or telephone calls. All contacts with Native Americans should be documented.
3. Prepare a cultural resources inventory report that includes a description of the proposed project; identification of the APE; a description of prehistoric, ethnographic and historical

background of the project area; methods used in the investigation to identify cultural resources in the APE; documentation of Native American consultation; results of the investigation; and recommendations for any additional actions to identify or protect cultural resources. This report should follow the format and protocol for submission of this document to the SSJIC. The report should comply with the applicable requirements and guidelines supplied by the California Department of Parks and Recreation.

4. Forward the cultural resources inventory report to FAA for review, approval and submission the California State Historic Preservation Officer.

The three cultural resource sites, preliminarily identified during the pedestrian survey, should be avoided during all Airport development and earth-disturbing activities. Prior to planned activities in the northern portion of the airport property, these resources should be formally recorded and proper documentation should be completed. The three cultural resource sites should be described, photographed, and a formal record of their character completed. These records should be filed with the Information Center using standard DPR-523 forms. In the event that modifications to existing structures at the airport are proposed that could be older than 45 years, an Architectural Historian should be retained to complete a survey of the Airport's buildings and structures. This study would document the buildings, structures, and facilities and determine their age and significance with respect to National Register of Historic Places criteria.

| DESIGNED BY: | A. Gold |
|---|---|
| DRAWN BY: | M. Scop |
| CHECKED BY: | A. Gold |
| APPROVED BY: | X |

| REVISIONS: | | | |
|---|---|---|---|
| NO. | DESCRIPTION: | DATE: | BY: |
| | | | |

AECOM

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**ATTACHMENT 1**

Tehachapi Municipal Airport
Tehachapi, California

| SCALE: | DATE: | PROJECT NUMBER: |
|---|---|---|
| as noted | 6/7/2011 | 60214773 0001 |

FIGURE NUMBER:
1

SHEET NUMBER:
X

Path: J:\Client-Projects\Tehachapi Municipal Airport\60214773 Archeology Survey\7.0 Deliverables\7.2 CADD-Graphics\tehachapi airport.mxd

# APPENDIX E

**Biological Constraints Review**

AECOM

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661.395.0359 fax

# Memorandum

| | | | |
|---|---|---|---|
| To | David James, City of Tehachapi | Pages | 5 |
| CC | Tom Glasgow, Tehachapi Municipal Airport Manager | | |
| Subject | Biological Constraints Evaluation for the Tehachapi Municipal Airport | | |
| From | Chris Mundhenk, Senior Project Manager - AECOM | | |
| Date | May 24, 2011 | | |

## *Introduction*

The purpose of this memo is to present the results of a biological constraints evaluation conducted by AECOM for the Tehachapi Municipal Airport. The 264-acre airport is located in the northern portion of the City of Tehachapi (City). The near-term project proposed by the City involves relocating the existing taxiway 28-feet to the south of its current location for safety of aircraft operations. Therefore, the evaluation is focused on potential biological constraints located in the immediate vicinity of the area proposed for the taxiway project. Additionally, a general survey of the surrounding airport property was conducted to identify potential biological constraints that could affect future projects proposed on airport property. An AECOM biologist surveyed the project site on May 3, 2011.

The airport is located in the Tehachapi Valley, with El Tejon Mountains to the northwest and the Tehachapi Mountains to the southeast. The terrain of the project site is relatively flat with the exception of a large rock outcrop known as Tehachapi Hill to the north. North of the runway are wastewater disposal fields. These fields provide for the disposal of treated water from the City of Tehachapi Wastewater Treatment Plant. At the time of the field visit, one of the fields was being flooded. The far northeast corner of the airport property, which includes a small rodeo arena, was being used for cattle grazing at the time of the field survey. The outline of the arena is clearly identifiable on recent aerial photographs.

Currently a levied channel carries storm water through the airport property from the southeast to the northwest along a fence line that divides the property. In addition, there is an open ditch and culvert drainage system to convey localized storm flows. This ditch was dry at the time of the field visit.

Overall, the airport area is heavily disturbed by development. Mowing and weed abatement practices are used to maintain the runway, taxiway, and safety zones for takeoffs and landings. Adjacent to the runway in the surrounding airport area, much of the property is currently non-native grasses and some sparse shrubs. Four elderberry shrubs were identified along the fence line and ditch at the northwest portion of the airport property. Numerous California ground squirrels were observed during the field visit. In addition, wildlife observed

during the field visit included common raven, house finch, European starling, red-tailed hawk and desert cottontail.

### *Biological Resources Constraints*

This memorandum describes potential biological resources constraints on the Tehachapi Municipal Airport project site. Sensitive biological resources, including special-status species and sensitive habitats, that could influence project planning, approval, and implementation are summarized.

### *Methods*

Potential biological resources constraints were evaluated based on the results of a reconnaissance-level field survey conducted on May 3, 2011 and a search of the California Department of Fish and Game (DFG) Natural Diversity Database (CNDDB). The CNDDB is a statewide inventory that includes information on sensitive biological resources. Although the CNDDB is a reliable source of site-specific information on special-status species and sensitive habitats, it contains only those records that have been submitted to DFG. Therefore, there could be past and current occurrences of special-status species and sensitive habitats in the vicinity of the project site that are not included in the CNDDB five mile search radius.

### *Special-Status Species*

Sensitive biological resources addressed in this memorandum include special-status species and sensitive habitats. Special-status species include plants and animals in the following categories:

- plants and animals that are listed under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA) as rare, threatened, or endangered;
- plants and animals considered candidates for listing or proposed for listing;
- animals identified by DFG as fully protected and/or species of special concern; and
- plants identified by the California Native Plant Society (CNPS) as List 1B (plants considered by CNPS to be rare, threatened, or endangered in California and elsewhere) or plants identified by CNPS List 2 (plants considered by CNPS to be rare, threatened, or endangered in California, but more common elsewhere).

Six special-status wildlife species have been reported to the CNDDB within a five-mile radius of the Tehachapi Municipal Airport (Exhibit 1). These include tricolored blackbird, Tehachapi pocket mouse, yellow-blotched salamander, coast-horned lizard, Tehachapi slender salamander, and Comstock's blue butterfly. No suitable habitat exists on the proposed project site for the taxiway relocation for any of these species. The airport does not support valley-foothill riparian areas for the Tehachapi slender salamander nor does it support oak woodland for the yellow-blotched salamander. Grassland areas exist in the surrounding airport property for the Tehachapi pocket mouse and coast-horned lizard. However, this area is not expected to be affected as part of the taxiway relocation. Comstock's blue butterfly requires *Eriogonum* species as its hostplant and no *Eriogonum* species were identified on the project site.

Tricolored blackbirds are not expected to use the project site because no suitable nesting habitat is present. The nearest CNDDB occurrence of tricolored blackbirds is at the Tehachapi Wastewater Treatment Plant, which is located within 5 miles of the project site.

Several elderberry shrubs were identified along the ditch and fence line at the northeast portion of the airport property. Elderberry shrubs are the host plant of the federally threatened valley elderberry longhorn beetle. The project site is located near the southeast edge of this species range. Although there are no prior CNDDB occurrences for this species in the search radius, loss of elderberry shrubs could be considered a potential impact on this species. Because it is unlikely that the valley elderberry longhorn beetle occurs in the project vicinity, it is unlikely that this species would present a constraint to future development on airport property.

***Special-Status Plants***

Eight special-status plants have been reported to the CNDDB within a five-mile radius of the Tehachapi Airport. These include calico monkeyflower, Coulter's goldfields, pale-yellow layia, Palmer's mariposa lily, round-leaved filaree, Tehachapi monardella, Tracy's eriastrum and Baja navarretia. None of these plants are expected to occur on the project site because of the absence of suitable habitat in the proposed project footprint. Suitable habitats for these species include cismontane coniferous forest, upland forest, marshes and vernal pools. The project area for the taxiway is heavily disturbed and does not support any of these habitat types. Therefore, special-status plants are not expected to constrain development of the proposed project.

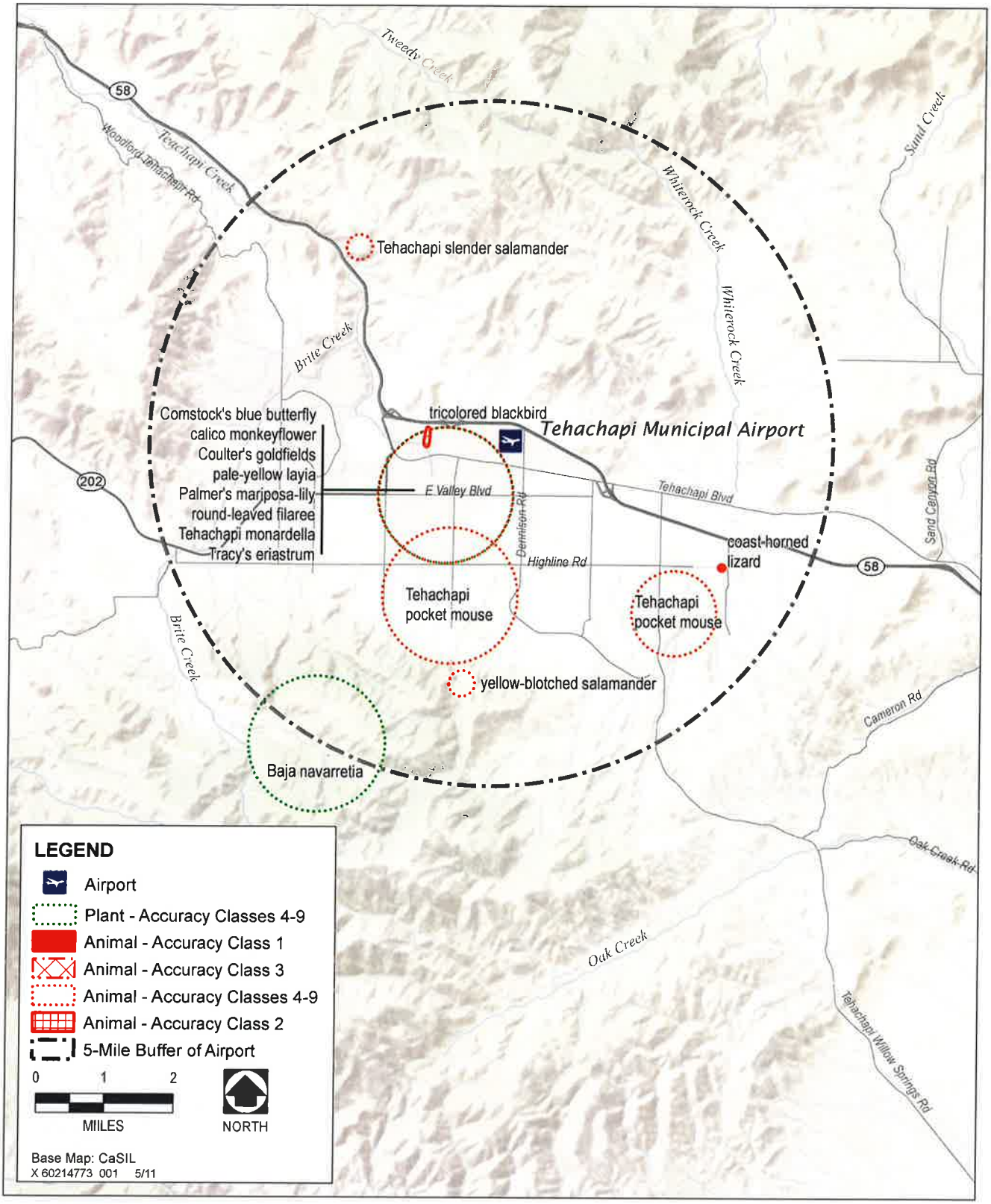
***Sensitive Habitats***

Sensitive habitats include those that are of special concern to resource agencies, or that are afforded specific consideration through the California Environmental Quality Act (CEQA), Section 1600 of the California Fish and Game Code, and Sections 404 and 401 of the federal Clean Water Act (CWA). Areas meeting the regulatory definition of "Waters of the US" (jurisdictional waters), including wetlands, are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the Clean Water Act. CWA Section 401 specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal licensing or permitting agency with a certification that any such discharge will not violate state water quality standards. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by DFG under Section 1602 of the California Fish and Game Code. Under Section 1602, "stream" is defined as a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life.

Although highly disturbed, the wastewater disposal fields, levied channels and drainage ditch that run across the surrounding airport property could potentially meet the definition of Waters of the US. These features may provide wildlife habitat value and may be subject to state and/or federal regulatory jurisdiction. A wetland delineation would need to be completed and verified by USACE to conclusively determine if wetlands and waters of the United States are present on the project site. However, the wastewater disposal fields, levied channel and drainage ditch are not expected to be impacted as part of the project area for the taxiway relocation.

### *Conclusions and Recommendations*

Based on the field survey results, and database and literature review, AECOM concludes that the proposed airport taxiway relocation project site is not expected to support sensitive biological resources. Sensitive biological resources located elsewhere on airport property that could potentially constrain future development are limited to small areas that could be considered jurisdictional wetlands. The drainages in the surrounding airport property may potentially meet USACE and DFG jurisdictional criteria for wetlands and/or Waters of the United States.




Source: CNDDB 2011, Kern County 2008

Special-status Species Occurrences within 5-miles of Tehachapi Municipal Airport

DRAFT - Not for Public Review

# APPENDIX F

## Botanical Survey

AECOM
2400 Professional Parkway
Suite 100
Santa Maria, CA 93455
www.aecom.com

805 938 0855 tel
805 938 0047 fax

May 22, 2014

David James
City of Tehachapi
Community Development Director
115 Robinson Street
Tehachapi, CA 93561

**Subject: Botanical Survey at the Proposed Tehachapi Event Center, Tehachapi, CA**

Dear Mr. James,

AECOM is pleased to present this letter summarizing the results of spring botanical surveys performed at the proposed Tehachapi Event Center in Tehachapi, California.

## BACKGROUND

The Tehachapi Event Center and Rodeo Grounds (Project) is designed to provide entertainment and recreation facilities to the residents of the city of Tehachapi and surrounding areas. The Project is located on lands owned by the City of Tehachapi.

The proposed Project area encompasses approximately 77 acres, the majority of which is currently being used as disposal fields for treated wastewater by the City of Tehachapi Wastewater Treatment Plant (Figure 1). The Project would include a variety of facilities including a banquet area, covered arena, park areas, motocross/BMX track, multi-use trail, performance area, parking facilities, and an existing rodeo area (Figure 2).

## METHODS

Survey design and implementation followed protocol guidances: U.S. Fish and Wildlife Service General Rare Plant Survey Guidelines (USFWS 2002); Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009); and California Native Plant Society Botanical Survey Guidelines (CNPS 2001).

A literature and database search of the California Natural Diversity Database (CNDDB) and CNPS *Inventory for Rare and Endangered Vascular Plants of California* was conducted in May 2014. Results of the literature and database search identified 8 special-status plant species within a 5-mile radius of the Project Area (Table 1).

Surveys consisted of comprehensive and systematic techniques following USFWS, CDFW, and CNPS protocols. Transects were spaced so that taxa could be identified in each habitat. Meandering transects were performed on the central rock outcrop (known as Tehachapi Hill) that is outside the area of direct impacts.

Survey timing was defined by the target species blooming periods. All target species were identifiable at the time of the survey. The survey was conducted on May 6, 2014 by AECOM botanist Robin Murray, assisted by AECOM biologist Rocky Brown. Unknown plant species were keyed using the Jepson Manual, Second Edition (Baldwin et. al. 2012)

Biologists conducting the survey carried the following equipment:

- Aerial maps which included reference markers of the survey area
- Trimble GeoXH units capable of sub-meter accuracy
- Field notebook for documenting species encountered and plant habitat characteristics
- Digital camera to document findings by photographing habitat conditions and flora of interest
- 10x hand lenses
- Containers to collect unknown species

General data recorded during the sensitive plant survey included:

- Date, time, and weather conditions of the survey
- GPS waypoints for observed sensitive plants
- All vascular plants observed onsite (native or naturalized)
- Any special status species observed and associated species
- Representative photographs of the survey area and flora of interest

**RESULTS**

During the course of the surveys, 45 plant species were observed, of which 31 are native, and 14 naturalized (Table 2). All species encountered were identifiable to the species level at the time of the survey. None of these species were rare or sensitive.

The majority of the survey area consisted of fallow agricultural fields that were being used for wastewater disposal. The areas to the east and west of Tehachapi Hill were dominated by the nonnative grasses ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis*), and foxtail barley (*Hordeum murinum*), as well as black mustard (*Brassica nigra*) and narrow leaved plantain (*Plantago lanceolata*). The native grass species beardless wild rye (*Elymus triticoides*) was also found. There was little plant diversity within these areas, likely due to the frequent disturbance of these areas as a result of their use as wastewater disposal fields.

The great majority of the plant diversity as well as native plant species were found within the central rock outcrop. Dominant plant species within this area include the native shrubs rubber rabbitbrush (*Ericameria nauseosa*), rock goldenbush (*Ericameria cuneata*), and gaping keckiella (*Keckiella breviflora* var. *breviflora*) as well as the native herbs whispering bells (*Emmenanthe penduliflora* var. *penduliflora*), fiddleneck (*Amsinckia menziesii*) and distant phacelia (*Phacelia distans*). A variety of ornamental tree species are

found within and surrounding the proposed project area, including Bishop pine (*Pinus muricata*), Jeffrey pine (*Pinus jeffreyi*), Fremont cottonwood (*Populus fremontii*) and valley oak (*Quercus lobata*).

Since the proposed project will be developed within the previously disturbed area of the site with minimal plant diversity, and no sensitive plant species were observed during survey efforts, no impacts to sensitive plant species are anticipated. Tehachapi Hill, which hosts the majority of the plant diversity on site, will not be disturbed by project activities. Due to these factors, measures to avoid or minimize impacts to sensitive plant species are not warranted.

Should you have further questions or require additional information regarding this submittal, please contact either myself at (805) 938-3500 or Wayne Vogler at (805) 938-5383.

Respectfully,

Robin Murray

Robin Murray
Biologist

**REFERENCES**

Baldwin et. al, 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. Berkeley and Los Angeles University of California Press.

California Department of Fish and Game, 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.*

California Natural Diversity Database (CNDDB), May 2014. Natural Heritage Division, California Department of Fish and Game, Sacramento, California.

California Native Plant Society, June 2001. *CNPS Botanical Survey Guidelines*.

California Native Plant Society, May 2014. Online Rare and Endangered Species Plant Inventory.

U.S. Fish and Wildlife Service, July 2002. *General Rare Plant Survey Guidelines*.

**ATTACHMENTS**

Figure 1- Proposed Project Area

Figure 2- Project Master Plan

Table 1- Rare and Sensitive Plants within Five Miles of the Proposed Tehachapi Event Center

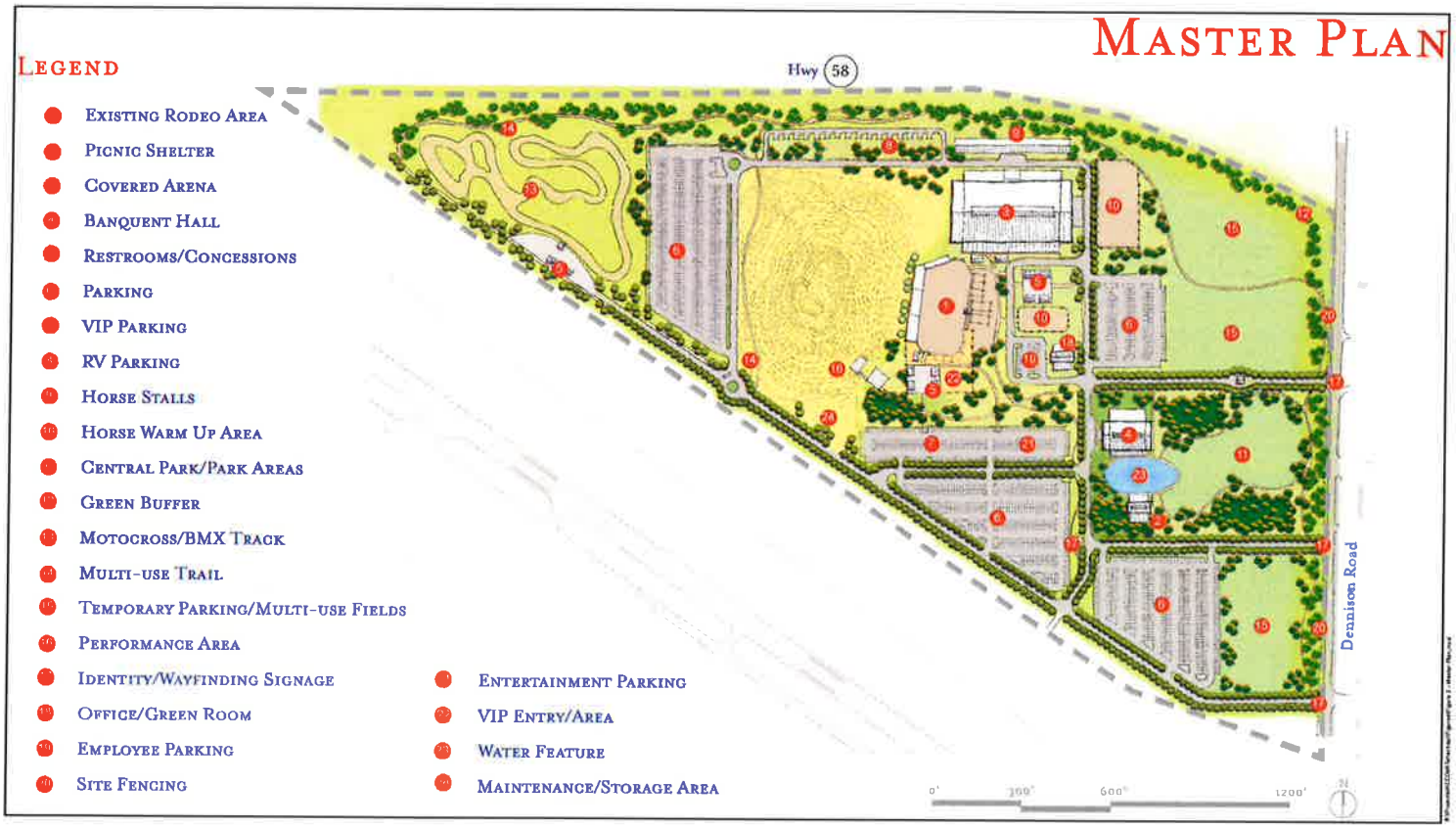
Table 2- Plant Species Observed Within the Footprint of the Proposed Tehachapi Event Center

Project Area

AECOM

TEHACHAPI EVENTS CENTER
AND RODEO GROUNDS

Figure 1




Master Plan

AECOM

TEHACHAPI EVENTS CENTER
AND RODEO GROUNDS

Figure 2

Table 1. Rare and Sensitive Plants within Five Miles of the Proposed Tehachapi Event Center

| Scientific Name | Common Name | Status[1] | Blooming Period | Habitats | Potential |
|---|---|---|---|---|---|
| *California macrophylla* | round-leaved filaree | 1B.1 | March-May | Cismontane woodland, valley and foothill grasslands on clayey soils. | Unlikely due to lack of clayey soils and disturbed nature of habitat. |
| *Calochortus palmeri var. palmeri* | Palmer's mariposa lily | 1B.2 | April-July | Chaparral, lower montane coniferous forests, meadows and seeps. | Potential due to presence of chaparral. |
| *Eriastrum tracyi* | Tracy's eriastrum | SR, 3.2 | May-July | Chaparral, cismontane woodland | Potential due to presence of chaparral. |
| *Lasthenia glabrata* ssp. *coulteri* | Coulter's goldfields | 1B.1 | February-June | Coastal salt marshes and swamps; playas, vernal pools. | Unlikely due to lack of undisturbed mesic habitat. |
| *Layia heterotricha* | pale-yellow layia | 1B.1 | March-June | Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland on alkaline or clayey soils. | Unlikely due to lack of clayey soils and disturbed nature of habitat. |
| *Mimulus pictus* | calico monkeyflower | 1B.2 | March-May | Broadleaf upland forest, cismontane woodland. Typically found in granitic, disturbed areas. | Unlikely. Constituent elements of suitable habitat not present. |
| *Monardella linoides* ssp. *oblongata* | Tehachapi monardella | 1B.3 | June-August | Lower montane coniferous forest, pinyon and juniper woodland, and upper montane coniferous forest. | Unlikely. Constituent elements of suitable habitat not present. |
| *Navarretia peninsularis* | Baja navarretia | 1B.2 | June-August | Openings within chaparral, lower montane coniferous forest, pinyon and juniper woodland, meadows and seeps. Typically found within mesic areas. | Limited potential. Openings within chaparral are present, but these areas are not mesic in nature. |

