FINAL REPORT

Environmental Assessment

Prepared for

Mammoth Yosemite Airport
Expansion Project

Prepared by:
The Town of Mammoth Lakes

December 2000

This environmental assessment becomes a Federal document when evaluated and signed by the responsible FAA official.

Responsible FAA Official

Date

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Abstract

The Town of Mammoth Lakes, operator of the Mammoth Yosemite Airport, proposes improvements to the Airport that would allow the airfield to safely and efficiently accommodate commercial airline service. These improvements include but are not limited to (1) extension of Runway 09-27 1,200 feet to the west, creating a runway 8,200 feet in length, (2) airside infrastructure improvements to accommodate narrow body air carrier aircraft up to the size of a Boeing 757-200, and (3) the construction an air carrier apron and associated passenger terminal building facilities. Commercial airline service to the Mammoth Yosemite Airport is scheduled to resume during the winter season of 2001/2002 with Boeing 757 aircraft serving Dallas/Fort Worth and Chicago O'Hare International airports. This service is anticipated to expand, in the following years, to include air carrier and commuter service to other regional and national destinations such as Los Angeles.

The Environmental Assessment to date has uncovered no significant environmental impacts caused by the expansion of the Airport that could not be satisfactorily mitigated. Among the findings and mitigation measures in the EA are:

- The Sierra Nevada Aquatic Research Laboratory (SNARL) educational facilities located at the "Green Church" would be replaced on a different site in accordance with the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970.
- Deicing operations would be restricted to a specific portion of the air carrier ramp where the deicing fluid runoff could be collected in tanks and transported off site for treatment.
- A package plant will be used for the disposal of sewage effluent from the proposed terminal complex. This plant would provide secondary treatment of the sewage effluent with supplemental nitrate reduction. An oil water separator would be installed for the air carrier ramp and parking area.
- A revision of the Airport's use permit would be required from the U.S. Forest Service to accommodate land required by the Runway 09-27 Runway Safety Area.
- The dry meadow area east of the Airport should be monitored in the spring 2001 for the Sage Grouse prior to the use of heavy construction equipment in the vicinity.
- Degraded high quality deer habitat would be replaced at a ratio of one restored acre for every one degraded acre. Four potential mitigation sites have been identified. The U.S. Forest Service gravel pit located north of the Airport is the primary area being considered for restoration.
- The required chain link security fence can be seen through and would be constructed of neutral colored fencing material to make the fence more aesthetically pleasing and to reduce blockage of views from U.S. 395. Post tops would be designed to discourage perching by raptors.
- The Airport Commercial Development Plan and Sierra Business Park project have been examined in conjunction with the proposed action. Access road connections to Benton Crossing Road associated with the Airport Commercial Development Plan or restriping center median lanes at the intersection of U.S. 395 and Hot Creek Road would be required to reduce potential traffic congestion at Hot Creek Road.

The following Environmental Assessment addresses these areas in addition to the other areas required by the National Environmental Policy Act of 1969 and Federal Aviation Administration Order 5050.4A, *Airport Environmental Handbook*.

I. Introduction and Background

1.1 Introduction

Mammoth Yosemite Airport (the Airport) serves the Town of Mammoth Lakes, California and other Eastern Sierra communities. The Town of Mammoth Lakes lies within Mono County, which is located in the Eastern Sierra Nevada Mountain Range. The Town operates the Airport, which predominantly generally serves general aviation aircraft. The airfield has approximately 40 based aircraft and serves approximately 6,000 annual operations.

The Airport has a single runway, which is designated as Runway 09-27 and is 7,000 feet long by 100 feet wide. A full parallel taxiway system, 50 feet in width, supports this runway. Apron and hangar facilities are available for both based and transient aircraft.

The proposed action, for which this Environmental Assessment (EA) was prepared, is to extend Runway 9-27 1,200 feet to the west. The purpose of the proposed action is to provide the necessary runway length to safely allow air carrier/charter aircraft up to the size of a Boeing 757-200 to operate at the Airport. The purposes of this EA are to: (1) obtain approval of the Airport Layout Plan from the Federal Aviation Administration (FAA), (2) obtain the necessary certifications from the FAA to operate as an air carrier airport, (3) be eligible to receive funds from the FAA under its Airport Improvement Program (AIP) or impose Passenger Facility Charges (PFC) to assist in funding some of the proposed improvements, and (4) to obtain environmental clearance for the construction of the first phase of development.