NOTES:

1 SR=State Rare. CNPS California Rare Plant Rank: 1B- rare, threatened or endangered in California and elsewhere; 2- rare, threatened or endangered in California, but more common elsewhere; 4- limited distribution. CNPS threat ranks: 0.1- seriously threatened in California; 0.2- fairly threatened in California

Table 2. Plant Species Observed Within the Footprint of the Proposed Tehachapi Event Center

| Scientific Name | Common Name | Origin |
|---|---|---|
| *Achillea millefolium* | yarrow | Native |
| *Amsinckia menziesii* | fiddleneck | Native |
| *Argemone corymbosa* | prickly poppy | Native |
| *Asclepias fascicularis* | narrow leaf milkweed | Native |
| *Astragalus douglasii* | Douglas's milkvetch | Native |
| *Brassica nigra* | black mustard | Naturalized |
| *Bromus diandrus* | ripgut brome | Naturalized |
| *Bromus madritensis* | red brome | Naturalized |
| *Calochortus venustus* | butterfly mariposa lily | Native |
| *Chamaesyce albomarginata* | rattlesnake weed | Native |
| *Chenopodium californicum* | California goosefoot | Native |
| *Cryptantha nevadensis* var. *nevadensis* | Nevada cryptantha | Native |
| *Ehrharta calycina* | veldt grass | Naturalized |
| *Elymus triticoides* | beardless wild rye | Native |
| *Emmenanthe penduliflora* var. *penduliflora* | whispering bells | Native |
| *Ericameria cuneata* | rock goldenbush | Native |
| *Ericameria nauseosa* | rubber rabbitbrush | Native |
| *Erodium cicutarium* | redstem filaree | Naturalized |
| *Eschscholzia californica* | California poppy | Native |
| *Grindelia camporum* | common gumplant | Native |
| *Hirschfeldia incana* | summer mustard | Naturalized |
| *Hordeum murinum* | foxtail barley | Naturalized |
| *Juniperus californica* | California juniper | Native |
| *Keckiella breviflora* var. *breviflora* | gaping keckiella | Native |
| *Corethrogyne filaginifolia* | common sandaster | Native |
| *Marrubium vulgare* | horehound | Naturalized |
| *Melilotus indicus* | annual yellow sweetclover | Naturalized |
| *Phacelia distans* | common phacelia | Native |
| *Pinus jeffreyi* | Jeffrey pine | Native |
| *Pinus muricata* | bishop pine | Native (in cultivation) |
| *Plantago lanceolata* | narrow leaved plantain | Naturalized |
| *Polypogon monspeliensis* | rabbitsfoot grass | Naturalized |
| *Populus fremontii* | Fremont cottonwood | Native |
| *Quercus* x *alvordiana* | Alvord oak | Native |
| *Quercus lobata* | valley oak | Native |
| *Ribes quercetorum* | foothill gooseberry | Native |
| *Nasturtium officinale* | watercress | Native |
| *Salix exigua* | narrowleaf willow | Native |
| *Salix gooddingii* | black willow | Native |
| *Salsola tragus* | Russian thistle | Naturalized |
| *Sambucus nigra* ssp. *caerulea* | blue elderberry | Native |
| *Scrophularia californica* | California figwort | Native |
| *Sisymbrium irio* | London rocket | Naturalized |
| *Uropappus lindleyi* | silver puffs | Native |
| *Vicia benghalensis* | purple vetch | Naturalized |

# APPENDIX G

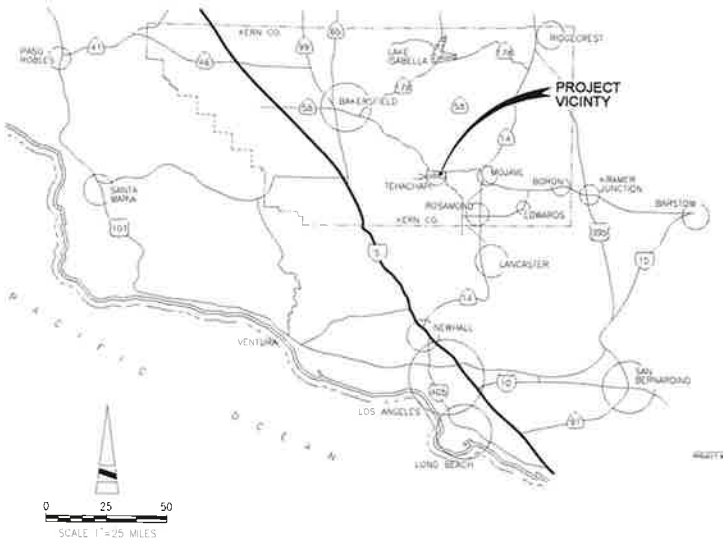
Event Center Infrastructure Design

CONSTRUCTION PLANS FOR THE

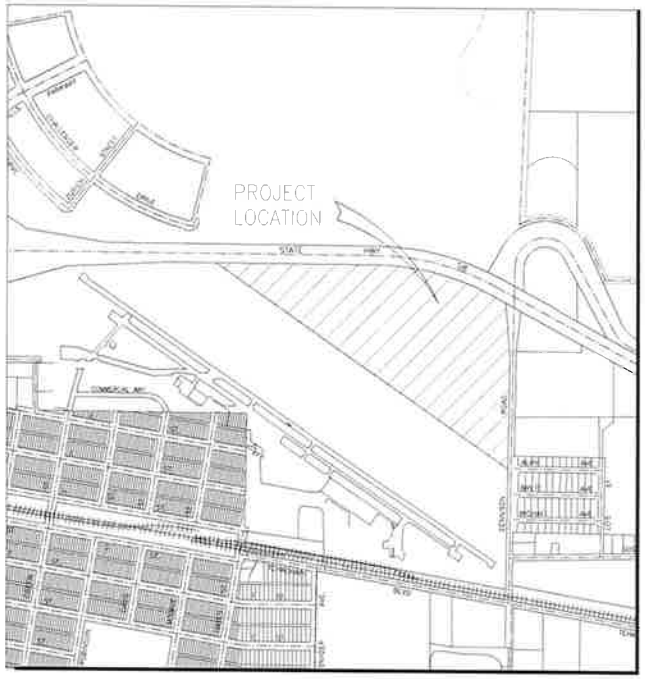
# CITY OF TEHACHAPI

## EVENT CENTER INFRASTRUCTURE PROJECT

AUGUST 2014




VICINITY MAP




LOCATION MAP

600 0 600 1200
SCALE IN FEET

APPROVAL:

JOHN HOUSTON SCHLOSSER, CITY ENGINEER — DATE

GREG GARRETT, CITY MANAGER — DATE

JON CURRY, PUBLIC WORKS DIRECTOR — DATE

AECOM

CITY OF TEHACHAPI CALIFORNIA

60309567

**EVENT CENTER INFRASTRUCTURE PROJECT**

Tehachapi, CA

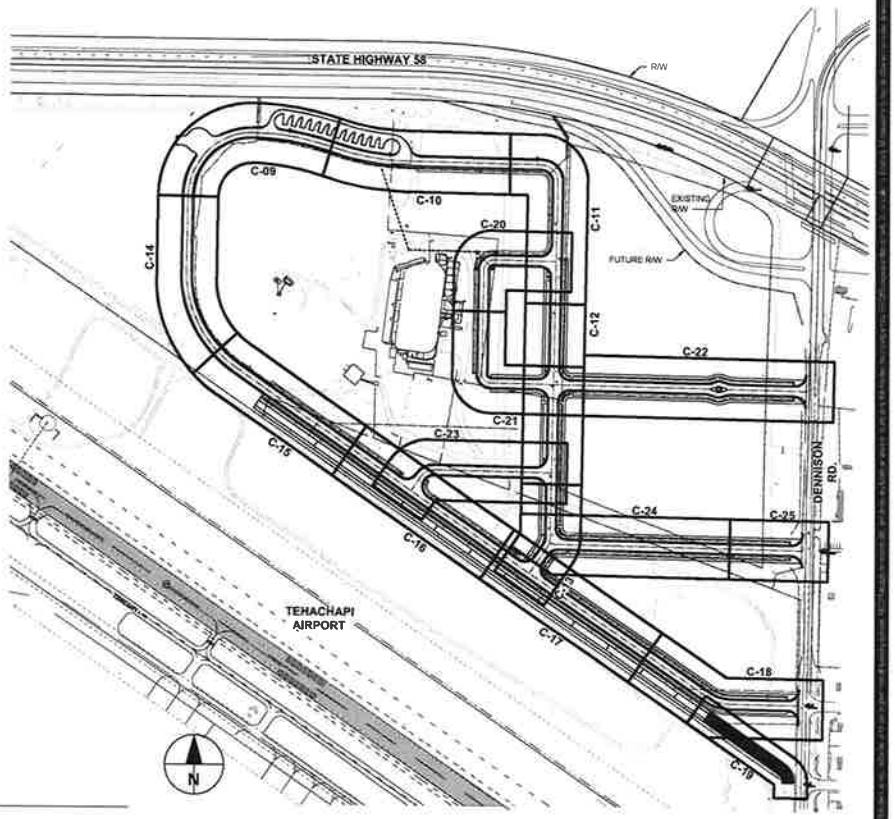
**90% DESIGN - August 2014**

Project Management Intern: Designer: JPF Checked: — Approved: — ANSI D 22" x 34"

Last saved by: FROELICHER,J(2014-07-23) Last Plotted: 2014-07-28
Filename: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - GISN22-SHEETS\

## GENERAL NOTES:

1. WORK SHALL BE PERFORMED ACCORDING TO THE LATEST EDITION OF THE CITY OF TEHACHAPI SUBDIVISION AND DEVELOPMENT STANDARDS (CTSDS) AND ANY SPECIAL PERMITTING REQUIREMENTS.
2. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 2 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
3. ALL WORK WITHIN CITY STREETS SHALL BE EXECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND THE PUBLIC.
4. ALL MATERIALS SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE PRIOR TO BEING USED FOR CONSTRUCTION. THE OWNER'S REPRESENTATIVE HAS THE AUTHORITY TO REJECT THE USE OF MATERIALS WHICH ARE DAMAGED OR NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS.
5. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES AND TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES AND IMPROVEMENTS FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.
6. ALL UTILITIES FRAMES AND COVERS, INCLUDING SEWER AND STORM DRAIN MANHOLES AND WATER VALVES ARE TO BE ADJUSTED FLUSH WITH NEW FINISH GRADE PER CTSDS SHEET NO. 3.7 AND 4.6, RESPECTIVELY.
7. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WITH SERVICES IN THE AREA PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES AND SHALL COORDINATE WITH THE UTILITY FACILITIES AFFECTED BY THE CONSTRUCTION.
8. SURVEY MONUMENTS SHALL BE PROTECTED IN PLACE BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE REPLACEMENT OF DAMAGED OR DISPLACED SURVEY MONUMENTS AND SHALL NOTIFY THE CITY FIVE (5) WORKING DAYS PRIOR TO RESTORING MONUMENTS. MONUMENTS SHALL BE RESET BY A CALIFORNIA LICENSED LAND SURVEYOR.
9. THE CONTRACTOR AGREES UPON SUBMISSION OF HIS/HER BID THAT HE/SHE HAS VISITED THE SITE AND IS AWARE OF ANY OBSTRUCTIONS THAT AFFECT THE PROJECT COST AND THAT HIS/HER BID IS SUFFICIENT TO COVER RELEVANT EXPENSES.




SHEET INDEX

Scale 1" = 200'

## SHEET INDEX:

| SHEET No. | DRAWING | DESCRIPTION |
|---|---|---|
| 1 | C-01 | TITLE SHEET |
| 2 | C-02 | SHEET INDEX AND GENERAL NOTES |
| 3 | C-03 | HORIZONTAL AND VERTICAL CONTROL |
| 4 | C-04 | DEMOLITION PLAN |
| 5 | C-05 | OVERALL GRADING PLAN |
| 6 | C-06 | GRADING CROSS SECTIONS - 1 |
| 7 | C-07 | GRADING CROSS SECTIONS - 2 |
| 8 | C-08 | GRADING CROSS SECTIONS - 3 |
| 9 | C-09 | PLAN AND PROFILE - STA. 10+00 to STA. 16+00 |
| 10 | C-10 | PLAN AND PROFILE - STA. 16+00 to STA. 22+00 |
| 11 | C-11 | PLAN AND PROFILE - STA. 22+00 to STA. 28+00 |
| 12 | C-12 | PLAN AND PROFILE - STA. 28+00 to STA. 34+00 |
| 13 | C-13 | PLAN AND PROFILE - STA. 34+00 to STA. 37+17.75 |
| 14 | C-14 | PLAN AND PROFILE - STA. 40+00 to STA. 45+50 |
| 15 | C-15 | PLAN AND PROFILE - STA. 45+50 to STA. 51+00 |
| 16 | C-16 | PLAN AND PROFILE - STA. 51+00 to STA. 57+00 |
| 17 | C-17 | PLAN AND PROFILE - STA. 57+00 to STA. 63+00 |
| 18 | C-18 | PLAN AND PROFILE - STA. 63+00 to STA. 68+82.44 |
| 19 | C-19 | PLAN AND PROFILE - STA. 65+39.07 to STA. 69+92.20 |

## SHEET INDEX:

| SHEET No. | DRAWING | DESCRIPTION |
|---|---|---|
| 20 | C-20 | PLAN AND PROFILE - STA. 80+00 to STA. 84+50 |
| 21 | C-21 | PLAN AND PROFILE - STA. 84+50 to STA. 88+63.37 STA. 100+00 to STA. 101+00 |
| 22 | C-22 | PLAN AND PROFILE - STA. 101+00 to STA. 108+53.78 |
| 23 | C-23 | PLAN AND PROFILE - STA. 120+00 to STA. 124+99.85 |
| 24 | C-24 | PLAN AND PROFILE - STA. 130+00 to STA. 136+00 |
| 25 | C-25 | PLAN AND PROFILE - STA. 136+00 to STA. 138+78.10 |
| 26 | C-26 | TYPICAL CROSS SECTIONS - SHEET 1 |
| 27 | C-27 | TYPICAL CROSS SECTIONS - SHEET 2 |
| 28 | C-28 | DETAILS - SHEET 1 |
| 29 | C-29 | DETAILS - SHEET 2 |
| 30 | C-30 | DETAILS - SHEET 3 |

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| BVCE | VERTICAL TANGENT-CURVE INTERSECTION ELEVATION | LVC | LENGTH OF VERTICAL CURVE |
| BVCS | VERTICAL TANGENT-CURVE INTERSECTION STATION | PC | TANGENT-CURVE INTERSECTION |
| ℄ | CENTERLINE | PI | TANGENT-TANGENT INTERSECTION |
| CTSDS | CITY OF TEHACHAPI SUBDIVISION AND DEVELOPMENT STANDARDS | PVI | POINT OF VERTICAL INTERSECTION |
| CMP | CORRUGATED METAL PIPE | PVIE | POINT OF VERTICAL INTERSECTION ELEVATION |
| EG | EXISTING GRADE | PVIS | POINT OF VERTICAL INTERSECTION STATION |
| ELEV | ELEVATION | | |
| EP | EDGE OF PAVEMENT | PT | CURVE-TANGENT INTERSECTION |
| EVCE | VERTICAL CURVE-TANGENT INTERSECTION ELEVATION | RCP | REINFORCED CONCRETE PIPE |
| | | ROW (R/W) | RIGHT OF WAY |
| EVCS | VERTICAL CURVE-TANGENT INTERSECTION STATION | RSP | ROCK SLOPE PROTECTION |
| FG | FINISH GRADE | STA | STATION |
| FNC | FENCE | SWL | SWALE |

811 Know what's below. Call before you dig.

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

PROJECT

EVENT CENTER INFRASTRUCTURE PROJECT

CLIENT

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

CONSULTANT

AECOM Technical Services, Inc
5001 E. Commercentar Dr., Suite 100
Bakersfield, CA 93309
661 325 7253 tel 661 395 0359 fax
www.aecom.com

REGISTRATION

ISSUE/REVISION

| VR | DATE | DESCRIPTION |
|---|---|---|
| | August 2014 | 90% DESIGN |

AECOM WATER

FOR PRELIMINARY USE ONLY

NOT FOR CONSTRUCTION

DATE: AUGUST 2014

PROJECT NUMBER

60309567

SHEET TITLE

SHEET INDEX AND GENERAL NOTES

SHEET NUMBER

C-02

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by FROELICHER,J(2014.07.29) Last Plotted 2014-08-01
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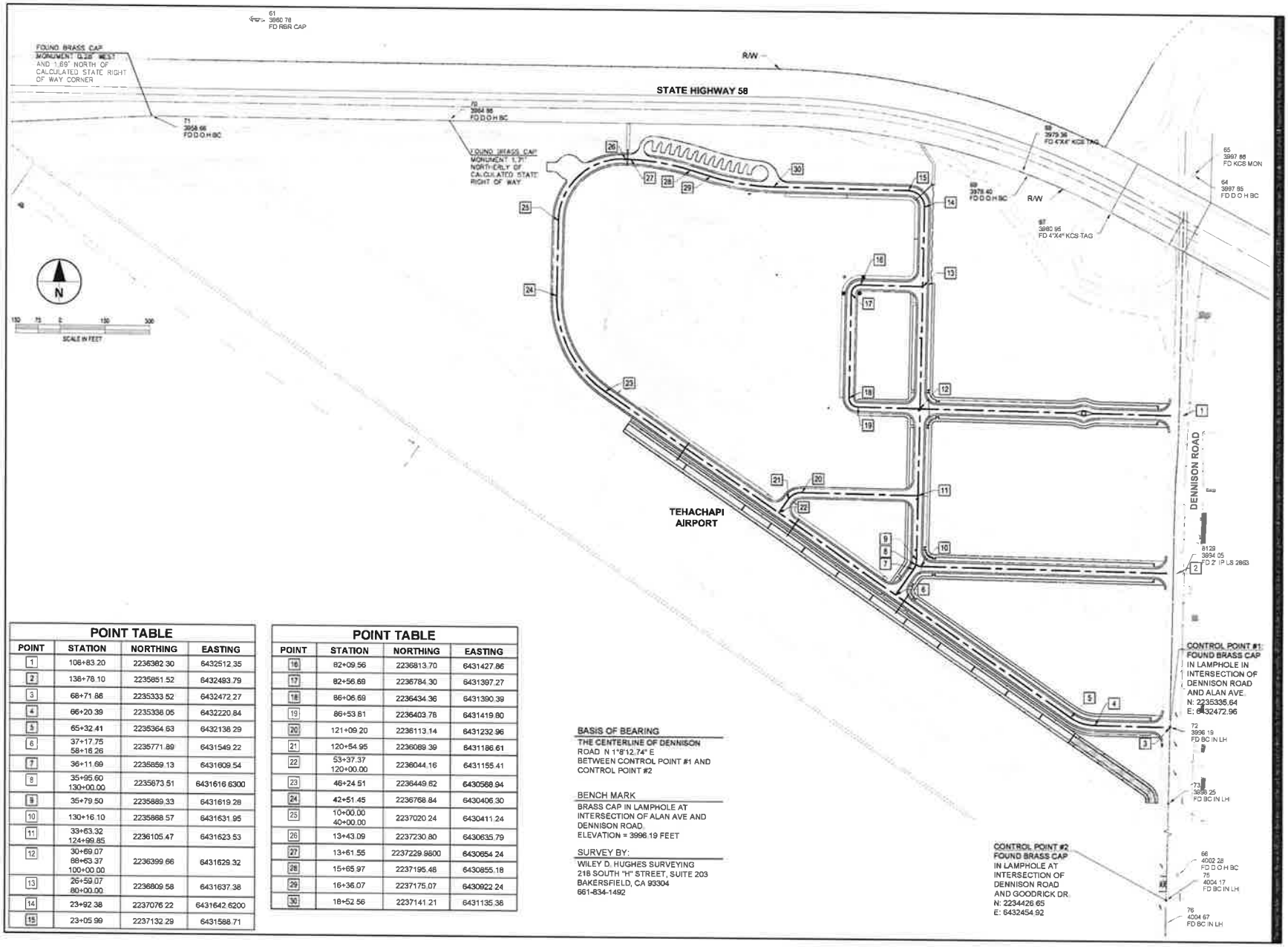


## POINT TABLE

| POINT | STATION | NORTHING | EASTING |
|---|---|---|---|
| 1 | 108+83.20 | 2236382.30 | 6432512.35 |
| 2 | 136+78.10 | 2235851.52 | 6432493.79 |
| 3 | 68+71.86 | 2235333.52 | 6432472.27 |
| 4 | 66+20.39 | 2235338.05 | 6432220.84 |
| 5 | 65+32.41 | 2235364.63 | 6432138.29 |
| 6 | 37+17.75<br>58+16.26 | 2235771.89 | 6431549.22 |
| 7 | 36+11.69 | 2235859.13 | 6431609.54 |
| 8 | 35+95.60<br>130+00.00 | 2235873.51 | 6431616.6300 |
| 9 | 35+79.50 | 2235889.33 | 6431619.28 |
| 10 | 130+16.10 | 2235868.57 | 6431631.95 |
| 11 | 33+63.32<br>124+99.85 | 2236105.47 | 6431623.53 |
| 12 | 30+69.07<br>88+63.37<br>100+00.00 | 2236399.66 | 6431629.32 |
| 13 | 26+59.07<br>80+00.00 | 2236809.58 | 6431637.38 |
| 14 | 23+92.38 | 2237076.22 | 6431642.6200 |
| 15 | 23+05.99 | 2237132.29 | 6431588.71 |

## POINT TABLE

| POINT | STATION | NORTHING | EASTING |
|---|---|---|---|
| 16 | 82+09.56 | 2236813.70 | 6431427.86 |
| 17 | 82+56.69 | 2236784.30 | 6431397.27 |
| 18 | 86+06.69 | 2236434.36 | 6431390.39 |
| 19 | 86+53.81 | 2236403.78 | 6431419.80 |
| 20 | 121+09.20 | 2236113.14 | 6431232.96 |
| 21 | 120+54.95 | 2236089.39 | 6431186.61 |
| 22 | 53+37.37<br>120+00.00 | 2236044.16 | 6431155.41 |
| 23 | 46+24.51 | 2236449.62 | 6430568.94 |
| 24 | 42+51.45 | 2236768.84 | 6430406.30 |
| 25 | 10+00.00<br>40+00.00 | 2237020.24 | 6430411.24 |
| 26 | 13+43.09 | 2237230.80 | 6430635.79 |
| 27 | 13+61.55 | 2237229.9800 | 6430654.24 |
| 28 | 15+65.97 | 2237195.46 | 6430855.18 |
| 29 | 16+36.07 | 2237175.07 | 6430922.24 |
| 30 | 18+52.56 | 2237141.21 | 6431135.38 |

**BASIS OF BEARING**

THE CENTERLINE OF DENNISON ROAD N 1°8'12.74" E BETWEEN CONTROL POINT #1 AND CONTROL POINT #2

**BENCH MARK**

BRASS CAP IN LAMPHOLE AT INTERSECTION OF ALAN AVE AND DENNISON ROAD.
ELEVATION = 3996.19 FEET

**SURVEY BY:**

WILEY D. HUGHES SURVEYING
218 SOUTH "H" STREET, SUITE 203
BAKERSFIELD, CA 93304
661-834-1492

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822.8569 fax

**CONSULTANT**

AECOM Technical Services, Inc
5001 E. Commercenter Dr., Suite 100
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AECOM WATER

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

HORIZONTAL AND VERTICAL CONTROL

**SHEET NUMBER**

C-03

Project Management Initials Designer: ____ Checked: ____ Approved: ____ ANSI D 22 x 34

Last saved by: FROELICHER,J(20140-07-29)
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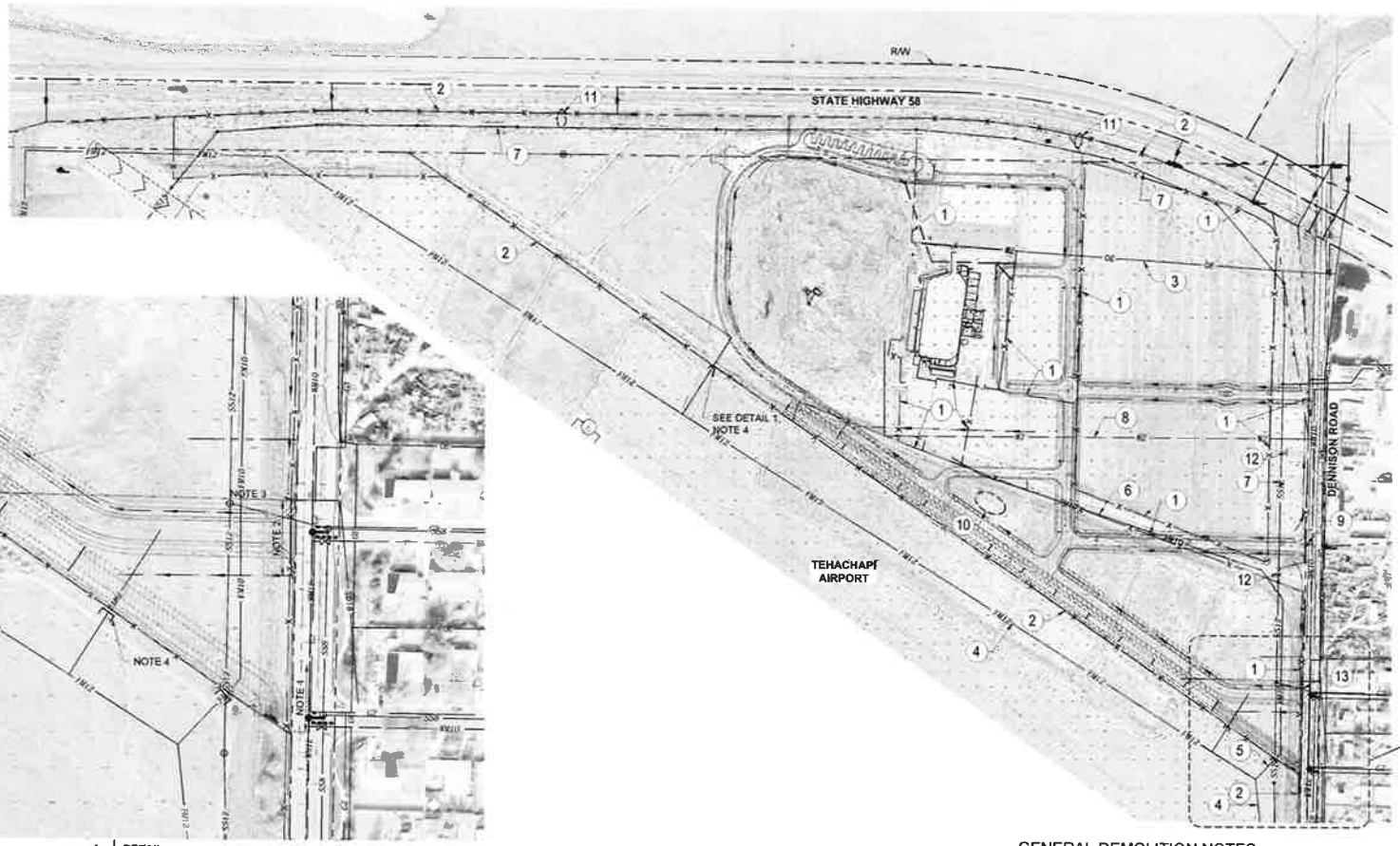


1 | DETAIL
Scale 1" = 80'

## NOTES:

1. REMOVE FENCE TO END.
2. SAWCUT AND REMOVE EXISTING CURB AND GUTTER TO 10' SOUTH OF BCR TO CATCH BASIN.
3. CATCH BASIN TO REMAIN. REMOVE AND REPLACE OUTLET PIPE PER SHEET C-18.
4. CAP PIPE 3' WEST OF FENCE OR AS DIRECTED BY OWNER. SEE GENERAL DEMOLITION NOTE 8.

N

0 200' 400'

## DEMOLITION PLAN NOTES

| ITEM | DESCRIPTION |
|---|---|
| 1 | REMOVE EXISTING FENCE |
| 2 | EXISTING FENCE TO REMAIN |
| 3 | PROTECT IN PLACE EXISTING OVERHEAD ELECTRICAL |
| 4 | EXISTING SEWER FORCE MAIN TO REMAIN |
| 5 | CUT AND CAP EXISTING SEWER FORCE MAIN |
| 6 | ABANDON OR REMOVE EXISTING SEWER FORCE MAIN, SEE GENERAL DEMOLITION NOTE 8 |
| 7 | EXISTING SEWER TO REMAIN |
| 8 | ABANDON OR REMOVE EXISTING WATER LINE. SEE GENERAL DEMOLITION NOTE 8. |
| 9 | REMOVE AND RELOCATE EXISTING FIRE HYDRANT, SEE DETAIL 1, SHEET C-25 |
| 10 | REMOVE AND RELOCATE BLEACHERS PER OWNER. |
| 11 | PROTECT IN PLACE EXISTING BILLBOARD, TYP. |
| 12 | REMOVE EXISTING GATE |
| 13 | REMOVE EXISTING CURB AND GUTTER. |

## GENERAL DEMOLITION NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS.
2. ALL EXISTING STRUCTURES TO REMAIN.
3. CLEAR AND GRUB SITE PER SECTION 311100.
4. CONTRACTOR SHALL NOTIFY THE CITY AT LEAST FIVE DAYS PRIOR TO DEMOLITION ACTIVITY.
5. ALL ITEMS TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISPOSAL FEES.
7. REMOVE ALL FENCING AROUND ROW CROPS AND OTHER FENCING THAT INTERFERES WITH FULL CONSTRUCTION BUILD OUT. FOR FENCING NOT SHOWN, CONFIRM REMOVAL WITH OWNER.
8. CUT, CAP, AND REMOVE ALL PIPE WITHIN THE ROAD SECTION LIMITS. POTHOLE AND REMOVE ALL PIPE INTERFERING WITH GRADING AND COMPACTION. PIPE NOT INTERFERING WITH GRADING AND COMPACTION SHALL BE ABANDONED.

811 Know what's below. Call before you dig.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

DEMOLITION PLAN

**SHEET NUMBER**

C-04

Project Management Initials Designer Checked Approved ANSI D (22" x 34")
Last saved by: P:\HDELICHRIJ\2014-01-07\tehachapi\Tehachapi\Tehachapi.dwg(C-01) Designer Checker Approved
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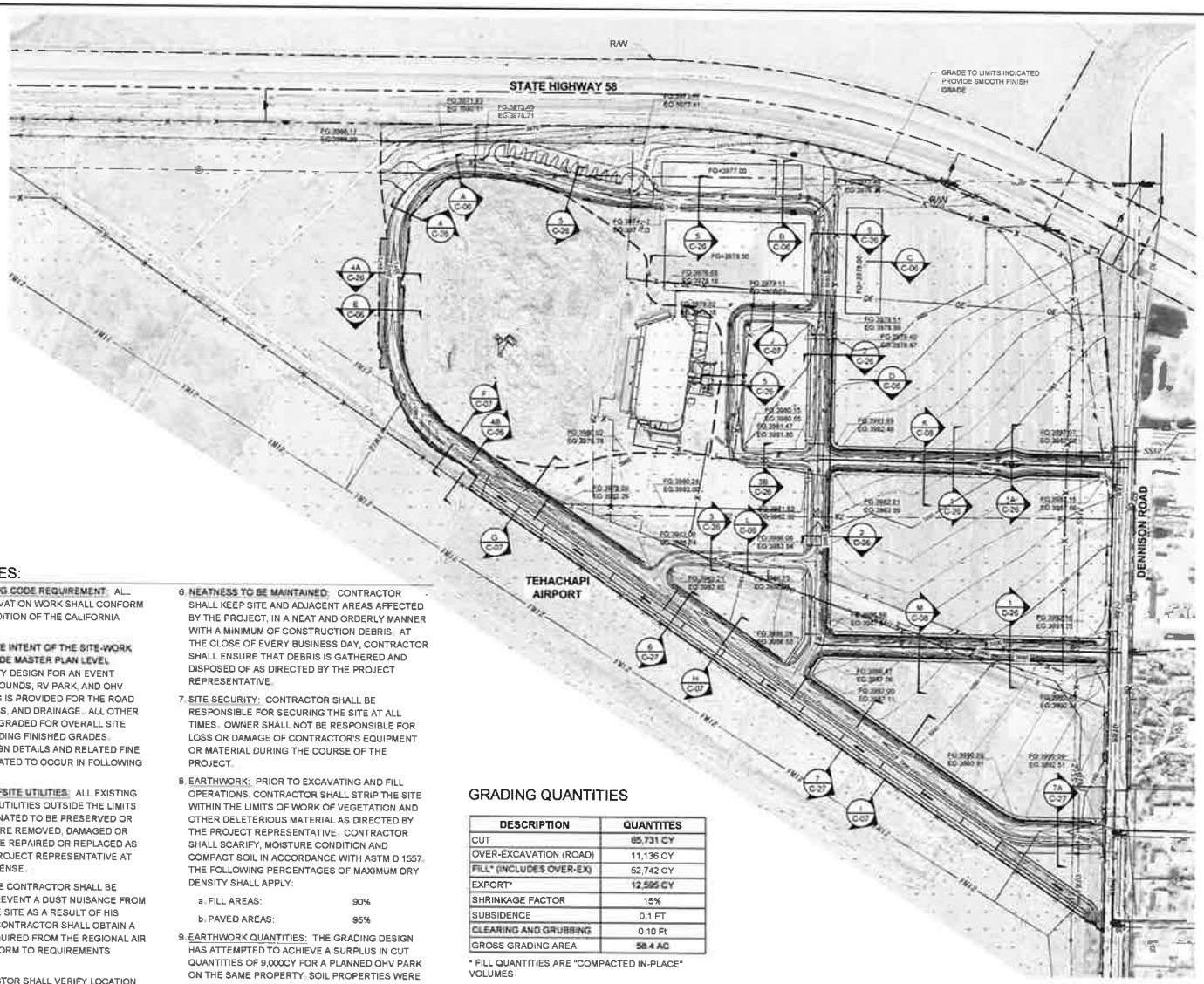


## GRADING NOTES:

1. CALIFORNIA BUILDING CODE REQUIREMENT: ALL GRADING AND EXCAVATION WORK SHALL CONFORM TO THE CURRENT EDITION OF THE CALIFORNIA BUILDING CODE.
2. DESIGN INTENT: THE INTENT OF THE SITE-WORK DESIGN IS TO PROVIDE MASTER PLAN LEVEL GRADING AND UTILITY DESIGN FOR AN EVENT CENTER, RODEO GROUNDS, RV PARK, AND OHV PARK. FINE GRADING IS PROVIDED FOR THE ROAD LAYOUT, WALK PATHS, AND DRAINAGE. ALL OTHER AREAS ARE ROUGH GRADED FOR OVERALL SITE DRAINAGE AND BUILDING FINISHED GRADES. FURTHER SITE DESIGN DETAILS AND RELATED FINE GRADING IS ANTICIPATED TO OCCUR IN FOLLOWING PHASES.
3. PROTECTION OF OFFSITE UTILITIES: ALL EXISTING IMPROVEMENTS OR UTILITIES OUTSIDE THE LIMITS OF WORK OR DESIGNATED TO BE PRESERVED OR PROTECTED, THAT ARE REMOVED, DAMAGED OR UNDERCUT, SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE PROJECT REPRESENTATIVE AT CONTRACTOR'S EXPENSE.
4. DUST CONTROL: THE CONTRACTOR SHALL BE RESPONSIBLE TO PREVENT A DUST NUISANCE FROM ORIGINATING AT THE SITE AS A RESULT OF HIS OPERATIONS. THE CONTRACTOR SHALL OBTAIN A DUST PERMIT IF REQUIRED FROM THE REGIONAL AIR DISTRICT AND CONFORM TO REQUIREMENTS THEREIN.
5. UTILITIES: CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES THAT MAY BE IMPACTED BY CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT AND SHALL PRESERVE AND PROTECT THEM THROUGH THE DURATION OF THE PROJECT. ANY DAMAGE TO EXISTING UTILITIES THAT ARE A DIRECT RESULT OF CONSTRUCTION ACTIVITIES SHALL BE PAID FOR BY THE CONTRACTOR AT HIS EXPENSE.
6. NEATNESS TO BE MAINTAINED: CONTRACTOR SHALL KEEP SITE AND ADJACENT AREAS AFFECTED BY THE PROJECT, IN A NEAT AND ORDERLY MANNER WITH A MINIMUM OF CONSTRUCTION DEBRIS. AT THE CLOSE OF EVERY BUSINESS DAY, CONTRACTOR SHALL ENSURE THAT DEBRIS IS GATHERED AND DISPOSED OF AS DIRECTED BY THE PROJECT REPRESENTATIVE.
7. SITE SECURITY: CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THE SITE AT ALL TIMES. OWNER SHALL NOT BE RESPONSIBLE FOR LOSS OR DAMAGE OF CONTRACTOR'S EQUIPMENT OR MATERIAL DURING THE COURSE OF THE PROJECT.
8. EARTHWORK: PRIOR TO EXCAVATING AND FILL OPERATIONS, CONTRACTOR SHALL STRIP THE SITE WITHIN THE LIMITS OF WORK OF VEGETATION AND OTHER DELETERIOUS MATERIAL AS DIRECTED BY THE PROJECT REPRESENTATIVE. CONTRACTOR SHALL SCARIFY, MOISTURE CONDITION AND COMPACT SOIL IN ACCORDANCE WITH ASTM D 1557. THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY SHALL APPLY:
   a. FILL AREAS: 90%
   b. PAVED AREAS: 95%
9. EARTHWORK QUANTITIES: THE GRADING DESIGN HAS ATTEMPTED TO ACHIEVE A SURPLUS IN CUT QUANTITIES OF 9,000CY FOR A PLANNED OHV PARK ON THE SAME PROPERTY. SOIL PROPERTIES WERE ASSUMED; THEREFORE, SURPLUS MATERIAL BEYOND 9,000CY WAS PROVIDED IN ORDER TO ENSURE SUFFICIENT MATERIAL. IN THE EVENT MORE EXPORT THAN DESIRED IS GENERATED, IT MAY BE USED FOR FUTURE SITE GRADING, STOCKPILED, OR REMOVED AT THE CITY'S DISCRETION.

## GRADING QUANTITIES

| DESCRIPTION | QUANTITES |
|---|---|
| CUT | 65,731 CY |
| OVER-EXCAVATION (ROAD) | 11,136 CY |
| FILL* (INCLUDES OVER-EX) | 52,742 CY |
| EXPORT* | 12,595 CY |
| SHRINKAGE FACTOR | 15% |
| SUBSIDENCE | 0.1 FT |
| CLEARING AND GRUBBING | 0.10 Ft |
| GROSS GRADING AREA | 58.4 AC |

* FILL QUANTITIES ARE "COMPACTED IN-PLACE" VOLUMES

NOTE:
QUANTITIES CALCULATED USING CIVIL3D SURFACE MODEL COMPARISON. MODEL COMPARED FG TO EG (LESS CLEARING AND GRUBBING AND SUBSIDENCE).

N

SCALE 1" = 150'

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PROJECT
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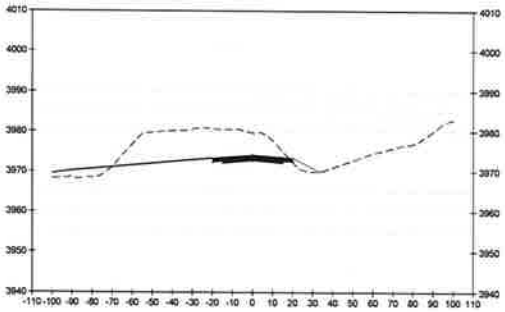
DATE: AUGUST 2014

PROJECT NUMBER
60309567

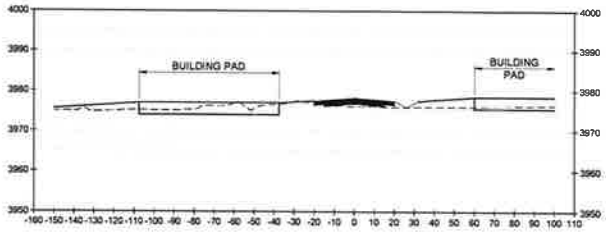
SHEET TITLE
OVERALL GRADING PLAN

SHEET NUMBER
C-05



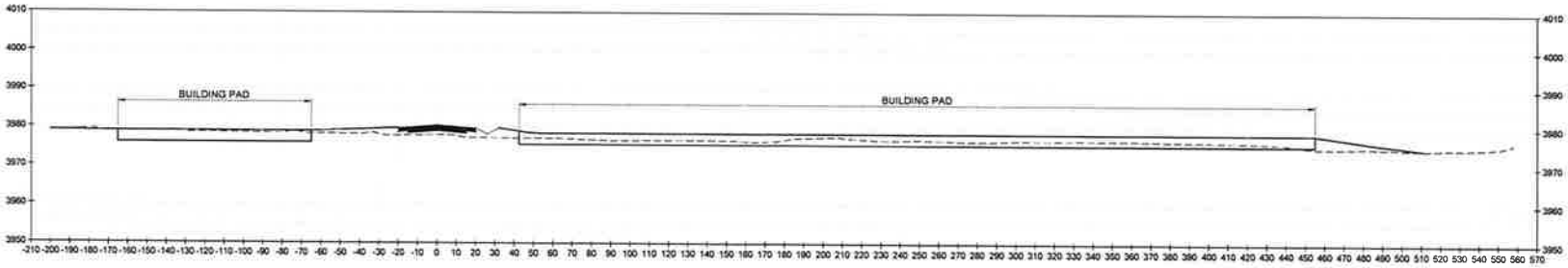
A | SECTION STA. 13+00

SCALE: HOR 1" = 30' - VERT 1" =15'



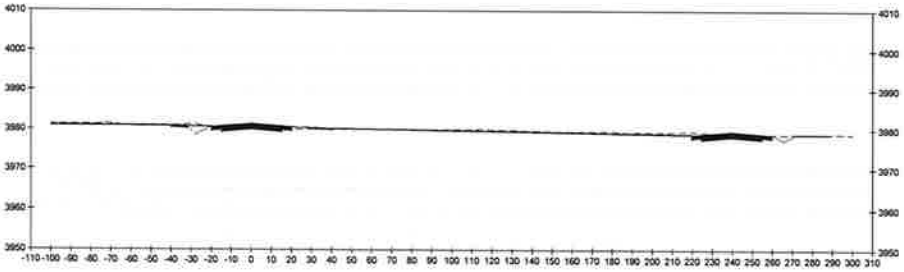

B | SECTION STA. 22+30

SCALE: HOR 1" = 30' - VERT 1" =15'



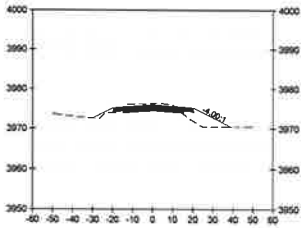

C | SECTION STA. 25+00

SCALE: HOR 1" = 30' - VERT 1" =15'



D | SECTION STA. 28+50

SCALE: HOR 1" = 30' - VERT 1" =15'




E | SECTION STA. 42+00

SCALE: HOR 1" = 30' - VERT 1" =15'

811

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**PROJECT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

GRADING CROSS SECTIONS - 1

**SHEET NUMBER**

C-06

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22 x 34

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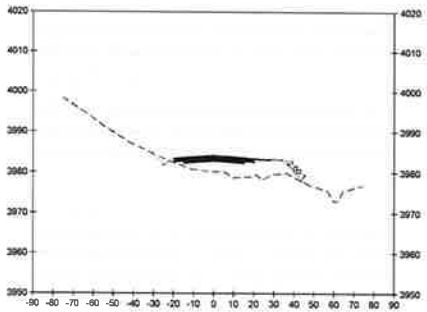
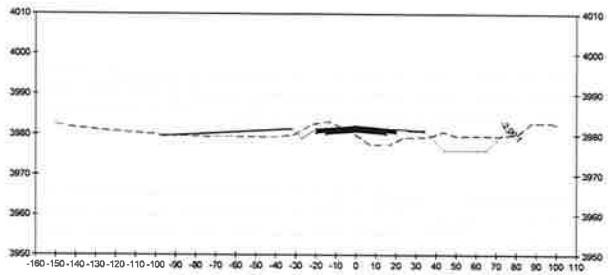


F | SECTION STA. 46+40

SCALE HOR 1" = 30' - VERT 1" =15'



G | SECTION STA. 49+00

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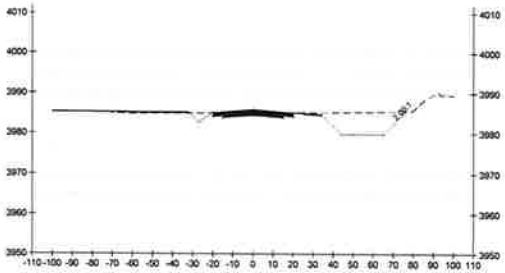

H | SECTION STA. 58+00

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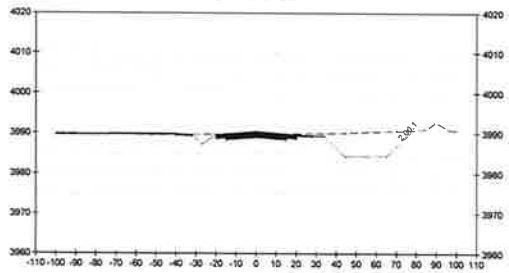

I | SECTION STA. 62+00

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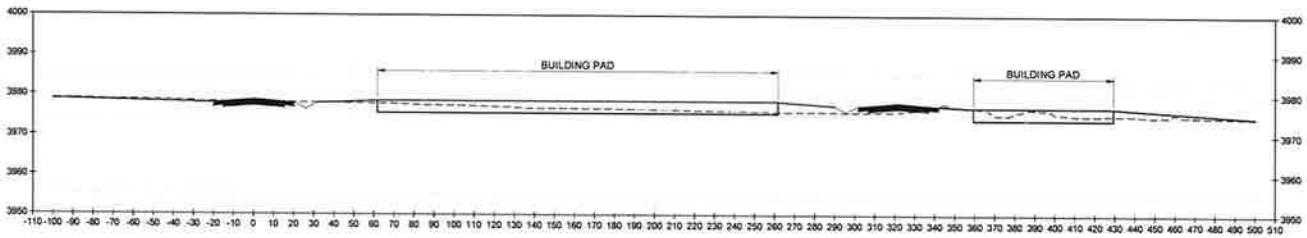