The potential environmental consequences of the proposed action, as well as alternatives to the proposed action, are evaluated in this EA.

1.2 Background

Mammoth Yosemite Airport was originally constructed by the United States (U.S.) Army for use as an auxiliary landing strip during World War II. The original dimensions of the landing strip were less than 4,000 feet in length by 30 feet in width. Mono County acquired the airfield from the U.S. Army after the war and renamed it Long Valley Field. The runway was an unpaved dirt strip and the Airport was a seasonal facility closed by winter snows until it was paved in 1959. The Airport was operated as an unattended landing strip until the early 1960s.

Mono County transferred the property to the U.S. Forest Service in 1965 with the understanding that airport facilities would be improved and expanded. Mono County then contracted with private interests for improvement and expansion of airfield facilities. In 1965, the runway was extended to 5,000 feet and widened to 100 feet. Also at this time, the runway was relocated 300 feet to the north to accommodate the future widening of U.S. Route 395, which runs adjacent to the Airport. The Airport was renamed Mammoth Lakes Airport and private interests operated the airfield, using U.S. Forest Service special use permits.

Mammoth Sky Lodge Corporation, then the Airport operator, extended the runway to 6,500 feet in 1971. A terminal building and an airport office were constructed in 1972. During this time, the

Airport became formally known as Mammoth-June Lakes Airport. In 1973, Sierra Pacific Airlines initiated service using Convair 440 aircraft and served Mammoth Lakes until 1980.

Mono County entered into an agreement with Mammoth Sky Lodge Corporation to acquire the Airport in 1978; however, the acquisition of the Airport was not consummated until 1980. During the intervening time, Mono County prepared an Environmental Impact Report for the acquisition of the Airport and extension of the runway. Mono County re-established public operation of the Airport in 1980, and the FAA approved a Finding of No Significant Impact (FONSI) Environmental Impact Report in 1981.

Mono County began an airfield improvement program in 1983. Using funds received under the Airport Improvement Program, a new runway, 7,000 feet by 100 feet, was constructed. This new runway began 3,400 feet east from the beginning of the previous runway in order to provide the required line of sight along the runway's length. The western 3,400 feet of pavement of the previous runway became the present day paved overrun. In 1985, Trans World Express began commuter service to Los Angeles and San Francisco using 19-seat Beechcraft 1900 turboprop aircraft. Airport development and land use changes were proposed in 1986 that included a plan for a 5,000-foot by 100-foot crosswind runway, 300,000 square feet of additional supporting taxiways, and a 120-acre golf course.

The 1986 proposed improvements required the preparation of environmental documents under the California Environmental Quality Act (CEQA). Mono County commissioned the preparation of an Environmental Impact Report (EIR) entitled, *Environmental Impact Report and Environmental Assessment Mammoth/June Lakes Airport Land Use Plan.* The EIR document was certified as adequate by the unanimous action of the Mono County Board of Supervisors in 1986.

Royal West Airlines began seasonal winter service only for the1987 ski season, using British Aerospace Bae 146 turbojet aircraft, but ceased all operations in 1988.

The Town of Mammoth Lakes purchased the Airport from Mono County in September 1992. United Express operated flights from Mammoth Lakes to Fresno, using 19-seat Jetstream 31 turboprop aircraft for the winter seasons of 1993 and 1994. Service reliability problems associated with overbooking the 19 seat Jetstream aircraft led to passenger disatisfaction causing United Express to discontinue service.

Additionally, Trans World Express terminated flight operations in 1995 due to reorganization of its major code share partner, Trans World Airlines. This reorganization of Trans World Airlines was required under Chapter 11 of the Federal Bankruptcy Code.