J | SECTION STA. 81+40

SCALE HOR 1" = 30' - VERT 1" =15'

Know what's **below.**
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H: 1" = 30
V: 1" = 15'

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

GRADING CROSS SECTIONS - 2

**SHEET NUMBER**

C-07

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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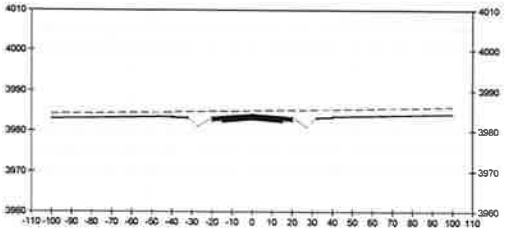
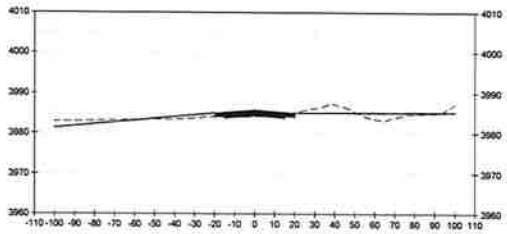
0 30' 60'
H: 1" = 30
V: 1" = 15'
0 15' 30'



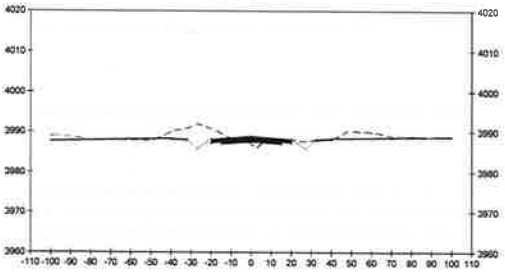

**K** | **SECTION STA. 103+00**

SCALE HOR 1" = 30' - VERT 1" =15'




**L** | **SECTION STA. 123+00**

SCALE: HOR 1" = 30' - VERT 1" =15'




**M** | **SECTION STA. 133+00**

SCALE HOR 1" = 30' - VERT 1" =15'

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**PROJECT**

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**CLIENT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

GRADING CROSS SECTIONS - 3

**SHEET NUMBER**

C-08

Project Management/Initials Designer ___ Checked ___ Approved ___ ANSI D 22" x 34"

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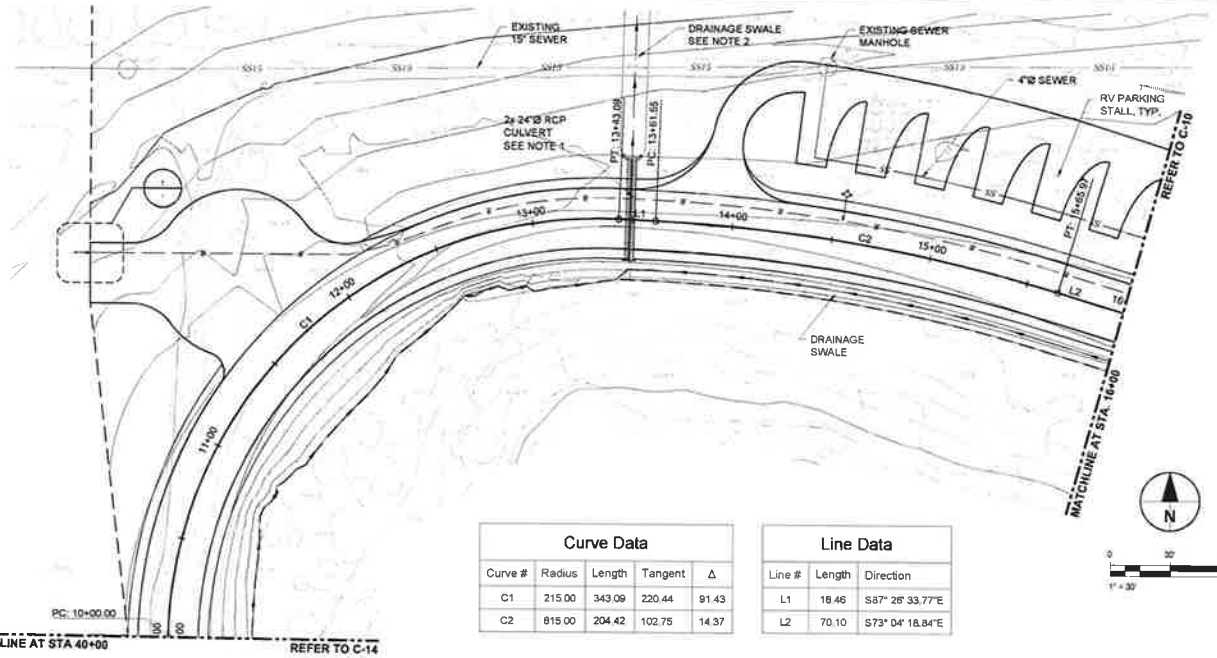
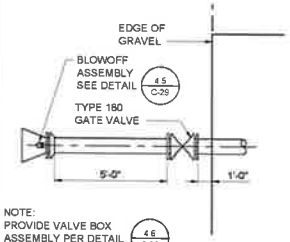
## NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B, SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.
2. PROVIDE FACING CLASS RSP AT ALL LOCATIONS WHERE CONCENTRATED WATER FLOW FROM SITE ENTERS CALTRANS R/W.



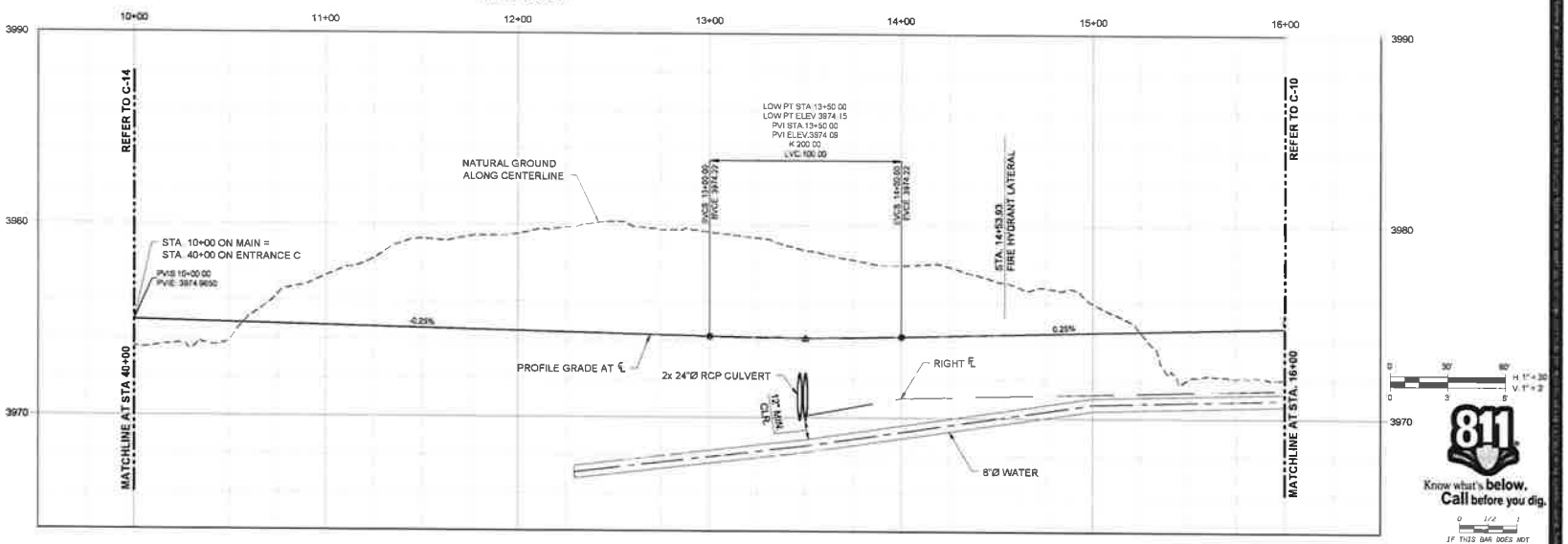

NOTE:
PROVIDE VALVE BOX ASSEMBLY PER DETAIL 4.6 / C-29

1 END OF WATER LINE

NOT TO SCALE

| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C1 | 215.00 | 343.09 | 220.44 | 91.43 |
| C2 | 815.00 | 204.42 | 102.75 | 14.37 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L1 | 18.46 | S87° 26' 33.77"E |
| L2 | 70.10 | S73° 04' 18.84"E |

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**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 10+00 TO STA. 16+00

**SHEET NUMBER**

C-09

Project Management Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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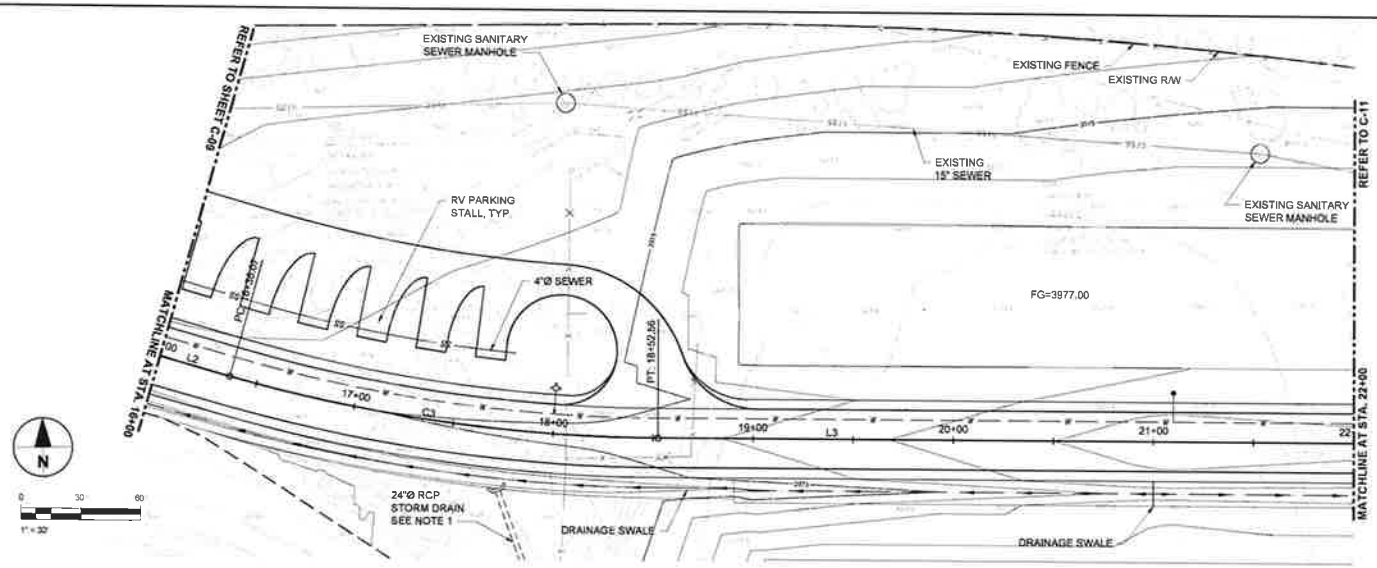
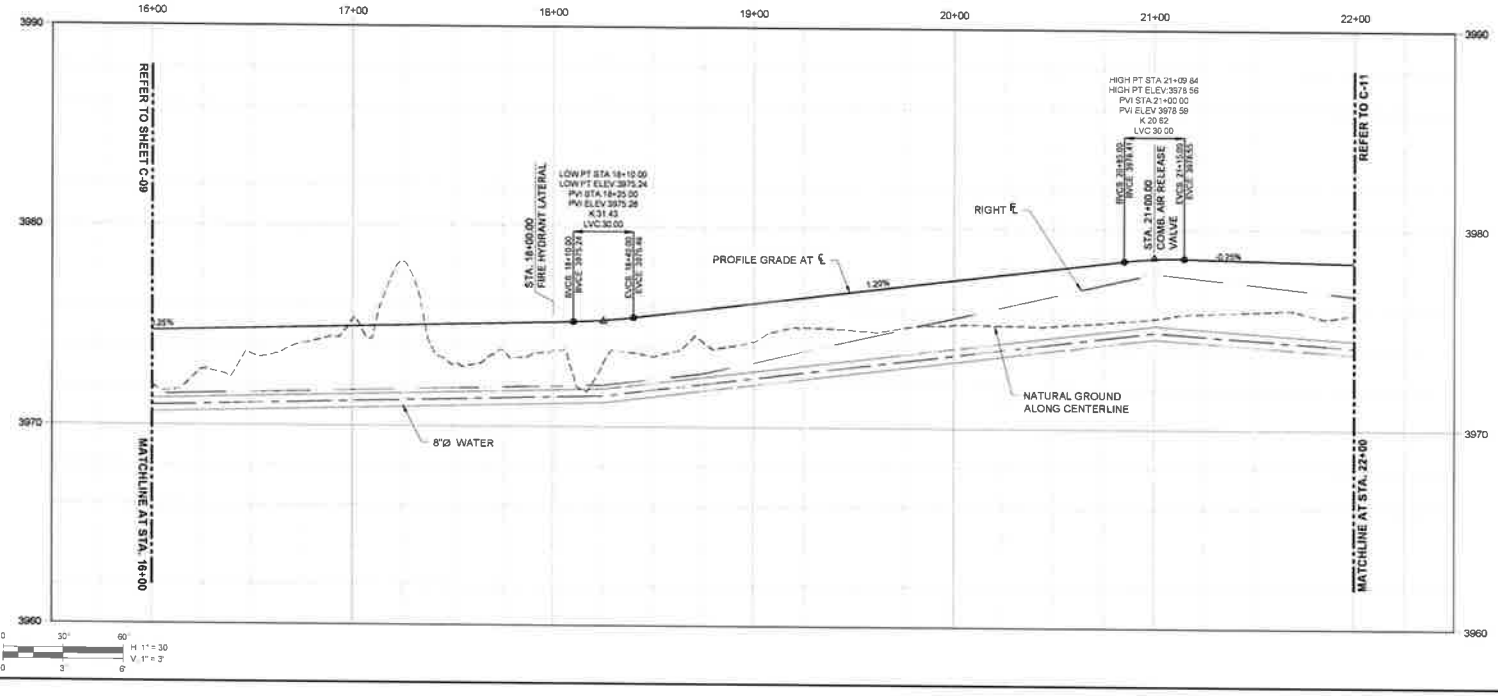



| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C3 | 785.00 | 216.49 | 108.94 | 15.80 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L2 | 70.10 | S73° 04' 18.84"E |
| L3 | 453.43 | S88° 52' 25.45"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.

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0 1/2 1
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**PROJECT**

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**CLIENT**

CITY OF TEHACHAPI
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Tehachapi, CA 93561
661 822 2200 tel 661 822 6559 fax

**CONSULTANT**

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661 325 7253 tel 661 395 0359 fax
www.aecom.com

**REGISTRATION**

**ISSUE/REVISION**

| IR | DATE | DESCRIPTION |
|---|---|---|
| | August 2014 | 90% DESIGN |

AECOM WATER

FOR PRELIMINARY USE ONLY

NOT FOR CONSTRUCTION

DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

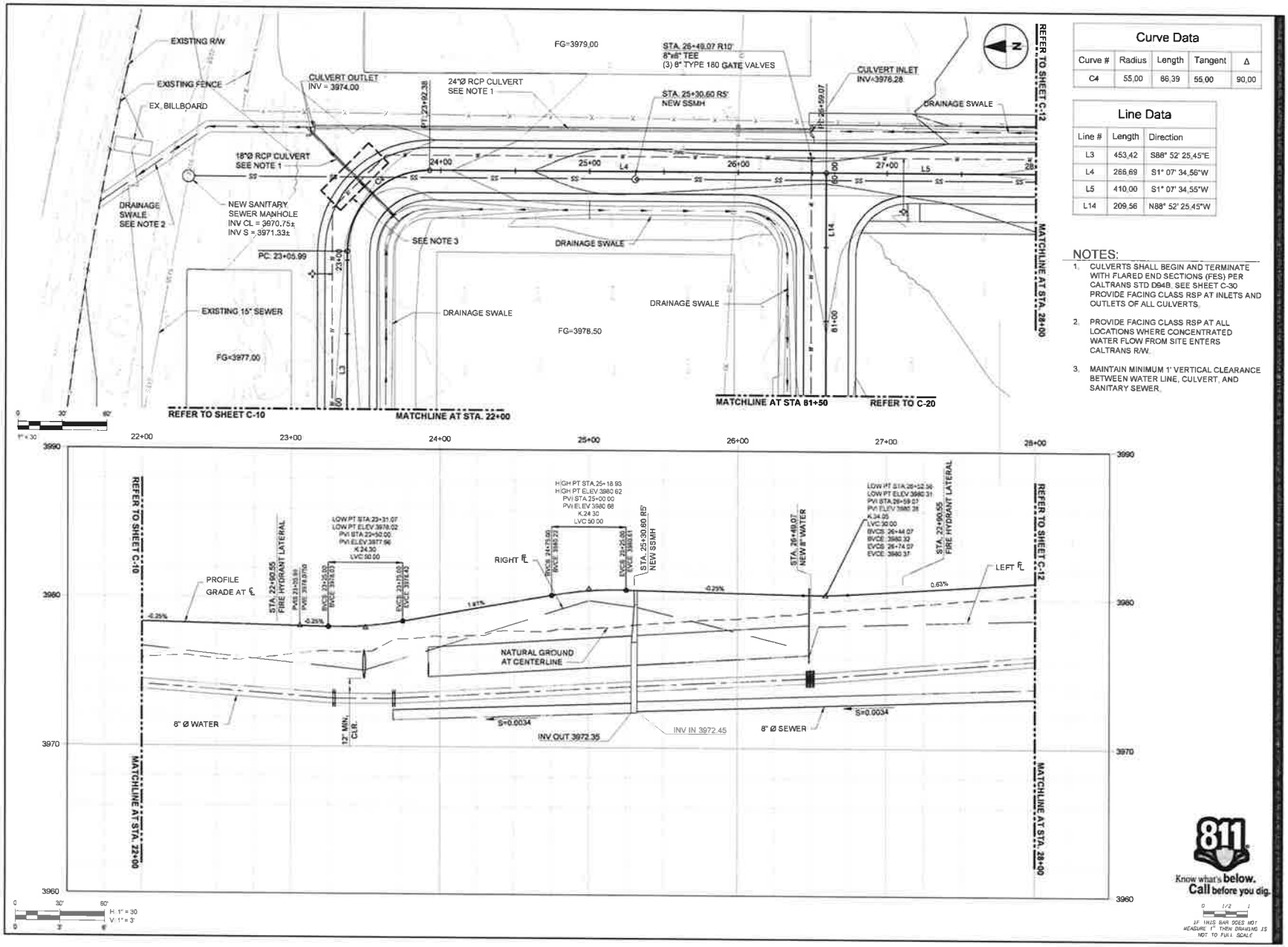
PLAN AND PROFILE
STA. 16+000 TO STA. 22+00

**SHEET NUMBER**

C-10

Project Management Initials: Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by: FRIDELEAKER (2014-08-01) Last Plotted: 2014-08-01
File name: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\100 CAD - CIVIL\10-PLAN\C-10.DWG




| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C4 | 55.00 | 86.39 | 55.00 | 90.00 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L3 | 453.42 | S88° 52' 25.45"E |
| L4 | 266.69 | S1° 07' 34.56"W |
| L5 | 410.00 | S1° 07' 34.55"W |
| L14 | 209.56 | N88° 52' 25.45"W |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30 PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.
2. PROVIDE FACING CLASS RSP AT ALL LOCATIONS WHERE CONCENTRATED WATER FLOW FROM SITE ENTERS CALTRANS R/W.
3. MAINTAIN MINIMUM 1' VERTICAL CLEARANCE BETWEEN WATER LINE, CULVERT, AND SANITARY SEWER.

Know what's below. Call before you dig.

IF THIS BAR DOES NOT MEASURE 1", THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

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661 325 7253 tel 661 395 0369 fax
www.aecom.com

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

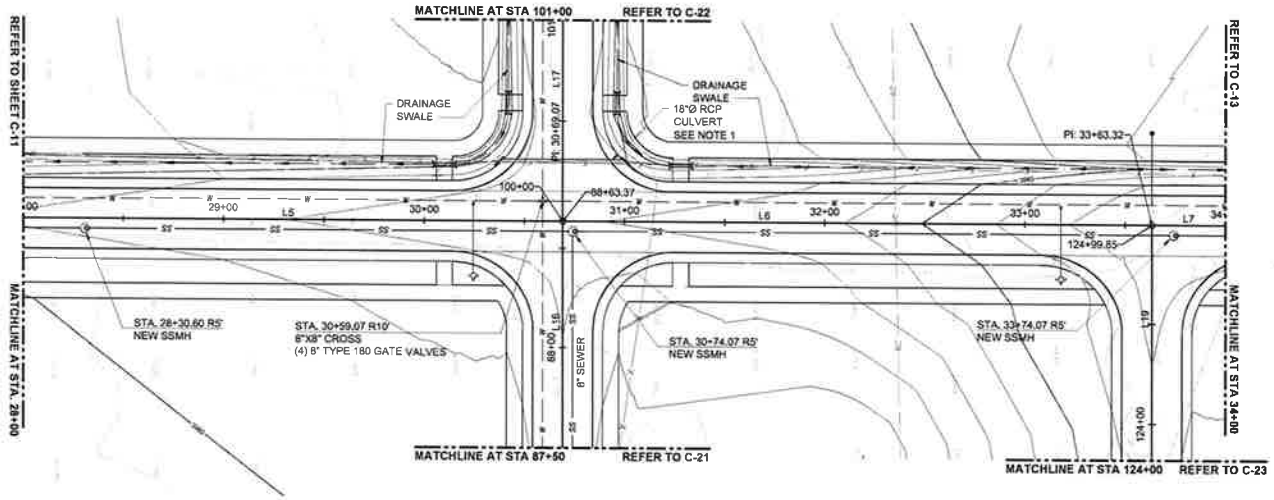
PLAN AND PROFILE
STA. 22+00 TO STA. 28+00

**SHEET NUMBER**

C-11

Project Management Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

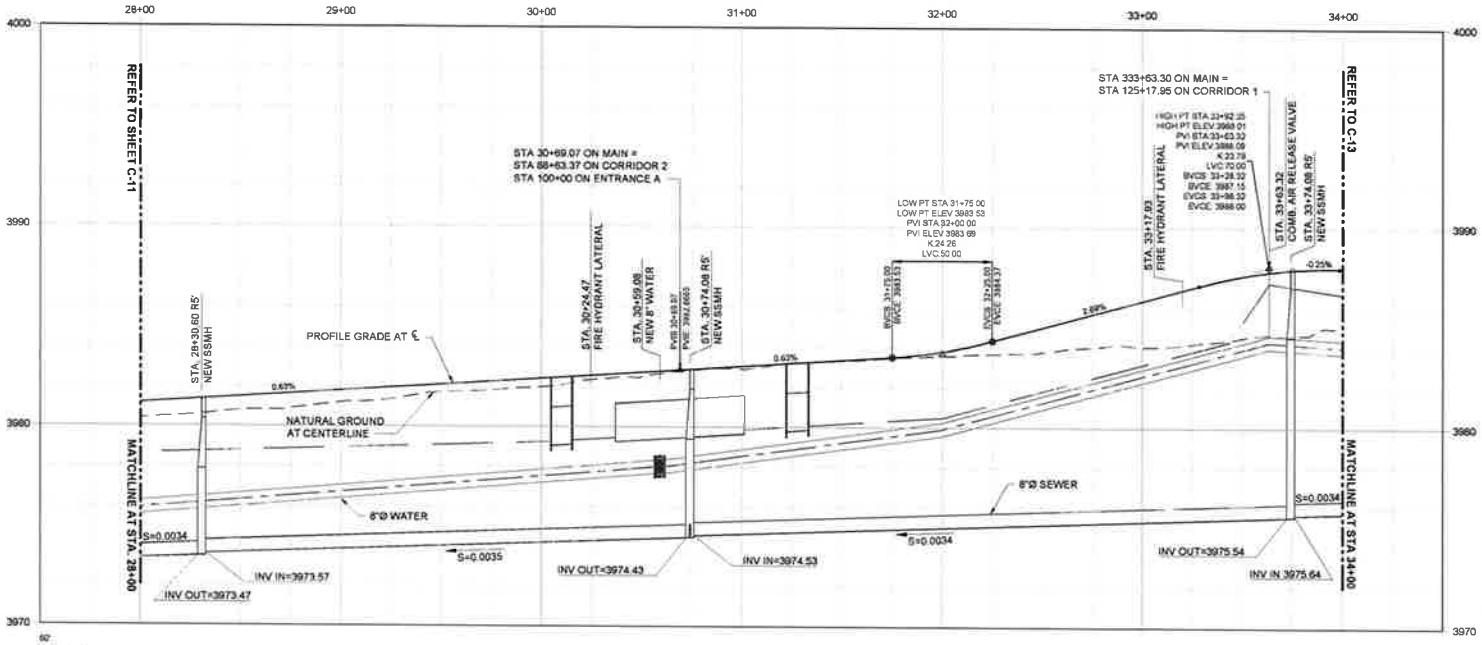
Last saved by: FROELICHERJ(2014-09-01) Last Plotted: 2014-09-01
Filename: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - DISC\C-SHEETS\60309567-SHT-C-11.DWG




| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L5 | 410.00 | S1° 07' 34.55"W |
| L6 | 294.25 | S1° 07' 34.56"W |
| L16 | 209.56 | S88° 52' 25.45"E |
| L17 | 883.20 | S88° 52' 25.45"E |
| L19 | 390.65 | S88° 52' 30.53"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.