In 1997, new airport development was proposed for the airfield. Previous plans for the crosswind runway and supporting taxiways and golf course were eliminated. An extension of the current Runway 09/27 from 7,000 feet to 9,000 feet was proposed as was the construction of a hotel/condominium complex. The elimination of both the crosswind runway and golf course from the airport development plan resulted in much less land disturbance, as the majority of the project would remain within the current boundaries of the Airport.

The new airport development reviewed in the 1997 EIR included both airside and landside developments by a private developer. Airside improvements included the proposed building of up to

approximately 135 private and public use hangars, an aviation fuel storage complex and facilities for the operation of a fixed base operator (FBO). Landside development would consist of a hotel and residential condominium complex, retail development, a restaurant complex and a recreational vehicle park. Also included in the new airport development reviewed in the 1997 EIR was the right to construct an access road from Benton Crossing Road to the Airport and signage on Town property along Highway 395. The above projects received environmental clearance upon 1997 certification of the EIR. Phase one construction began shortly after the EIR certification and has continued to date. This project, having previously been environmentally reviewed, is not the subject of this EA.

The 1997 Airport expansion program was environmentally reviewed in the 1997 EIR *Mammoth Lakes Airport Expansion, Subsequent Environmental Impact Report and Updated Environmental Assessment (C1-23)*. This report re-examined the 1986 *Environmental Impact Report and Environmental Assessment Mammoth/June Lake Airport Land Use Plan* for environmental impacts that had arisen or changed since 1986. The Town of Mammoth Lakes certified the 1997 EIR document as adequate.

In 2000 the Town of Mammoth Lakes changed the name of the airport from Mammoth Lakes Airport to Mammoth Yosemite Airport.

Commercial airline service to the Mammoth Yosemite Airport is scheduled to resume during the winter season of 2001/2002 with Boeing 757 aircraft serving Dallas/Fort Worth and Chicago O'Hare International airports. This service is anticipated to expand, in the following years, to include air carrier and commuter service to other regional and national destinations.

Development at the Airport that would allow the airfield to safely and efficiently accommodate commercial airline service is currently being proposed. This development differs in certain respects from development plans analyzed in the past, principally because it calls for less land disturbance and evaluates alternatives to the proposed project. The current plan would extend the current runway to 8,200 feet rather than the previously planned length of 9,000 feet. It is important to note that while a runway extension to 9,000 feet is still being considered in the Airport's long-range plans, extensions beyond the first phase length of 8,200 feet are not anticipated in the near-term planning horizon. However, it is prudent to environmentally analyze the development of a 9,000-foot runway as it may produce environmental impacts in addition to or different from those previously analyzed. The environmental review for this project was conducted under NEPA guidelines. This EA has been prepared to provide the community full disclosure of the proposed project and potential environmental impacts of the development alternatives.

II. Purpose and Need

2.1 Proposed Action

The proposed action, for which this EA was performed, is for the Town of Mammoth Lakes to extend Runway 09-27 at Mammoth Yosemite Airport to the west to a length of 8,200 feet. The Town of Mammoth Lakes would be required to obtain a special use permit from the United States Forest Service (USFS) for the additional 25 feet of land to the south. In addition to the runway extension the following are part of the proposed action and depicted in **Exhibit II-1**.

- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft
- Widen the runway from 100 to 150 feet on the south side of the runway, shifting the runway centerline 25 feet to the south. The Town of Mammoth Lakes would be required to obtain a special use permit from the USFS for the additional 20 feet of land to the west of Airport property for the runway safety area
- Widen the parallel taxiway from 50 to 75 feet by 20 feet on the south side and five feet on the north side
- Widen selected connecting taxiways from 50 to 75 feet
- Extend the parallel taxiway to match the runway extension
- Add an air carrier apron for three air carrier aircraft with expansion capabilities to accommodate up to six air carrier aircraft
- Construct Airport access road improvements
- Expand the automobile surface parking facilities
- Acquire land to the east of the Airport that is currently leased from the Los Angeles Department of Public Works (LADWP) for Airport use
- Improve security fencing to include a 6 to 8 foot high perimeter fence around the airfield
- Construction of a passenger terminal complex and related support areas

Commercial airline service to the Mammoth Yosemite Airport is scheduled to begin during the winter season of 2001/2002 with Boeing 757 aircraft serving Dallas/Fort Worth International Airport and Chicago O'Hare International Airport. This service is scheduled to expand, in following years, to include air carrier and commuter service to other regional and national destinations. The existing airfield at Mammoth Yosemite Airport does not currently meet all of the FAA airfield design criteria for the operation of a Boeing 757 aircraft. The current runway field length does not allow for narrowbody turbojet aircraft, such as the Boeing 757 and Boeing 737, to operate efficiently to major airports such as Dallas/Fort Worth, Denver, or Chicago O'Hare. Therefore, the primary purpose of the proposed action is to enable air carrier jet service, using aircraft up to the size of a Boeing 757, to safely and efficiently operate at the Airport.

2.2 Requested Federal Action

The requested Federal Action is the approval of a revised ALP, as depicted in **Exhibit II-2**, which includes the extended Runway 09-27, the taxiway improvements, and the terminal and other landside support facilities. Such approval would enable the Town of Mammoth Lakes to apply for AIP grants or impose a PFC. Also requested is environmental clearance for the first phase of development.

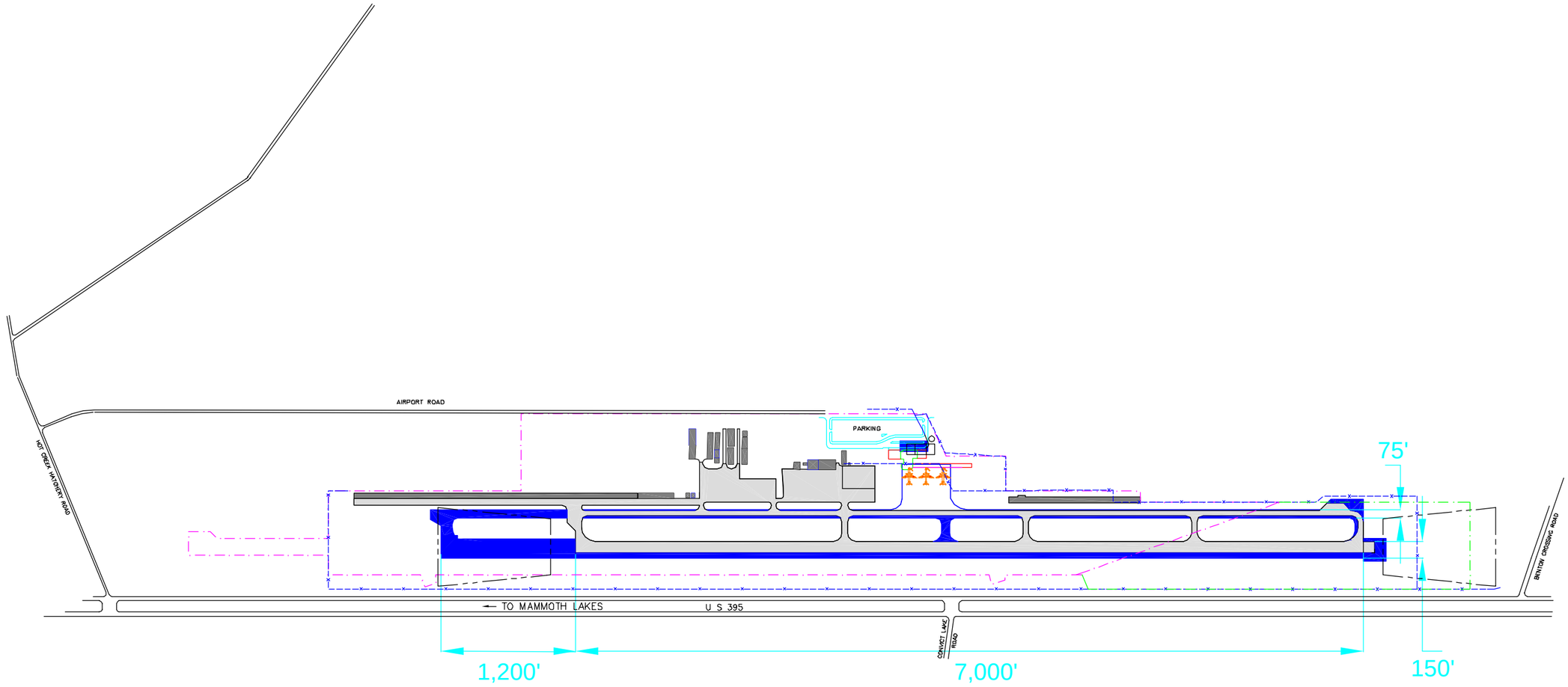
2.3 Purpose and Need

Mammoth Lakes, California is a resort town located in the Eastern Sierra Nevada Mountain Range approximately 170 miles south-southeast of Reno, Nevada. The region has year-round recreational attractions consisting of skiing in the winter and numerous outdoor recreational activities in the spring, summer, and autumn, which include major attractions such as Yosemite National Park, Mono Lake, June Lake, and Devil's Postpile National Monument. Winter skiing at Mammoth Mountain attracted nearly 1.0 million skiers in the 1998/99-winter season. Based on statistics provided by the California Department of Transportation (CalTrans), approximately 1.5 million summer tourists visit the Mammoth Lakes region annually. Nearly 6.0 million tourists visited nearby Yosemite, and Death Valley National Parks in 1998.