Know what's below. Call before you dig.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S Robinson Street
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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

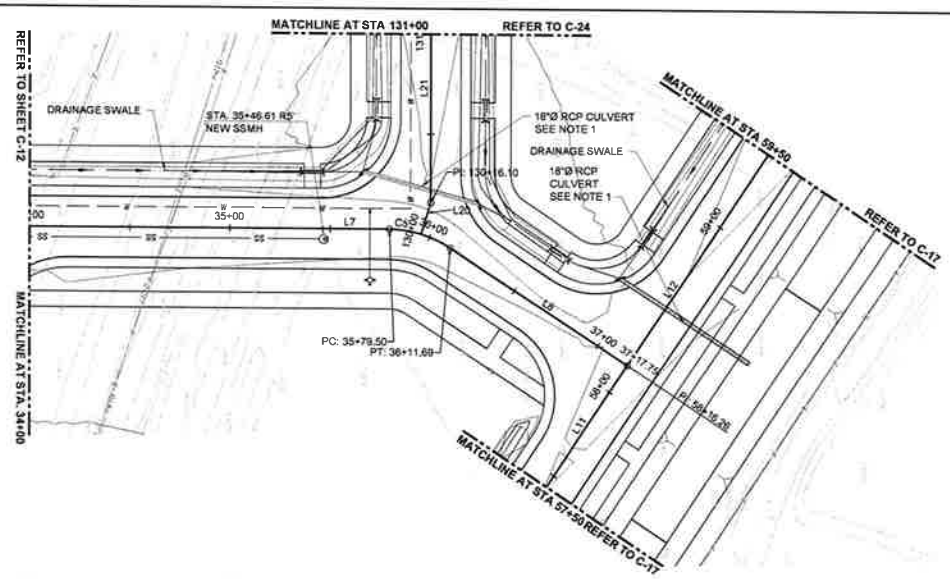
PLAN AND PROFILE
STA. 28+000 TO STA. 34+00

**SHEET NUMBER**

C-12

Project Management Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by FRIEDEWALD, 2014-08-07 Designer ____ Checked ____ Approved ____
Filename: \\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE\PROJECTS\CAD - GRADING\SHEETS\60309567-PIT-C-12.DWG

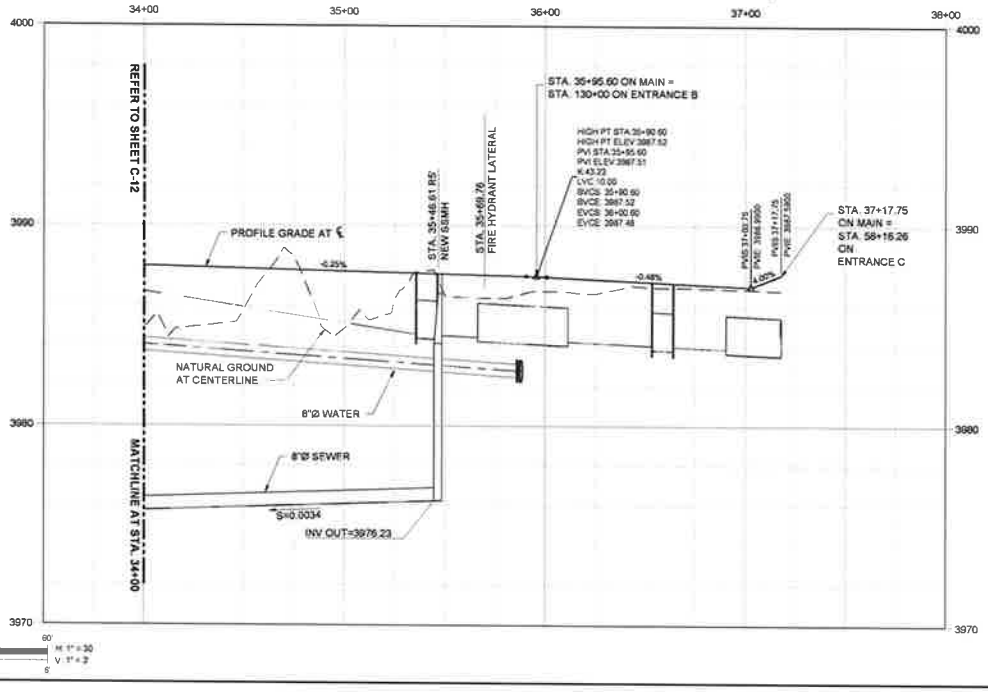



| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C5 | 55.00 | 32.19 | 16.57 | 33.53 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L7 | 216.18 | S1° 07' 34.56"W |
| L8 | 106.06 | S34° 39' 30.92"W |
| L11 | 478.90 | S55° 20' 29.08"E |
| L12 | 716.15 | S55° 20' 29.08"E |
| L20 | 16.10 | S72° 06' 27.52"E |
| L21 | 861.90 | S88° 51' 59.59"E |

## NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.




Know what's **below.**
**Call** before you dig.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER
INFRASTRUCTURE
PROJECT

**CLIENT**

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661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

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AECOM WATER

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 34+00 TO STA. 37+17.75

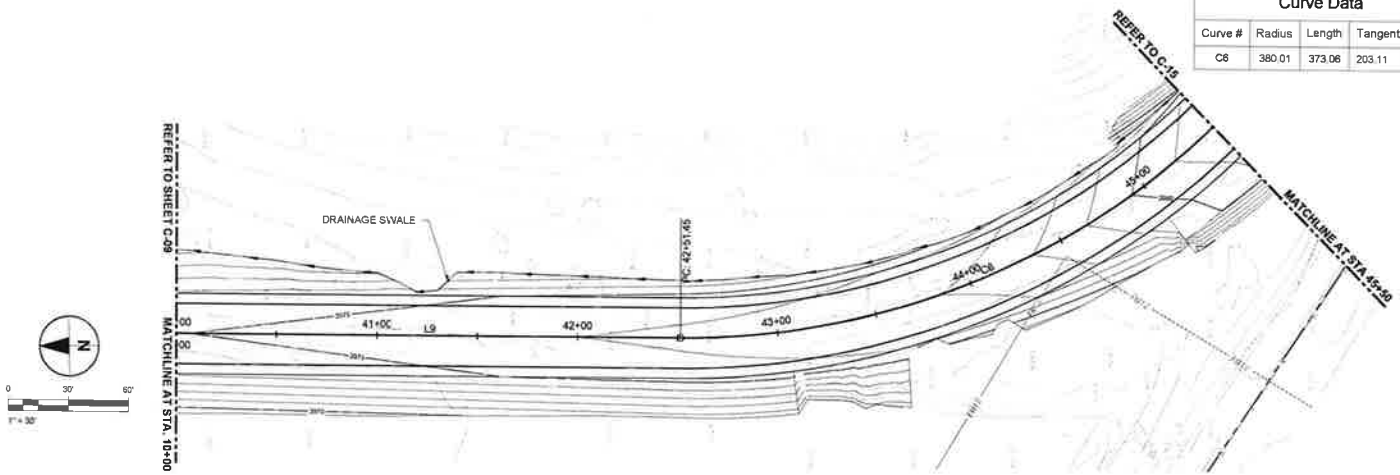
**SHEET NUMBER**

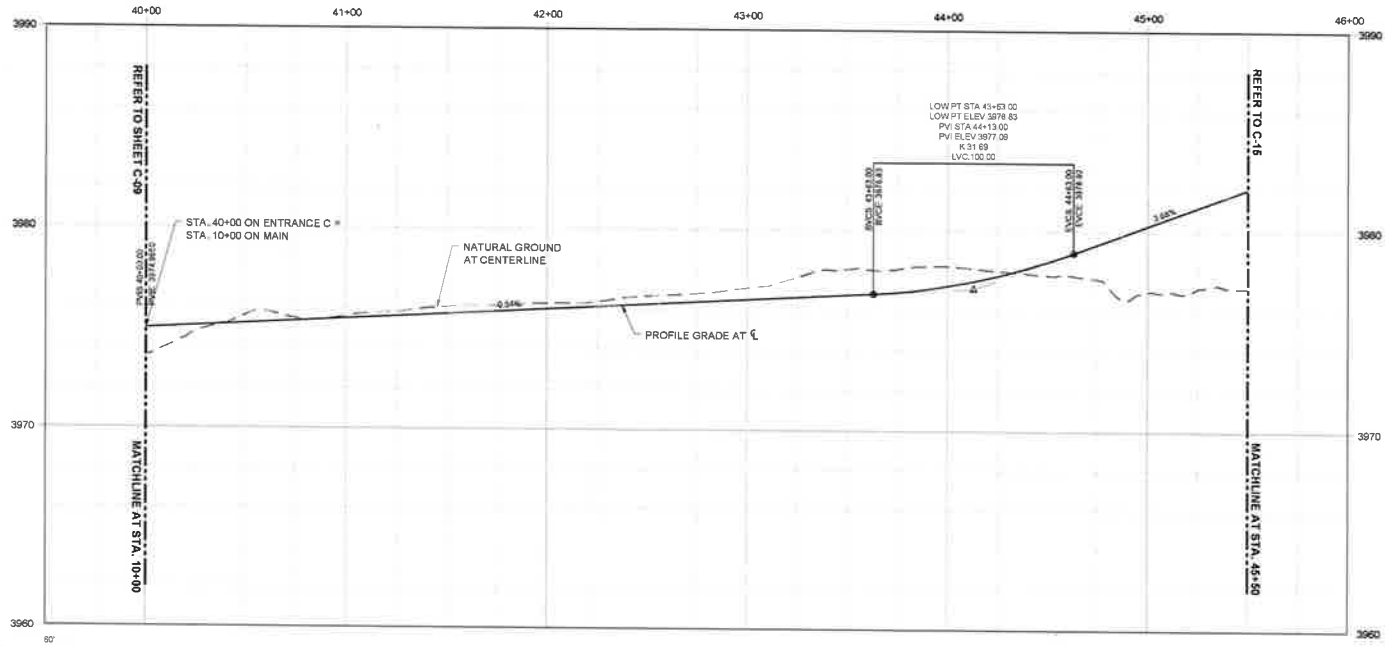
C-13

Project Manager/Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"
Last Saved by: P:\DELEC-PR\4\2014-08-01 Last Plotted: 2014-08-01
File-name: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - 02\903-SHEETFiles\C35567\C-13.DWG

| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C6 | 380.01 | 373.06 | 203.11 | 56.25 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L9 | 251.45 | S1° 07' 33.51"W |




Know what's below. Call before you dig.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
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661 822 2200 tel 661 822 6559 fax

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Bakersfield, CA 93309
661 325 7253 tel 661 395 0369 fax
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**REGISTRATION**

**ISSUE/REVISION**

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

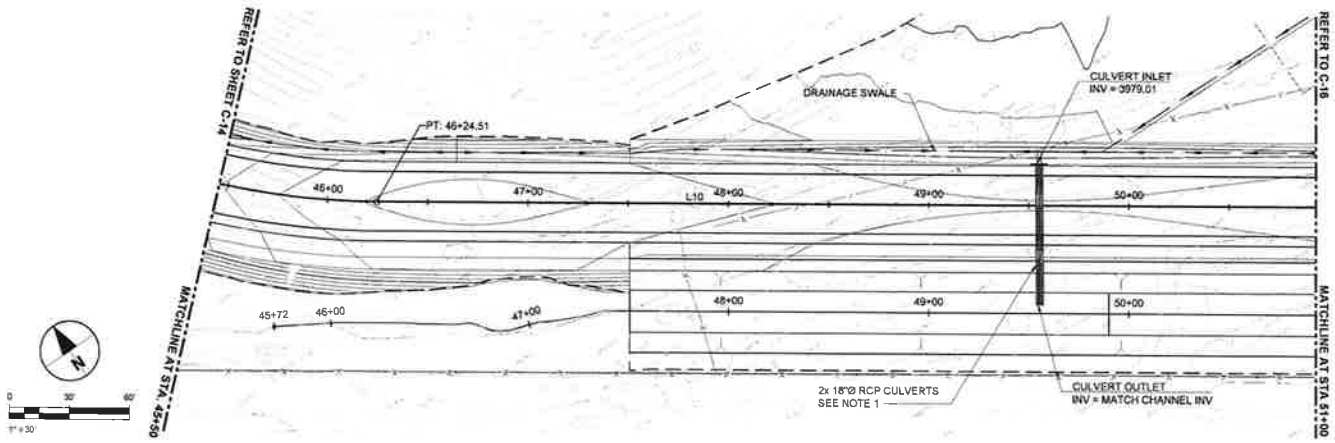
PLAN AND PROFILE
STA. 40+00 TO STA. 45+50

**SHEET NUMBER**

C-14

Project Management Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by FRIDLEC:HFA (2014-07-29) Last Plotted: 2014-08-01
Filename: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - GIS\02-SHEETS\60309567-SH1-C-14.DWG

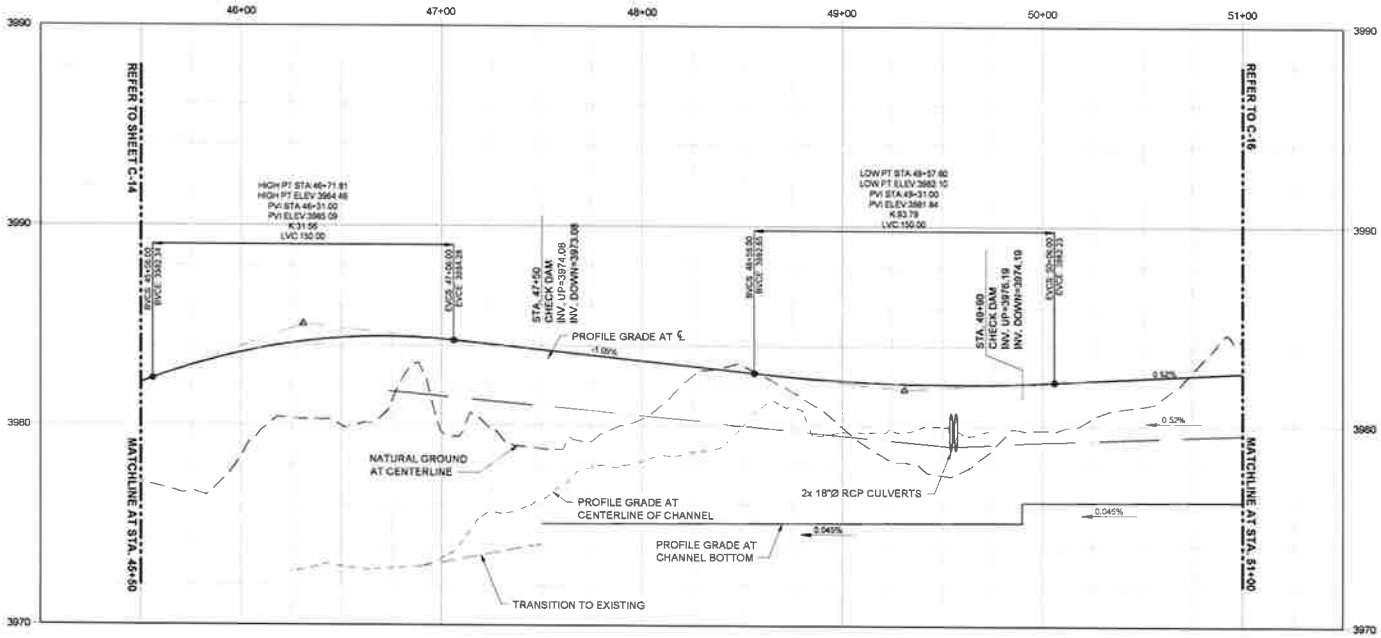



| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C6 | 380.01 | 373.06 | 203.11 | 56.25 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L10 | 712.86 | S55° 20' 29.08"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.
2. PROVIDE FACING CLASS RSP AT TRANSITION TO EXISTING CHANNEL FROM STA. 47+00 TO STA. 47+50.




811
Know what's **below.**
**Call** before you dig.

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

**AECOM**

**PROJECT**

EVENT CENTER
INFRASTRUCTURE
PROJECT

**CLIENT**

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Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

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Bakersfield, CA 93309
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AECOM WATER

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 45+50 TO STA. 51+00

**SHEET NUMBER**

C-15

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by [illegible] Designer ____ Checked ____ Approved ____
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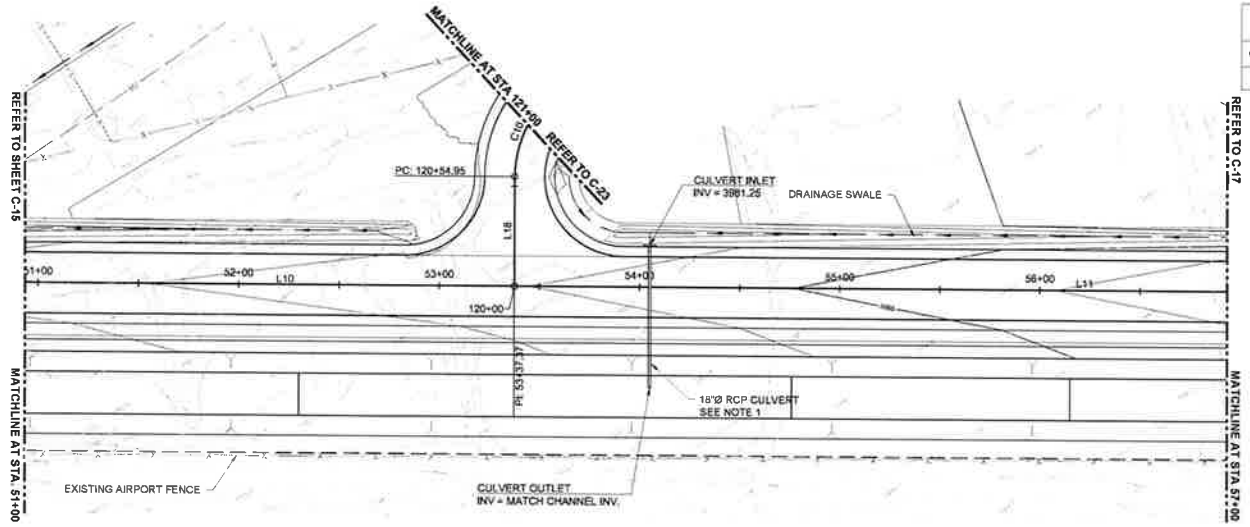



## Curve Data

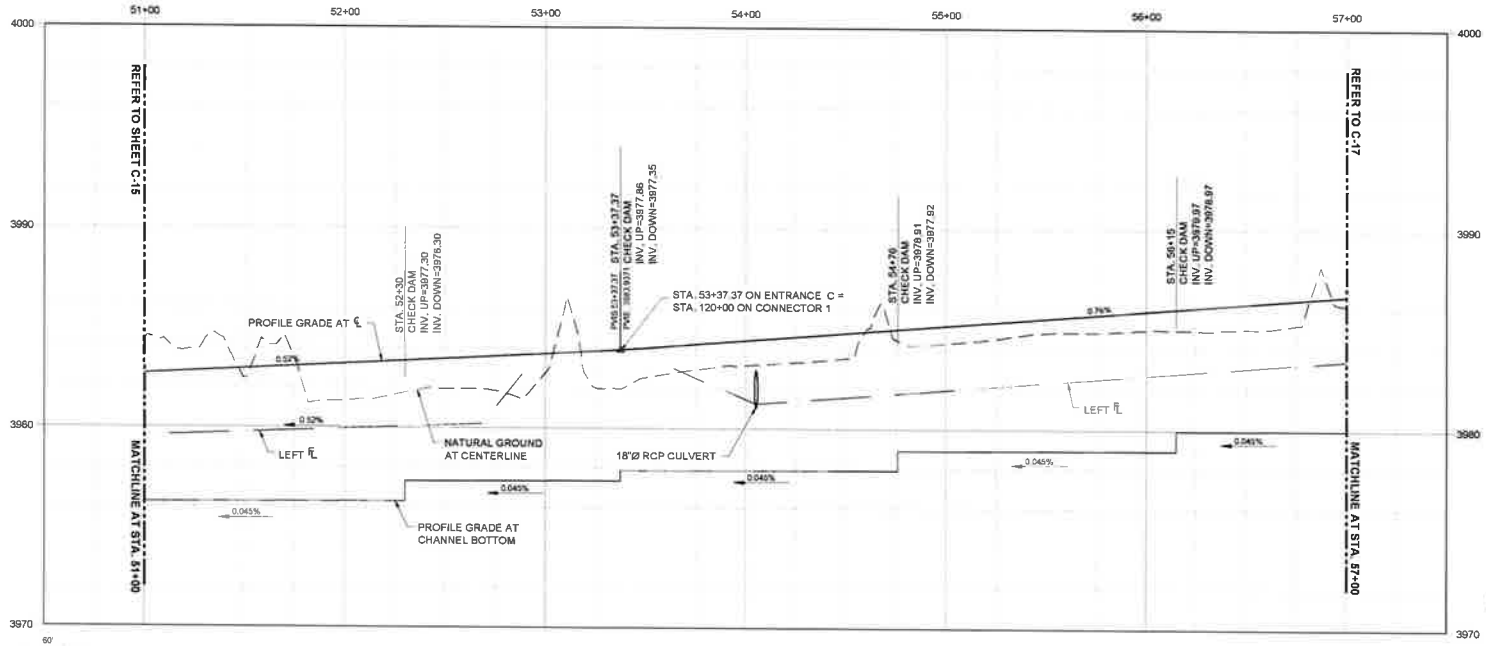
| Curve # | Radius | Length | Tangent | Δ |
|---|---|---|---|---|
| C10 | 54.99 | 54.25 | 29.56 | 56.53 |

## Line Data

| Line # | Length | Direction |
|---|---|---|
| L10 | 712.86 | S55° 20' 29.08"E |
| L11 | 476.89 | S55° 20' 29.08"E |
| L18 | 54.95 | N34° 35' 54.64"E |

## NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES)PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.




811
Know what's below.
Call before you dig.

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
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Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 51+00 TO STA. 57+00

**SHEET NUMBER**

C-16

Project Management Initials Designer Checked Approved ANSI D 22" x 34"

Last saved by: FROELICHER (2014-07-28)
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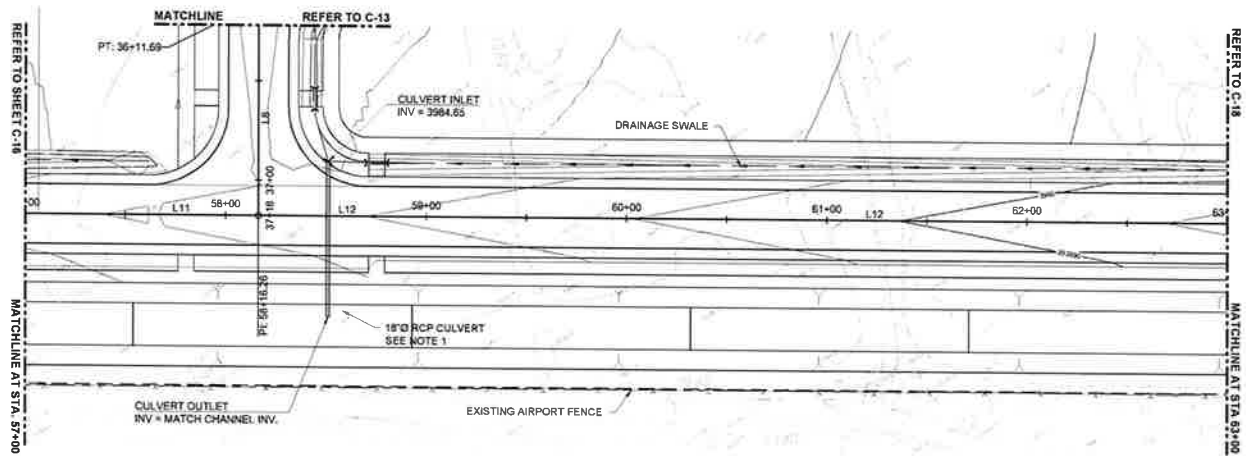
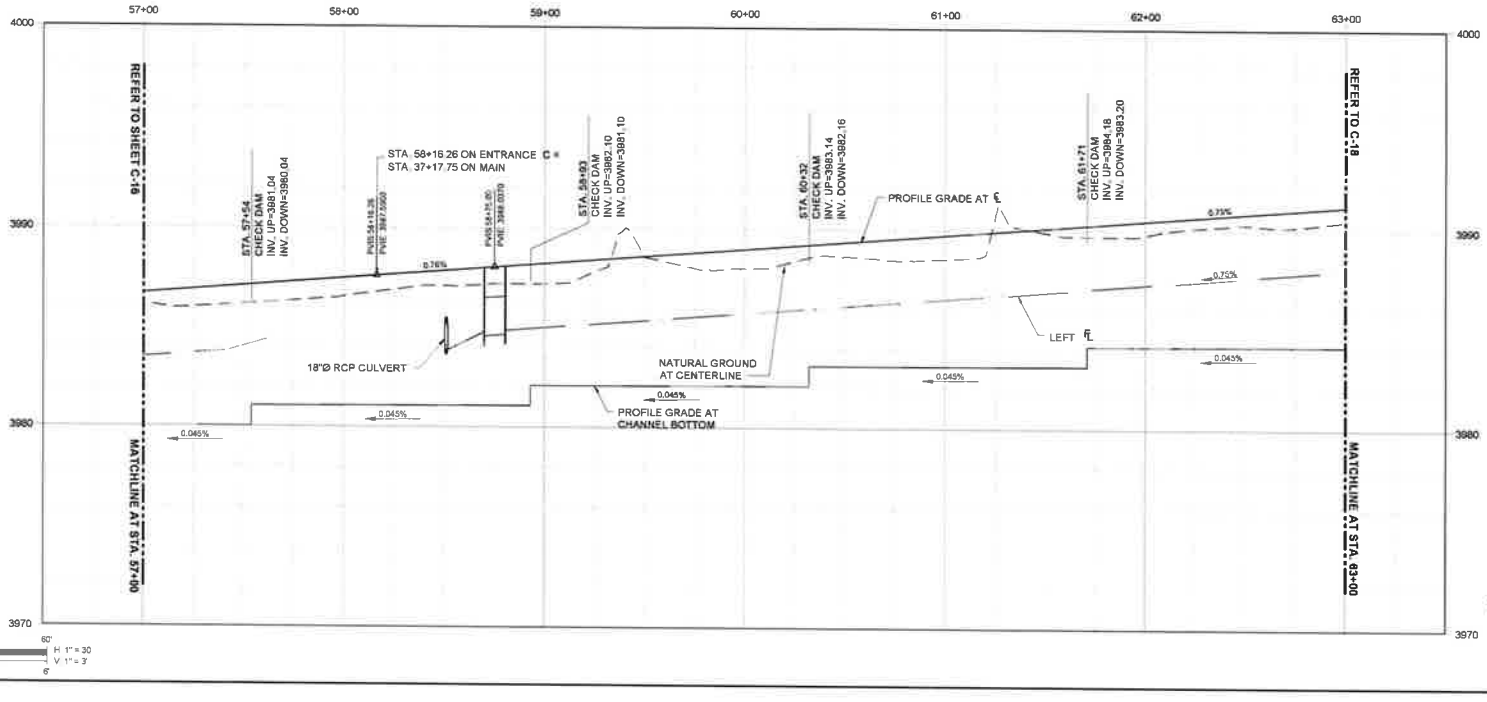



| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L8 | 106.06 | S34° 39' 30.92"W |
| L11 | 478.69 | S55° 20' 29.08"E |
| L12 | 716.15 | S55° 20' 29.08"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-03. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS




811
Know what's below.
Call before you dig.

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

PROJECT

EVENT CENTER INFRASTRUCTURE PROJECT

CLIENT

CITY OF TEHACHAPI
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Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

CONSULTANT

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DATE: AUGUST 2014

PROJECT NUMBER

60309567

SHEET TITLE

PLAN AND PROFILE
STA. 57+00 TO STA. 63+00

SHEET NUMBER

C-17

Project Management Details Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

Last saved by FROSELICHK(FROSELICHK) on 2014-08-01 Last Plotted: 2014-08-01
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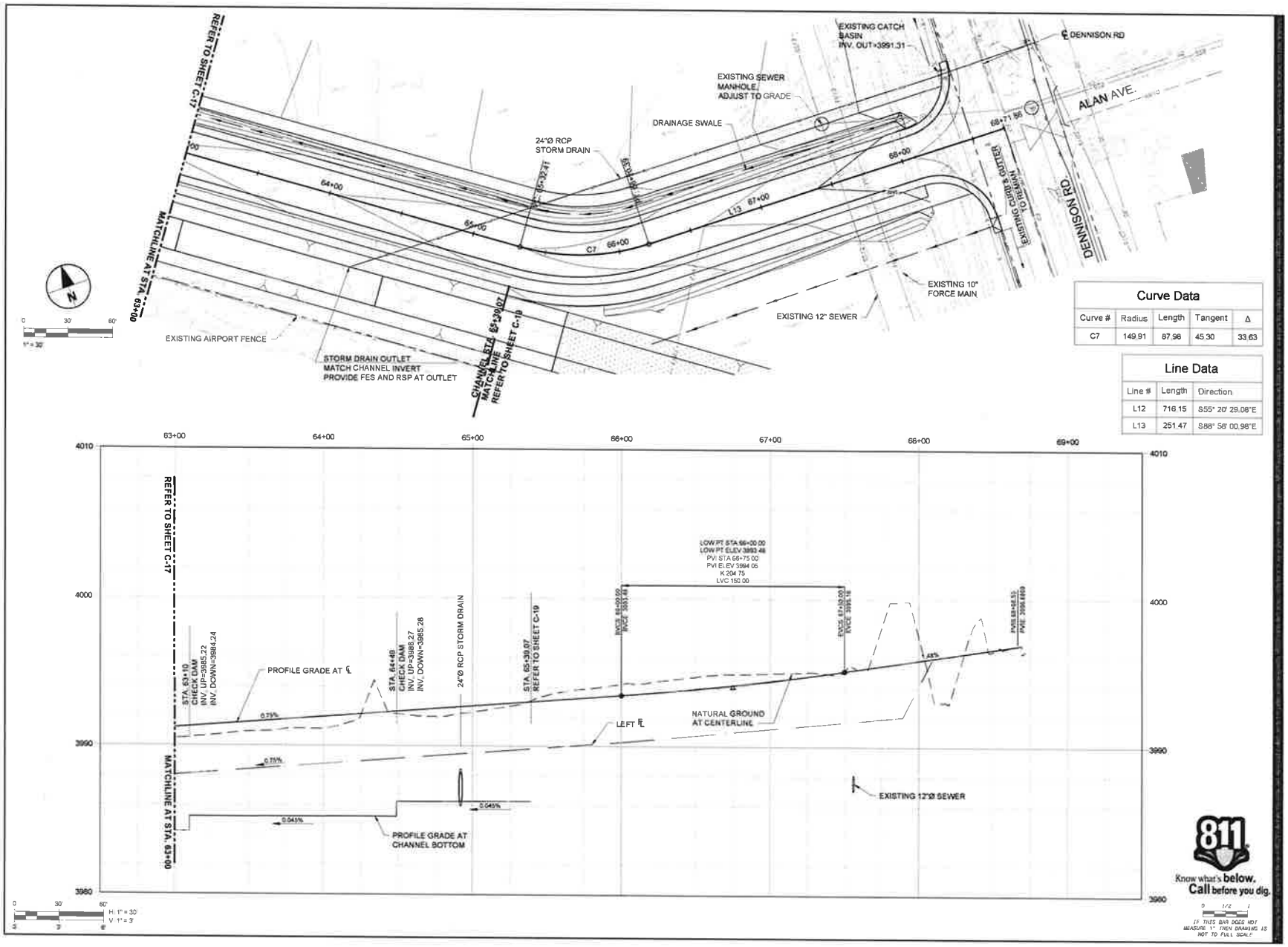


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**PROJECT**

EVENT CENTER
INFRASTRUCTURE
PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661.822.2200 tel 661.822.6559 fax

**CONSULTANT**

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DATE: AUGUST 2014

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0 1/2 1

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

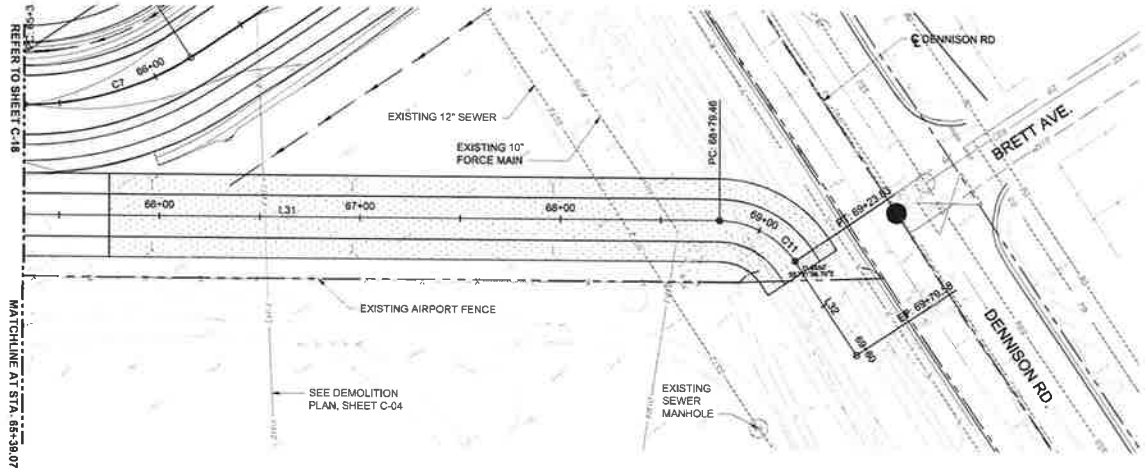
PLAN AND PROFILE
STA. 63+00 TO STA. 68+82.44

**SHEET NUMBER**

C-18

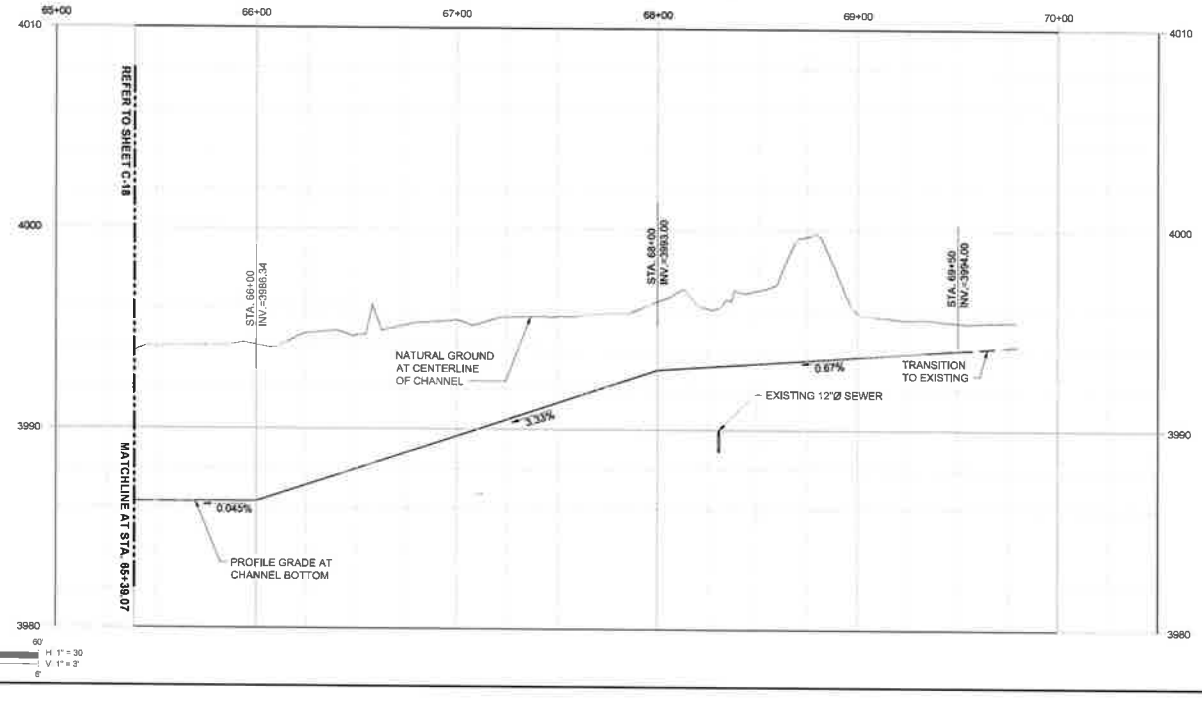
Project Management Initials Designer Checked Approved ANSI D 22" x 34"

Last Saved by: FROELICHER (2014-07-30)
Filename: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\300 CAD - G\802-SHEET\60309567-8H1-C-18.DWG




| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C11 | 45.50 | 44.37 | 24.13 | 55.87 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L31 | 340.39 | S55° 20' 29.08"E |
| L32 | 55.75 | S1° 07' 26.46"W |




## NOTES:

1. VERIFY DEPTH OF EXISTING SEWER FACILITY PRIOR TO FINAL DESIGN TO DETERMINE IF ENCASEMENT IS REQUIRED FOR FURTHER PROTECTION.
2. PROVIDE "LIGHT" CLASS RSP CHANNEL PROTECTION FROM STA. 65+75 TO STA. 69+50.
3. PROVIDE BERMS ON BOTH SIDES OF CHANNEL FROM STA. 66+00 TO STA. 69+25 TO PROVIDE MINIMUM 5-FT CHANNEL DEPTH.

811 Know what's below. Call before you dig.

0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

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661 326 7253 tel 661 395 0369 fax
www.aecom.com

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AECOM WATER

FOR PRELIMINARY USE ONLY

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

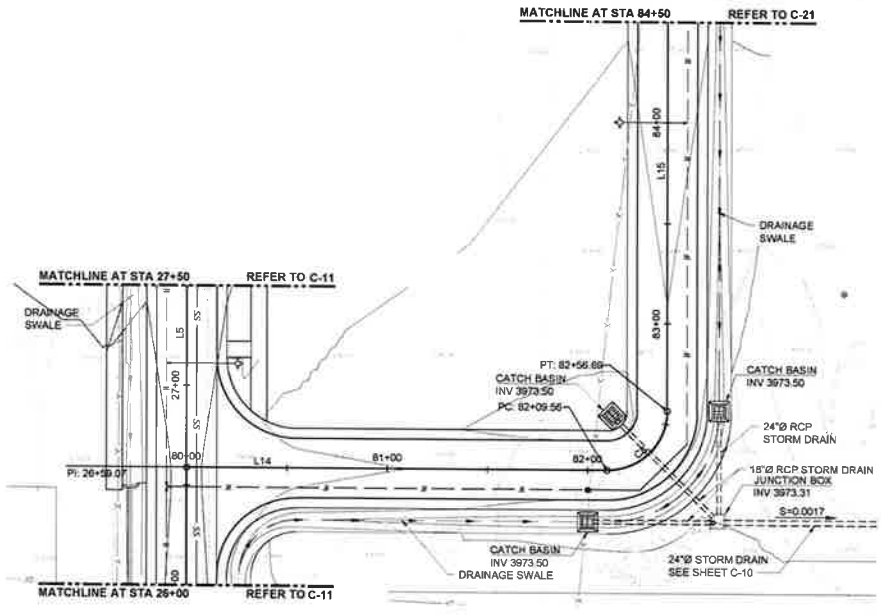
PLAN AND PROFILE
STA. 65+39.07 TO STA. 69+92.20

**SHEET NUMBER**

C-19

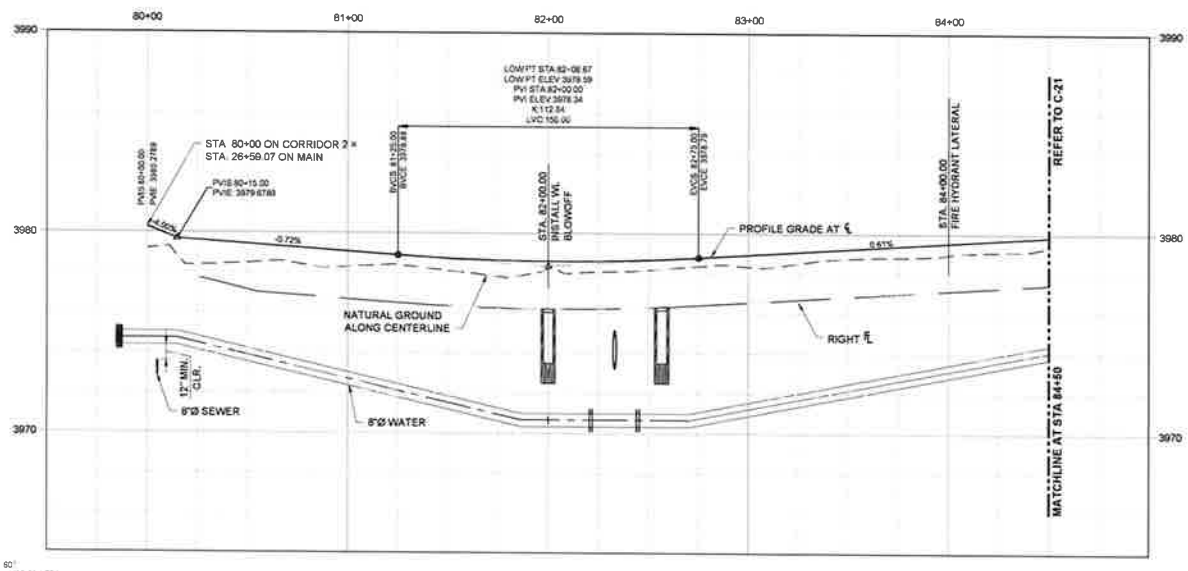
Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22 x 34"

Last Saved by: FROEHCHU (2014-07-29) Last Plotted: 2014-08-01
File name: P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - DRAWINGS\SHEETS\60309567-SHT-C-19.DWG




| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C8 | 30.00 | 47.13 | 30.00 | 90.00 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L4 | 266.69 | S1° 07' 34.56"W |
| L5 | 410.00 | S1° 07' 34.55"W |
| L14 | 209.56 | N88° 52' 25.45"W |
| L15 | 350.00 | S1° 07' 34.68"W |

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0 1/2 1
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AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661.822.2200 tel 661.822.8559 fax

**CONSULTANT**

AECOM Technical Services, Inc.
5001 E. Commercenter Dr., Suite 100
Bakersfield, CA 93309
661.325.7253 tel 661.395.0359 fax
www.aecom.com

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 80+00 TO STA. 84+50

**SHEET NUMBER**

C-20

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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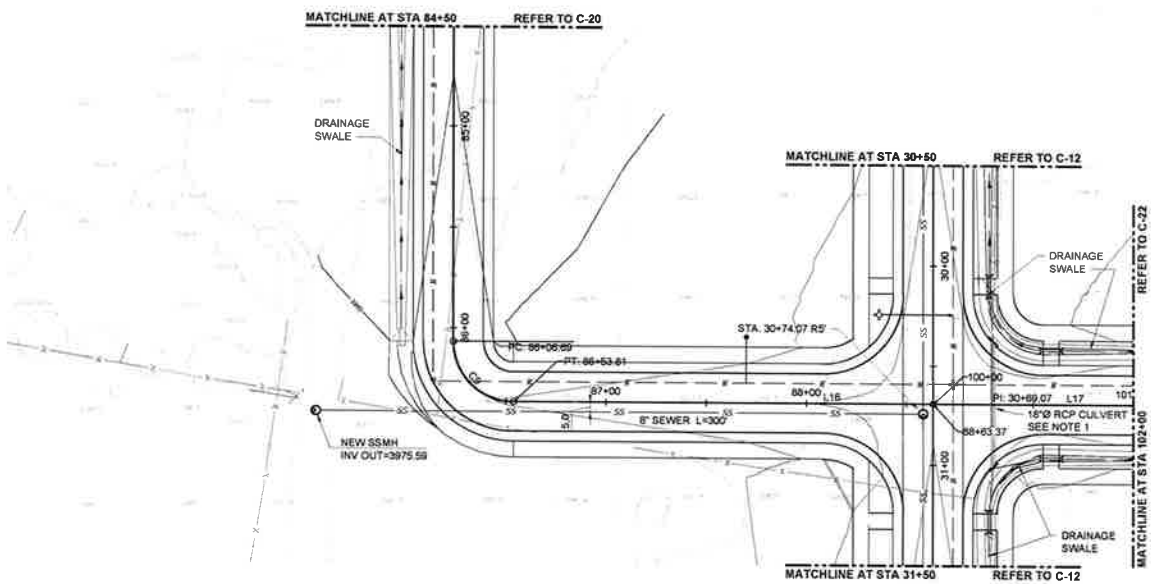


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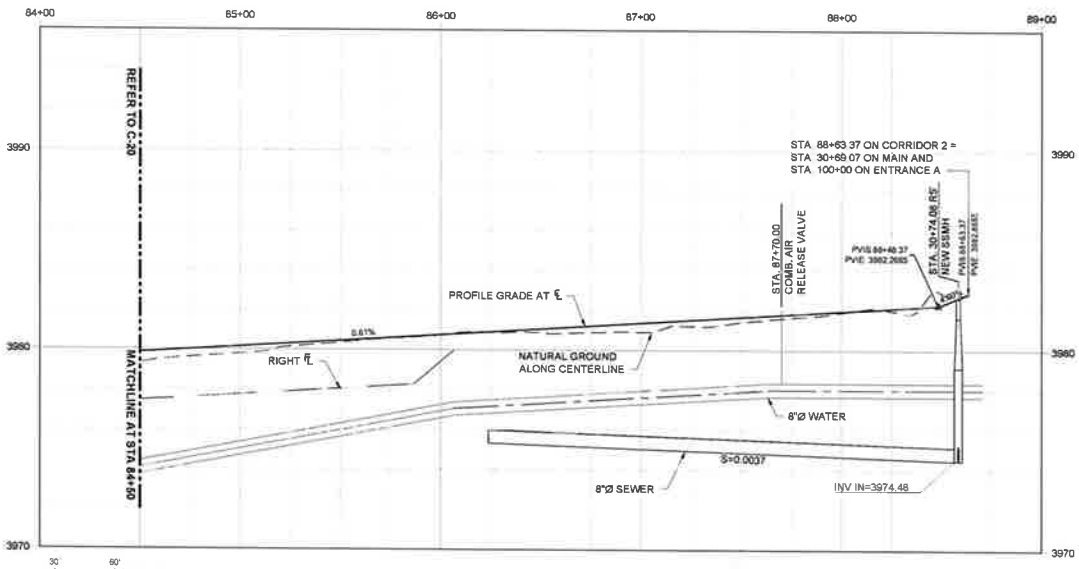
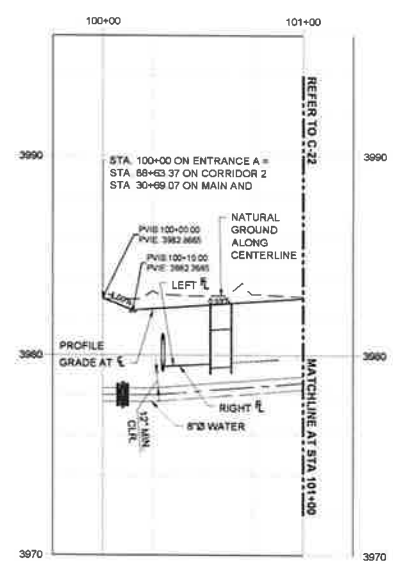
| Curve # | Radius | Length | Tangent | Δ |
| C9 | 30.00 | 47.12 | 30.00 | 90.00 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L5 | 410.00 | S1° 07' 34.55"W |
| L6 | 294.24 | S1° 07' 34.56"W |
| L15 | 350.00 | S1° 07' 34.68"W |
| L16 | 209.56 | S88° 52' 25.45"E |
| L17 | 863.20 | S88° 52' 25.45"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.