Currently, the nearest commercial service airport to the Mammoth Lakes area is in Reno (170 miles). The next closest commercial service airports are in Fresno, California (190 miles), Sacramento, California (230 miles), the three San Francisco, California Bay-Area airports (San Francisco/Oakland/San Jose, about 250 miles), Las Vegas, Nevada (310 miles), and Los Angeles, California (320 miles). Mammoth Lake's location with respect to these cities is depicted on **Exhibit II-3**. Most travelers outside of the California and Nevada areas fly to either Reno or Los Angeles and drive to the Mammoth Lakes area via U.S. Highway 395. For tourists living west of the Sierra Nevada Mountains in the San Jaoquin Valley, the shortest route to Mammoth Lakes is via the Tioga Pass through Yosemite National Park. However, heavy snows cause closure of this highway between November and May nearly every year. Northern California visitors travel by automobile to Mammoth Lakes via U.S. Highways 50 and 395. Visitors from Southern California use U.S. Highway 395 to Mammoth Lakes.

Mammoth Lakes was one of the most frequented ski resorts in North America during the 1980s. However, direct flights into other western U.S. ski resorts drew visitors away from the Mammoth Lakes area in the 1990s. It has been determined, through market research that one of the methods of improving service forecasting and the amount new visitors to the region would be by reducing visitor travel times to the Mammoth Lakes area. The development of airport facilities to accommodate commercial airline and charter operations would allow direct access to the region, thereby reducing visitor travel time. The introduction of airline service will directly reduce adverse air quality emissions as a result of reduced vehicular traffic to the region.

Assuming the proposed project is approved and constructed, commercial airline service to the Mammoth Yosemite Airport is scheduled to begin during the winter season in 2001/2002 and would include air carrier service to and from Dallas/Fort Worth International Airport and Chicago O'Hare International Airport using narrow-body turbojet aircraft. Commuter and regional jet aircraft service is also anticipated, in future years, to other regional markets such as the Los Angeles and San Francisco areas.



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared: Ricondo & Associates, Inc.

Exhibit II-1

0 1,000 ft.

north

Legend

- Existing Airfield
- Potential Airport Improvement
- Current Property Boundaries
- Fence
- Proposed Property Boundaries

Proposed Action

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LOCATION MAP

RUNWAY DATA

	RUNWAY 9 – 27		
	EXISTING	FUTURE	ULTIMATE
Approach Visibility Minimums	1-1/4 mi. — 1-1/4 mi.	1-1/4 mi. — 1-1/4 mi.	1-1/4 mi. — 1-1/4 mi.
Runway Length – ft.	7000' ASPHALT	8200' ASPHALT	9000' ASPHALT
Runway Width – ft.	100'	150'	150'
Pavement Strength – kips	113 D	113 D	113 D
Effective Gradient – %	1.03%	0.86%	0.86%
Approach Slopes	9 – 20:1 27 – 20:1	9 – 20:1 27 – 34:1	9 – 34:1 27 – 34:1
Runway Lighting	MIRL	MIRL	MIRL
Runway Marking	NON-PRECISION	NON-PRECISION	NON-PRECISION
Visual and Navigational Aids	RPTS, REILS, PAPI(27)	GPS, REILS, PAPI(9,27)	GPS, REILS, PAPI(9,27)
OFA Width – ft.	800	800	800
OFA Length beyond End of Runway – ft.	1000	1000	1000
RSA Width – ft.	500	500	500
RSA Length beyond End of Runway – ft.	1000	1000	1000
Runway End Coordinates 9 Latitude	37° 37' 37.812" N	37° 37' 41.406" N	37° 37' 44.234" N
Runway End Coordinates 9 Longitude	118° 51' 00.596" W	118° 51' 20.051" W	118° 51' 29.521" W
Runway End Coordinates 27 Latitude	37° 37' 13.335" N	37° 37' 13.335" N	37° 37' 13.335" N
Runway End Coordinates 27 Longitude	118° 48' 38.320" W	118° 48' 38.320" W	118° 48' 38.320" W

AIRPORT DATA

	EXISTING	ULTIMATE
Airport Category	GENERAL AVIATION	COMMERCIAL
Airport Elevation	7133.65' MSL	7138.30' MSL
Airport Reference Point (ARP)	LAT. 37° 37' 28.375"N LONG. 118° 50' 19.451"W	LAT. 37° 37' 28.788"N LONG. 118° 50' 43.352"W
Mean Max. Temp. Hottest Month	83° F (AA.V)	83° F (AA.V)
Wind Coverage at 13 Knots – %	94.85	94.85
Airport Reference Code A/C	B-II	C-IV
Taxiway Lighting	No	Yes
Taxiway Marking	Yes	Yes
Navigational Aids	GPS APPROACH	GPS APPROACH
Based Aircraft	48	330
Tiedowns	130	130
Hangar Spaces	35	159
FBO Tiedowns	0	10
Transient Tiedowns	130	84

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

TRUE MAGNETIC

DECLINATION (5/97)

14°58.7

0 400 800 1200

GRAPHIC SCALE IN FEET

SCALE: 1" = 400'

TIME PERIOD	R/W 9–27			
	10.5 Kn	13.0 Kn	16.0 Kn	20.0 Kn
07:00 – 13:00	95.65%	96.90%		
13:00 – 19:00	93.81%	95.63%		
19:00 – 07:00	89.04%	93.00%		
ALL DAY	91.90%	94.65%	97.62%	98.86%

NOTE:

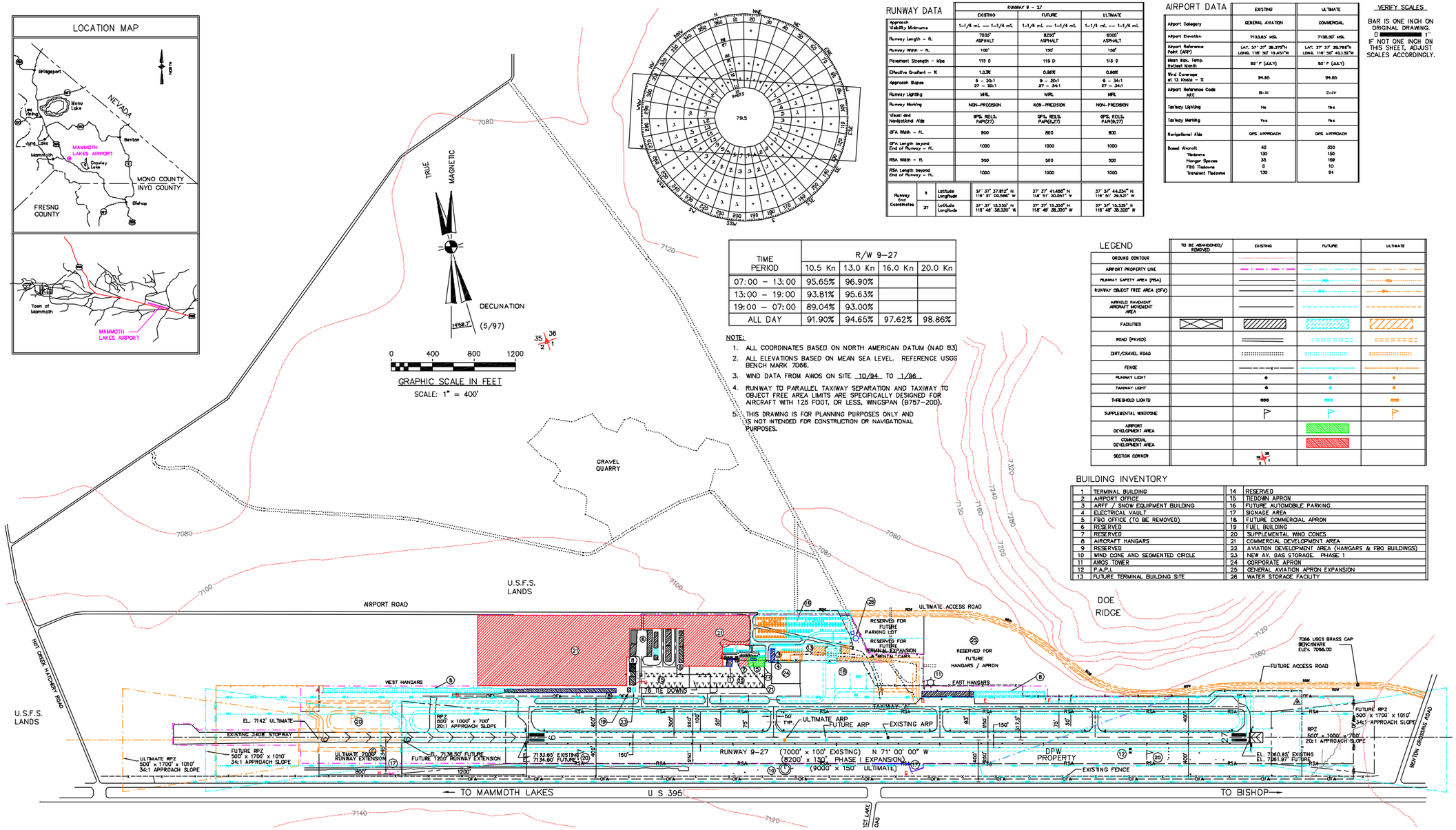
1. ALL COORDINATES BASED ON NORTH AMERICAN DATUM (NAD 83)
2. ALL ELEVATIONS BASED ON MEAN SEA LEVEL. REFERENCE USGS BENCH MARK 7066.
3. WIND DATA FROM AWOS ON SITE 10/94 TO 1/96
4. RUNWAY TO PARALLEL TAXIWAY SEPARATION AND TAXIWAY TO OBJECT FREE AREA LIMITS ARE SPECIFICALLY DESIGNED FOR AIRCRAFT WITH 125 FOOT, OR LESS, WINGSPAN (B757-200).
5. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

LEGEND

	TO BE ABANDONED/ REMOVED	EXISTING	FUTURE	ULTIMATE
GROUND CONTOUR				
AIRPORT PROPERTY LINE				
RUNWAY SAFETY AREA (RSA)			RSA	RSA
RUNWAY OBJECT FREE AREA (OFA)			OFA	OFA
AIRFIELD PAVEMENT/ AIRCRAFT MOVEMENT AREA				
FACILITIES				
ROAD (PAVED)				
DIRT/GRAVEL ROAD				
FENCE				
RUNWAY LIGHT		9	9	9
TAXIWAY LIGHT		6	6	6
THRESHOLD LIGHTS		666	666	666
SUPPLEMENTAL WINDCONE				
AIRPORT DEVELOPMENT AREA				
COMMERCIAL DEVELOPMENT AREA				
SECTION CORNER				