811
Know what's below.
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AECOM

PROJECT

EVENT CENTER INFRASTRUCTURE PROJECT

CLIENT

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CONSULTANT

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DATE: AUGUST 2014

PROJECT NUMBER

60309567

SHEET TITLE

PLAN AND PROFILE
STA. 84+50 TO STA. 88+63.37
STA. 100+00 TO STA. 101+00

SHEET NUMBER

C-21

Last Saved by: FRDELICHGA (2014-07-29) Last Plotted: 2014-08-01
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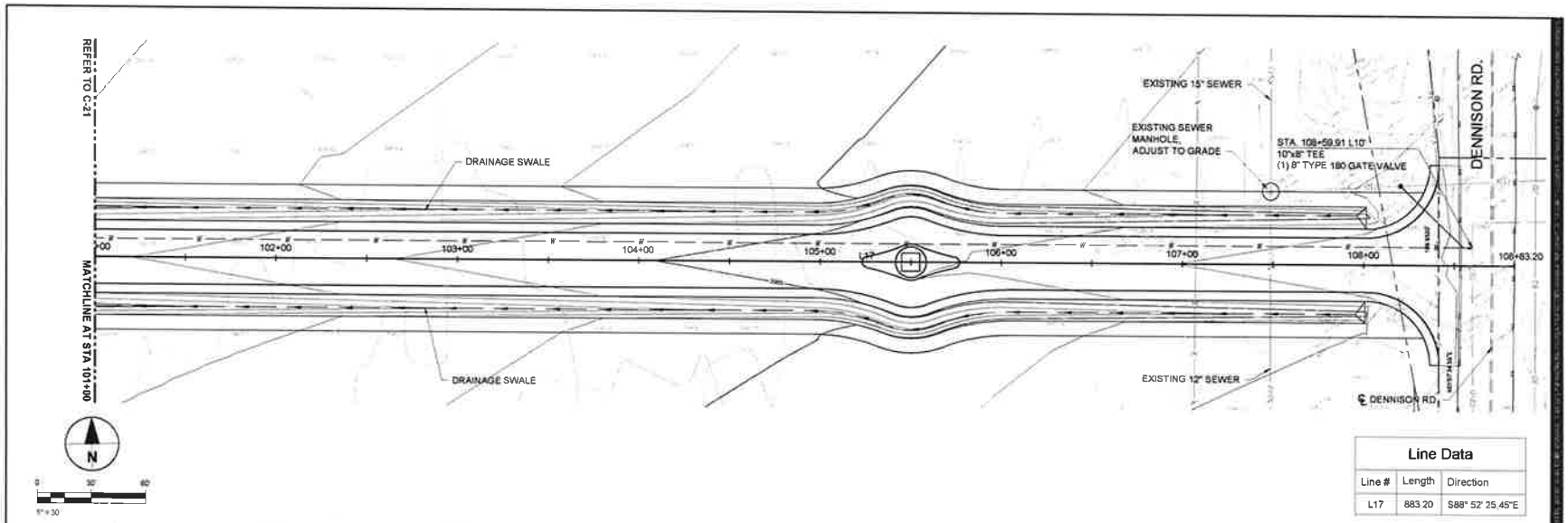
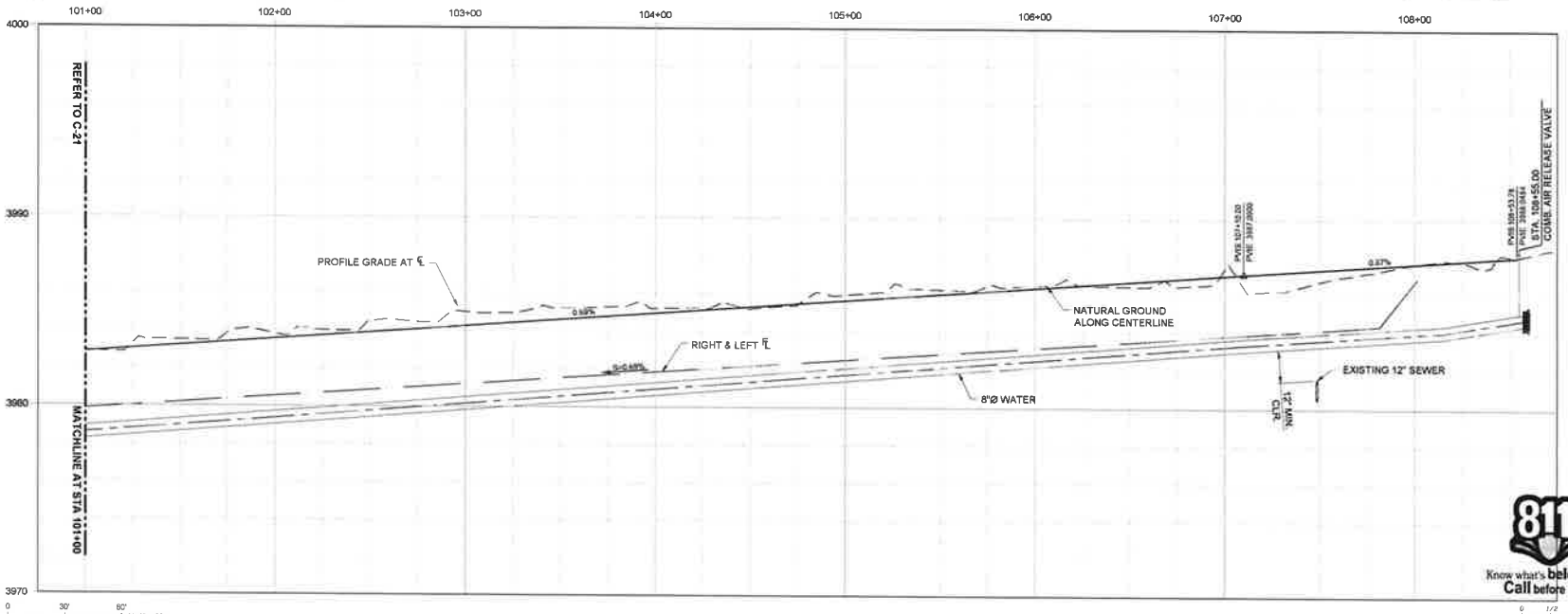



| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L17 | 883.20 | S88° 52' 25.45"E |

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Know what's below.
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AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
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**CONSULTANT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 101+00 TO 108+53.78

**SHEET NUMBER**

C-22

Project Management Initials Designer Checked Approved ANSI D 22" x 34"

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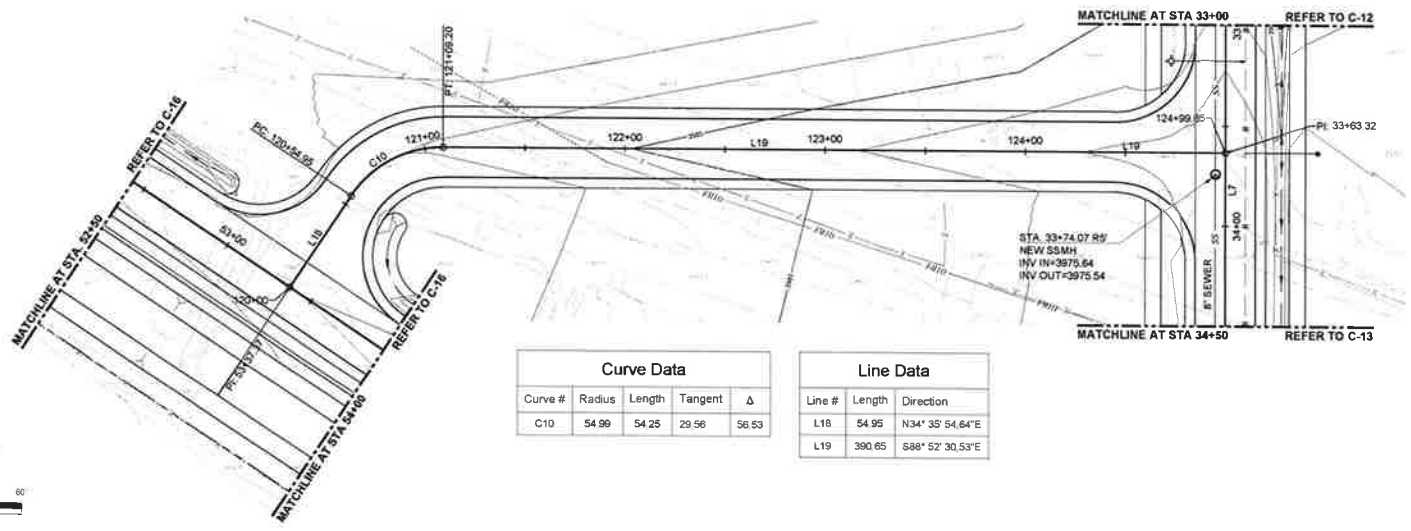
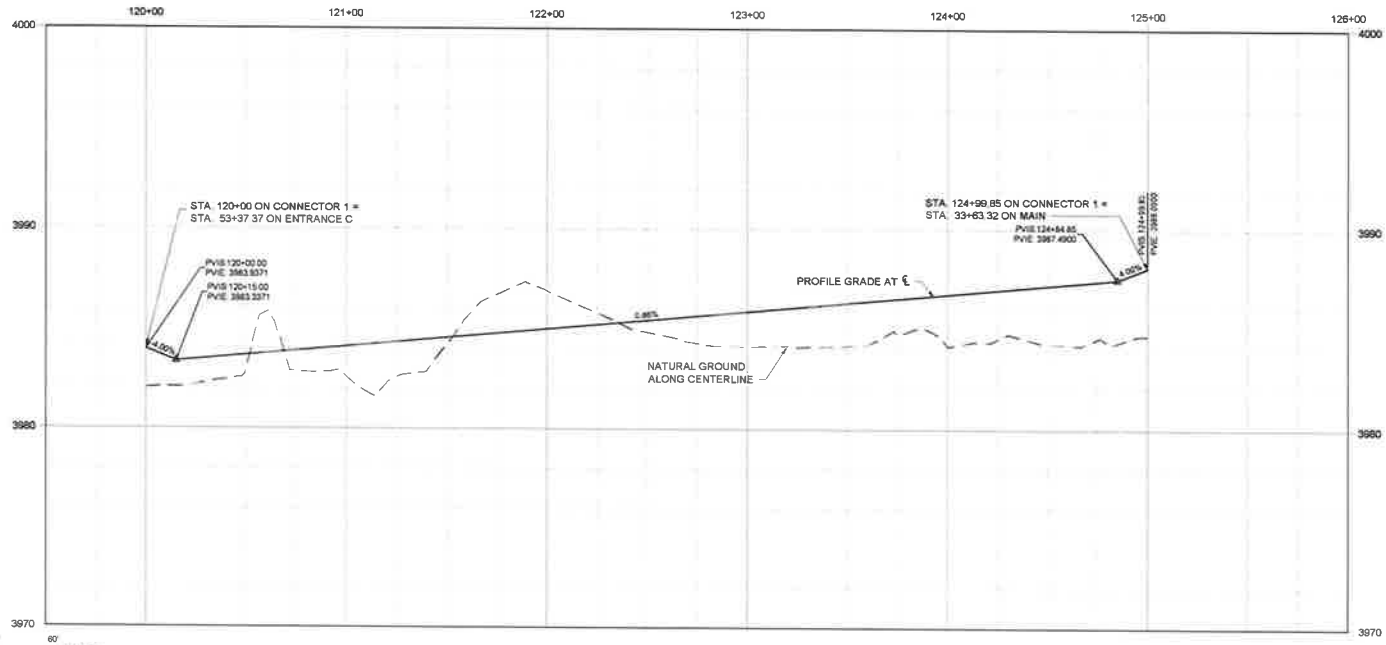



| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C10 | 54.99 | 54.25 | 29.56 | 56.53 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L18 | 54.95 | N34° 35' 54.64"E |
| L19 | 390.65 | S88° 52' 30.53"E |

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**PROJECT**

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**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 120+00 TO STA. 124+99.85

**SHEET NUMBER**

C-23

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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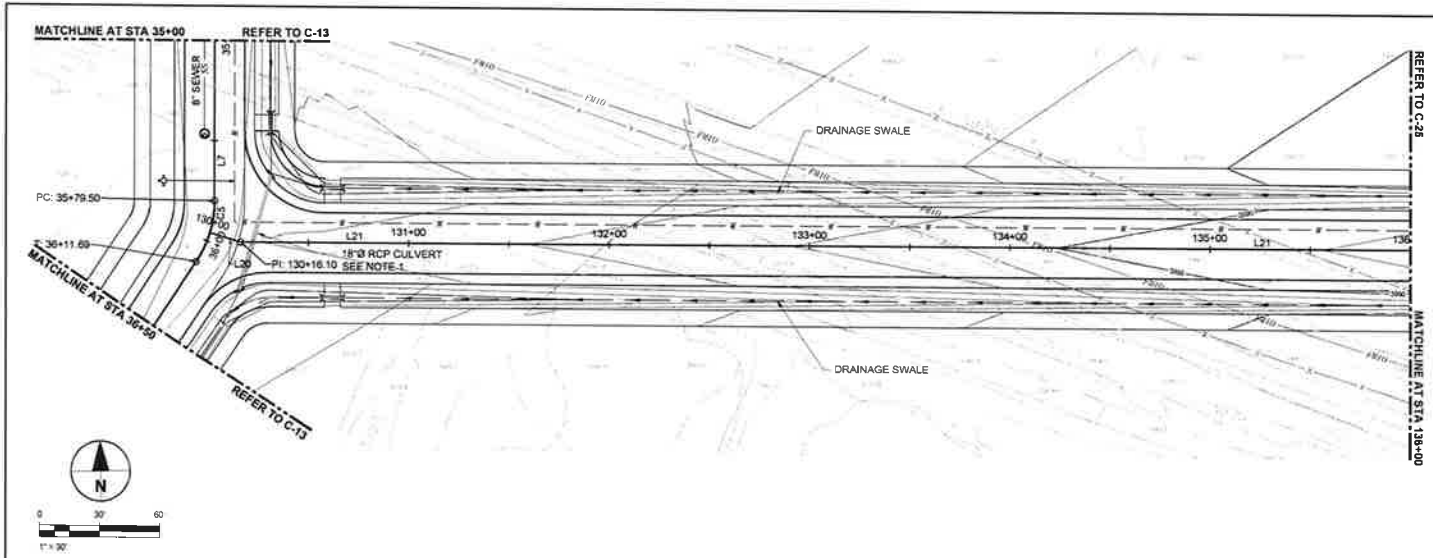
Filename P:\TEHACHAPI\60309567 - EVENT CENTER INFRASTRUCTURE PROJECT\900 CAD - 01\902-SHEETS\60309567SH1-C-23.DWG

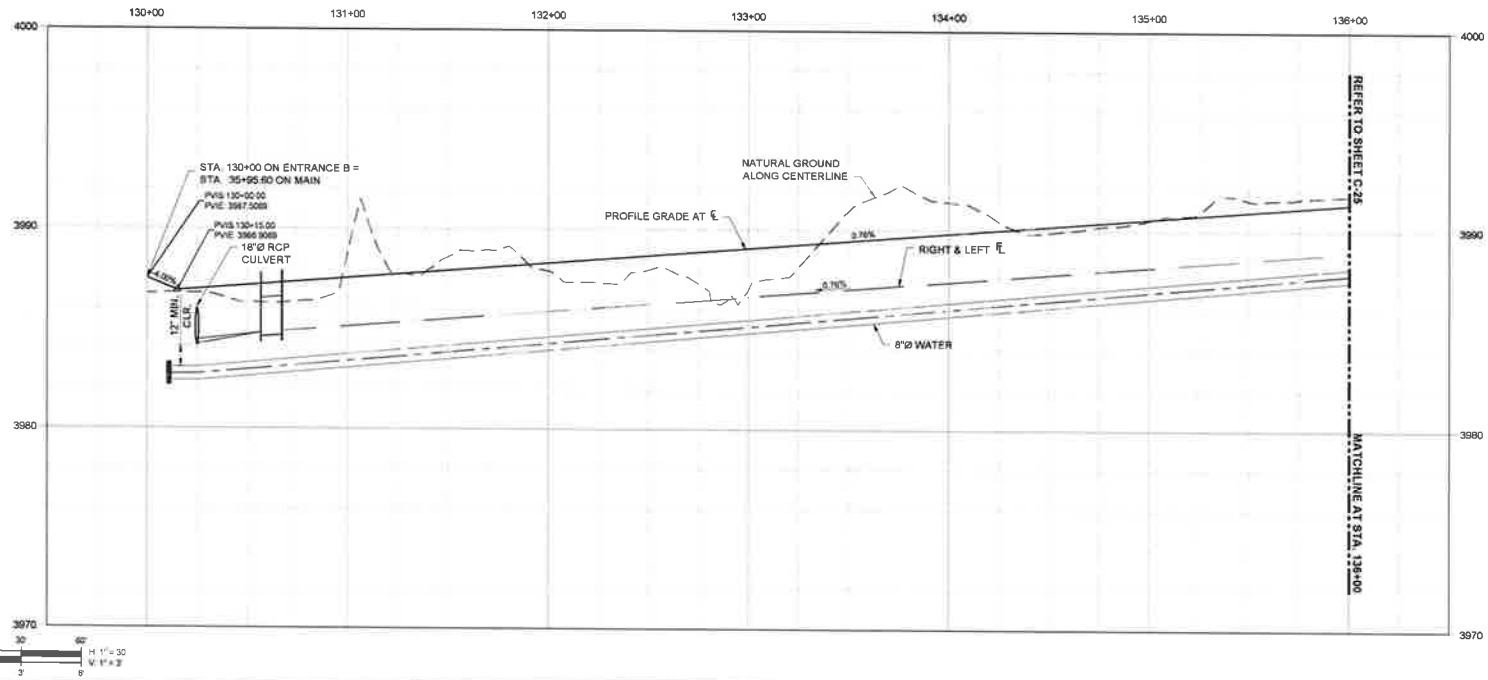



| Curve Data | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Tangent | Δ |
| C5 | 55.00 | 32.19 | 16.57 | 33.53 |

| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L7 | 218.19 | S1° 07' 34.56"W |
| L6 | 106.06 | S34° 39' 30.92"W |
| L20 | 16.10 | S72° 06' 27.52"E |
| L21 | 861.90 | S88° 51' 59.59"E |

NOTES:

1. CULVERTS SHALL BEGIN AND TERMINATE WITH FLARED END SECTIONS (FES) PER CALTRANS STD D94B. SEE SHEET C-30. PROVIDE FACING CLASS RSP AT INLETS AND OUTLETS OF ALL CULVERTS.

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AECOM

**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

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**PROJECT NUMBER**

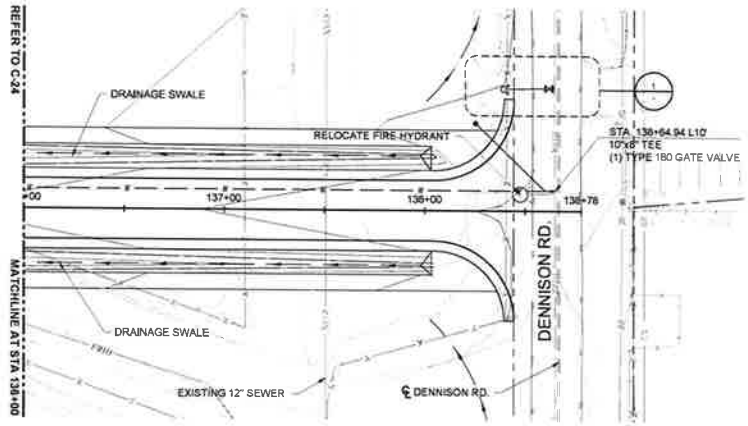
60309567

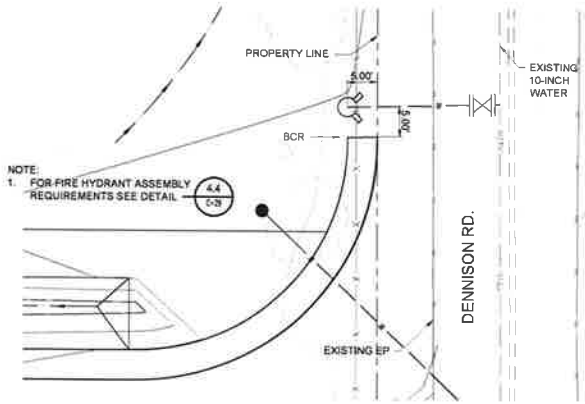
**SHEET TITLE**

PLAN AND PROFILE
STA. 130+00 TO STA. 136+00

**SHEET NUMBER**

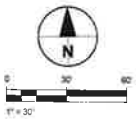
C-24

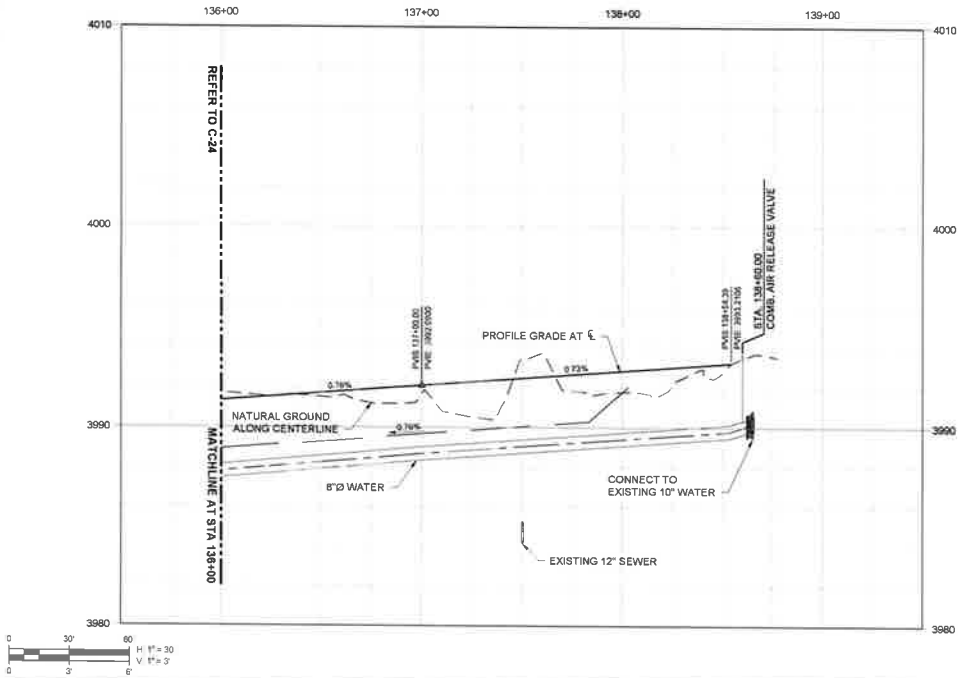



1 FIRE HYDRANT RELOCATION

Scale 1" = 10




| Line Data | | |
|---|---|---|
| Line # | Length | Direction |
| L21 | 861.90 | S88° 51' 59.59"E |

Know what's below. Call before you dig.

0 1/2 1

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**PROJECT**

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Tehachapi, CA 93561
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**PROJECT NUMBER**

60309567

**SHEET TITLE**

PLAN AND PROFILE
STA. 136+00 TO STA. 138+78.10

**SHEET NUMBER**

C-25

Project Management Initials: Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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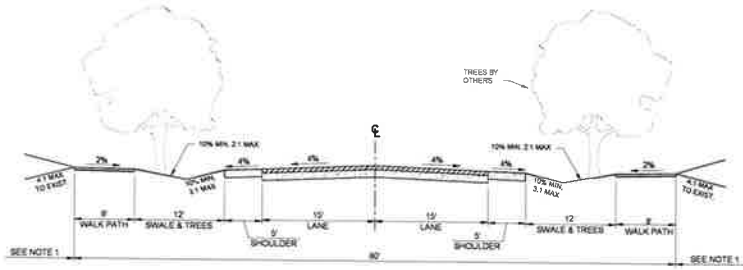
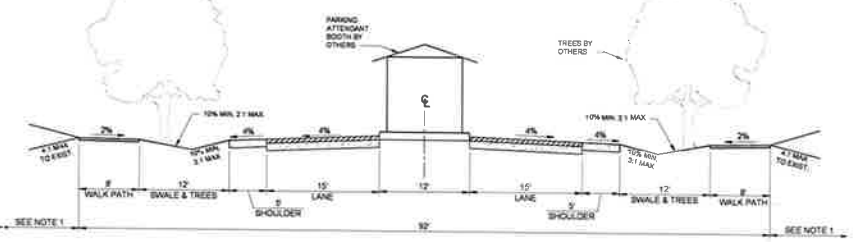



**1 ROAD SECTION 1**

STA. 100+15 to STA. 104+97
STA. 106+02.92 to STA. 108.0136
STA. 130+15 to STA. 138+78.10

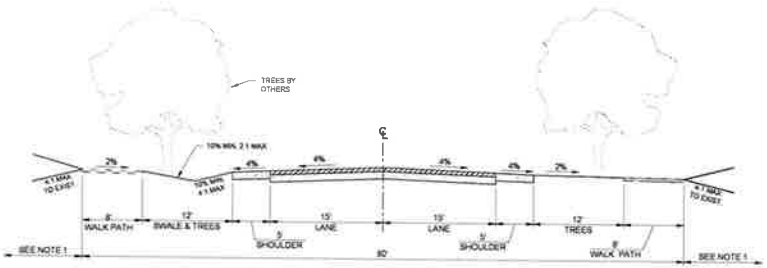
Scale: 1/8" = 1'-0"




**1A ROAD SECTION 1A**

STA. 104+97 to STA. 106+02.92

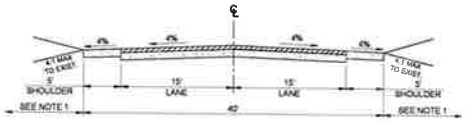
Scale: 1/8" = 1'-0"




**2 ROAD SECTION 2**

STA. 27+13.26 to STA. 37+02.75

Scale: 1/8" = 1'-0"




**3 ROAD SECTION 3**

STA. 120+15 to STA. 124+84.85

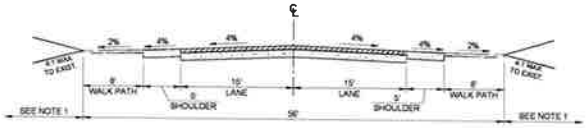
Scale: 1/8" = 1'-0"

## CROSS SECTION NOTES:

1. GRADE AREA OUTSIDE OF ROADWAY SECTION PER GRADING PLANS WHERE APPLICABLE. OTHERWISE, GRADE TO EXISTING AS SHOWN.

## LEGEND:

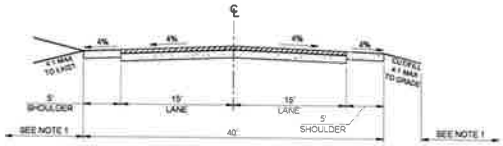
- 6" MINIMUM TYPE A GRAVEL ROAD COMPACTED TO 95% RELATIVE COMPACTION
- 12" NATURAL GROUND COMPACTIED TO 95% RELATIVE COMPACTION
- 4" MINIMUM DECOMPOSED GRANITE WALK PATH




**3B ROAD SECTION 3B**

STA. 86+06.68 to STA. 88+48.37

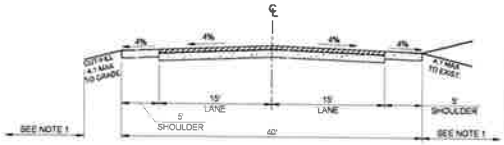
Scale: 1/8" = 1'-0"




**4 ROAD SECTION 4**

STA. 10+00 to STA. 13+50.00

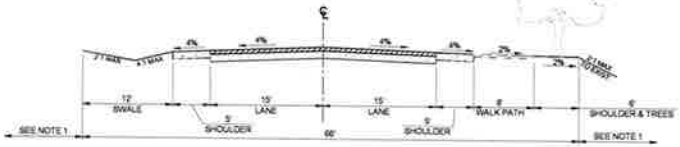
Scale: 1/8" = 1'-0"




**4A ROAD SECTION 4A**

STA. 40+00 to STA. 45+00

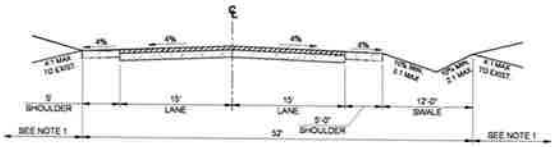
Scale: 1/8" = 1'-0"




**4B ROAD SECTION 4B**

STA. 45+00.00 to STA. 49+52.25

Scale: 1/8" = 1'-0"




**5 ROAD SECTION 5**

STA. 13+50.00 to STA. 27+13.26
STA. 80+15 to STA. 88+06.68

Scale: 1/8" = 1'-0"

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0 1/2 1

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**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822 8559 fax

**CONSULTANT**

AECOM Technical Services, Inc
5001 E. Commercenter Dr., Suite 100
Bakersfield, CA 93309
661 325 7253 tel 661 396 0359 fax
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**PROJECT NUMBER**

60309567

**SHEET TITLE**

TYPCIAL CROSS SECTIONS SHEET 1

**SHEET NUMBER**

C-26

Project Management Initials ____ Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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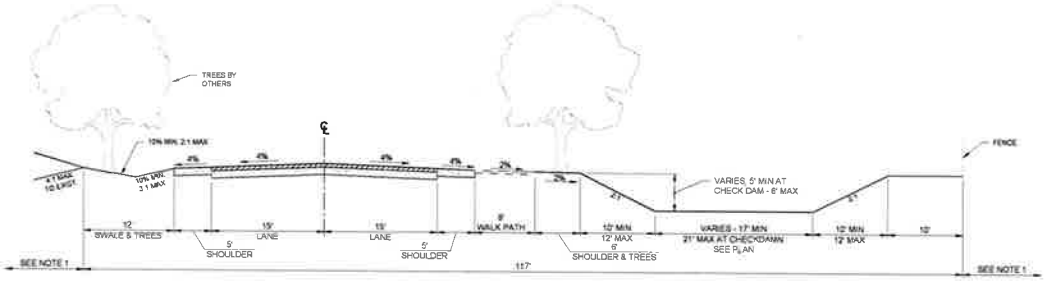
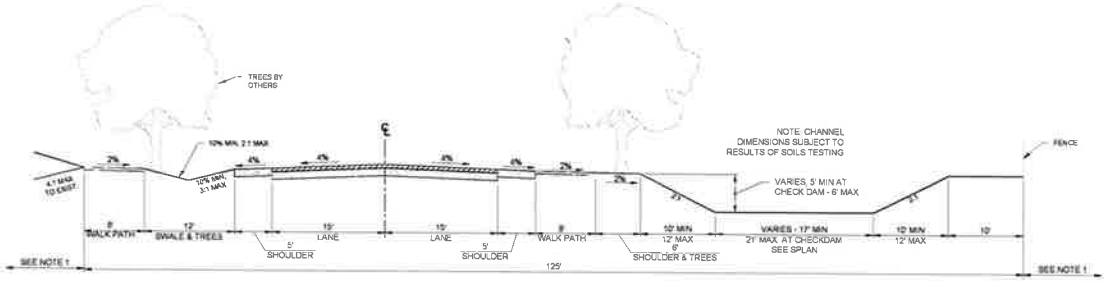


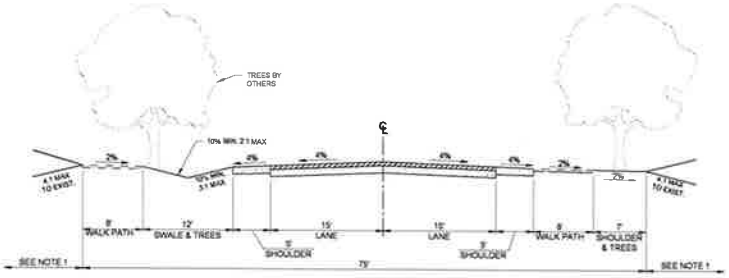

**6** | **ROAD SECTION 6**

STA. 49+54.25 to STA. 58+71.26 — Scale: 1/8" = 1'-0"




**7** | **ROAD SECTION 7**

STA. 58+71.26 to STA. 65+32.41 — Scale: 1/8" = 1'-0"




**7A** | **ROAD SECTION 7A**

STA. 65+32.41 to STA. 68+82.44 — Scale: 1/8" = 1'-0"

## LEGEND:

- 6" MINIMUM TYPE A GRAVEL ROAD COMPACTED TO 95% RELATIVE COMPACTION
- 12" NATURAL GROUND COMPACTED TO 95% RELATIVE COMPACTION
- 4" MINIMUM DECOMPOSED GRANITE WALK PATH

## CROSS SECTION NOTES:

1. GRADE AREA OUTSIDE OF ROADWAY SECTION PER GRADING PLANS WHERE APPLICABLE. OTHERWISE, GRADE TO EXISTING AS SHOWN.

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DATE: AUGUST 2014

**PROJECT NUMBER**

60309567

**SHEET TITLE**

TYPICAL CROSS SECTIONS SHEET 2

**SHEET NUMBER**

C-27

Project Management Details Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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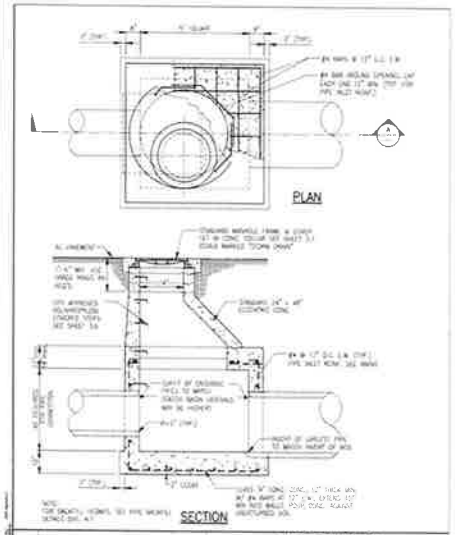
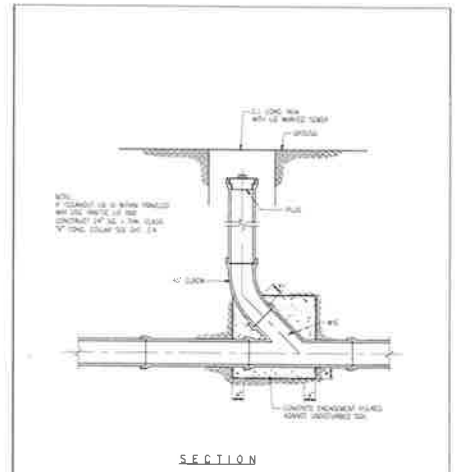
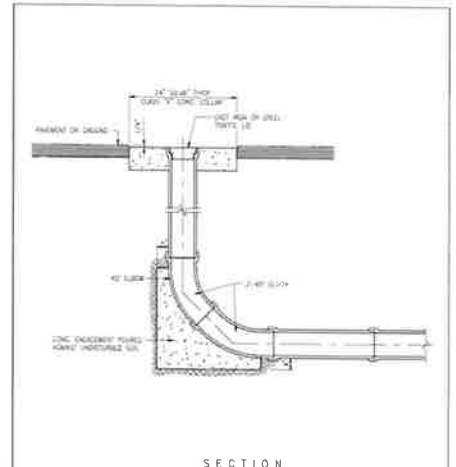


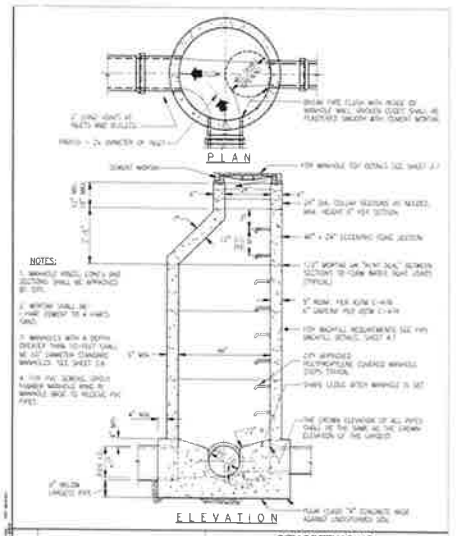

CITY OF TEHACHAPI
STORM DRAIN
JUNCTION MANHOLE DETAIL
01/06 2.1



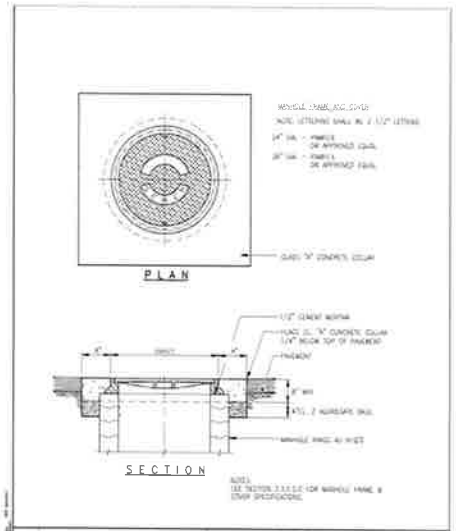

CITY OF TEHACHAPI
INLINE CLEANOUT
01/06 3.3



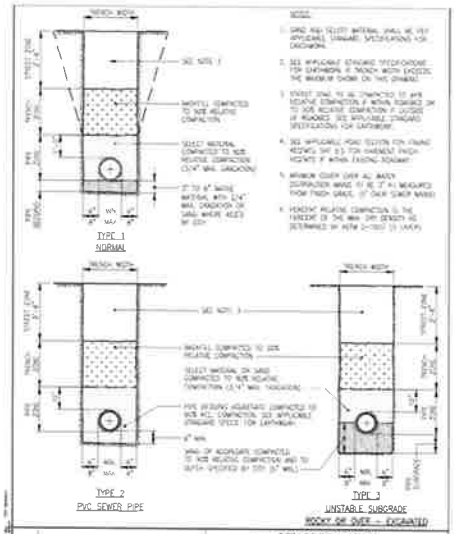

CITY OF TEHACHAPI
END OF LINE CLEANOUT
01/06 3.4




CITY OF TEHACHAPI
48" I.D. STANDARD MANHOLE
01/06 3.5




CITY OF TEHACHAPI
MANHOLE FRAME AND COVER
01/06 3.7




CITY OF TEHACHAPI
WATER AND SEWER PIPE
BEDDING AND BACKFILL DETAILS
01/06 4.1

811
Know what's below.
Call before you dig.

0 1/2 1
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AECOM

PROJECT
EVENT CENTER INFRASTRUCTURE PROJECT

CLIENT
CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2200 tel 661 822 8569 fax

CONSULTANT
AECOM Technical Services, Inc
5001 E. Commercenter Dr., Suite 100
Bakersfield, CA 93309
661 325 7253 tel 661 395 0359 fax
www.aecom.com

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ISSUE/REVISION

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PROJECT NUMBER
60309567

SHEET TITLE
DETAILS - SHEET 1

SHEET NUMBER
C-28

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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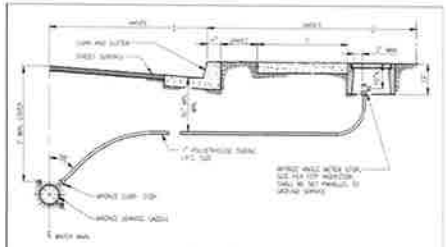
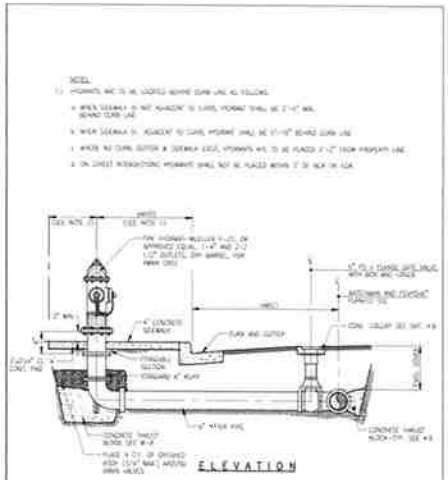
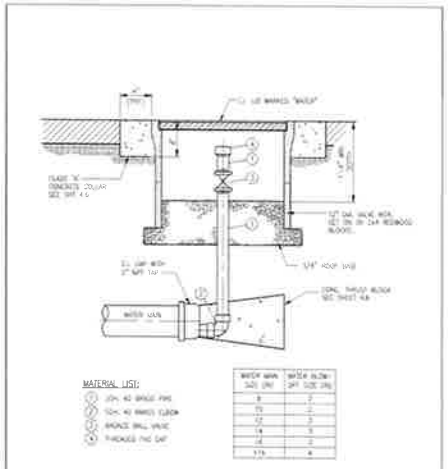


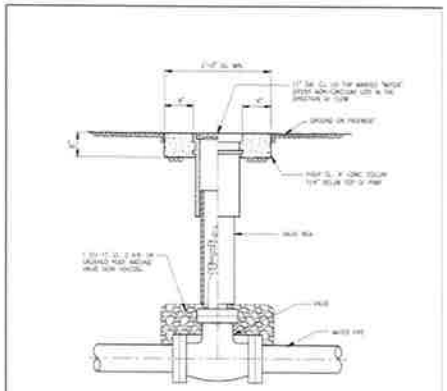

CITY OF TEHACHAPI
1" 1-1/2" & 2"
STANDARD WATER SERVICES
01/06 4.2



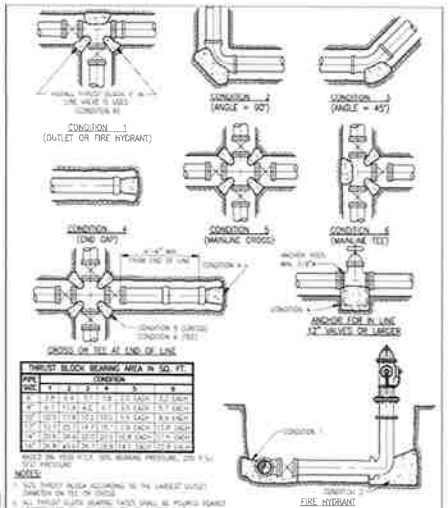

CITY OF TEHACHAPI
STANDARD FIRE HYDRANT ASSEMBLY
01/06 4.4



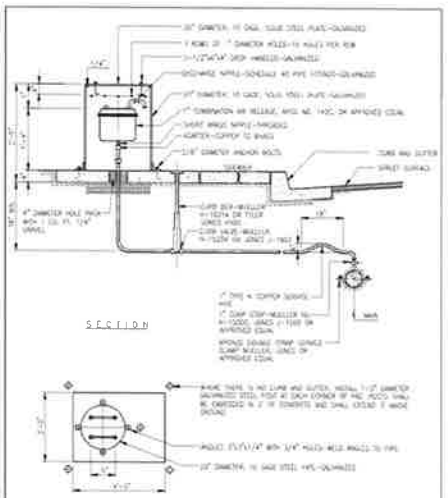

CITY OF TEHACHAPI
BLOWOFF ASSEMBLY
01/06 4.5




CITY OF TEHACHAPI
VALVE BOX ASSEMBLY
01/06 4.6




CITY OF TEHACHAPI
TYPICAL THRUST BLOCK DETAILS
01/06 4.8




CITY OF TEHACHAPI
COMBINATION AIR RELEASE VALVE ASSEMBLY
04/02 4.9

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1" TALL BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

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PROJECT
EVENT CENTER INFRASTRUCTURE PROJECT

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www.aecom.com

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PROJECT NUMBER
60309567

SHEET TITLE
DETAILS - SHEET 2

SHEET NUMBER
C-29

Project Management Initials Designer ____ Checked ____ Approved ____ ANSI D 22" x 34"

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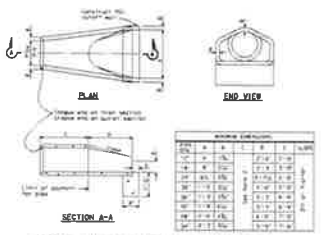
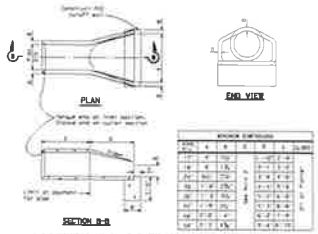



PRECAST CONCRETE FLARED END SECTION TYPE A




PRECAST CONCRETE FLARED END SECTION TYPE B

NOTES:

1. Contractor has the option of using either type A or B precast concrete flared end section.
2. "C" dimension varies by manufacturer and will be held for all concrete pipe.

State of California
Department of Transportation

CONCRETE FLARED END SECTIONS

NO SCALE

D848

Project Management Initials: ____ Designer: ____ Checked: ____ Approved: ____ ANSI D 22" x 34"

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**PROJECT**

EVENT CENTER INFRASTRUCTURE PROJECT

**CLIENT**

CITY OF TEHACHAPI
115 S. Robinson Street
Tehachapi, CA 93561
661 822 2700 tel 661 822 8559 fax

**CONSULTANT**

AECOM Technical Services, Inc.
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**PROJECT NUMBER**

60309567

**SHEET TITLE**

DETAILS - SHEET 3

**SHEET NUMBER**

C-30