BUILDING INVENTORY

1	TERMINAL BUILDING	14	RESERVED
2	AIRPORT OFFICE	15	TIEDOWN APRON
3	ARFF / SNOW EQUIPMENT BUILDING	16	FUTURE AUTOMOBILE PARKING
4	ELECTRICAL VAULT	17	SIGNAGE AREA
5	FBO OFFICE (TO BE REMOVED)	18	FUTURE COMMERCIAL APRON
6	RESERVED	19	FUEL BUILDING
7	RESERVED	20	SUPPLEMENTAL WIND CONES
8	AIRCRAFT HANGARS	21	COMMERCIAL DEVELOPMENT AREA
9	RESERVED	22	AVIATION DEVELOPMENT AREA (HANGARS & FBO BUILDINGS)
10	WIND CONE AND SEGMENTED CIRCLE	23	NEW AV. GAS STORAGE. PHASE 1
11	AWOS TOWER	24	CORPORATE APRON
12	P.A.P.I.	25	GENERAL AVIATION APRON EXPANSION
13	FUTURE TERMINAL BUILDING SITE	26	WATER STORAGE FACILITY



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit II-2

0 1000

north

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Future Airport Layout Plan

Source: Cartesia Software, MapArtGeopolitical Deluxe - USA, Version 2.0, 1998
Prepared by: Ricondo &Associates, Inc.

Exhibit II-3

0 100miles north

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Town of Mammoth Lakes
Location and Vicinity

The current Airport facilities include a 7,000-foot by 100-foot runway, a parallel taxiway system, a general aviation hangar, tie-down, support facilities, and limited landside passenger processing facilities. It has been determined that modifications to the Airport facilities would be required to comply with Airport Design Standards and commercial airline operating policy for safe and efficient flight operations and for accommodation of the projected air service. An evaluation of the airfield design requirements is provided in Appendix B.

Calculations for runway length were conducted using the methodology proscribed in the B757-200 FAA approved Aircraft Flight Manual (AFM). The calculations were based on operations from Mammoth Yosemite Airport to Dallas-Ft. Worth and to Chicago-O'Hare. It was determined that on the maximum mean temperature day, runway length required for a 100 percent load factor on the aircraft is 9,000 feet. The land that is owned at the airport allows the construction of an 8,200-foot runway. Additional runway length can be obtained by acquiring additional land to the west, so the Master Plan shows an ultimate runway length of 9,000 feet.

Calculations were made to determine the allowable load factors with a B757-200 flying from Mammoth Yosemite Airport to Dallas-Ft. Worth and Chicago-O'Hare on the maximum mean temperature day. The results of these studies indicate that the B757-200 flying to Dallas-Ft. Worth can operate at 100 percent load factor; whereas, the B757-200 operating to Chicago-O'Hare must download to 94 percent load factor.

Consultation with the airlines and the Airport indicated that there would be no time in the winter and only a very few days in the summer that would require a load factor of less than 100 percent to fly the B757-200 to Chicago-O'Hare with an 8,200-foot runway. From economic and environmental considerations it was agreed that the first stage runway length of 8,200 feet would be adequate for development of the Mammoth Yosemite Airport to serve the B757-200 type aircraft with reasonable load factors and stage lengths. Appendix B contains these load factor and ranges calculations.

The safety criteria for certifying airports for commercial service are contained in the Federal Aviation Regulations (FAR) Part 139. FAR Part 139 prohibits an airport from serving any scheduled passenger operation of an airline operating an aircraft with a seating capacity of more than 30 passengers if all criteria are not met. The certification process ensures the safety of the airport environment is adequate for the proposed operation, considering such items as size, surface, obstructions, and lighting. Mammoth Lakes currently only possesses a limited FAR Part 139 certificate, which would not allow the operation of a commercial airline operating aircraft with more than 30 seats. The commercial airline service scheduled for the 2001/2002-winter season would use aircraft up to the size of a Boeing 757-200, which has a capacity of 176 seats.

The proposed action is needed to bring the current airfield facilities into compliance with Airport Design Standards to allow the safe operation of commercial airline narrow-body aircraft up to the size and seating capacity of a Boeing 757-200. The proposed action will adequately address the operational requirements of FAR Part 139 certification process.

2.4 Requirement for an Environmental Assessment

The EA for the extension of Runway 09-27 at Mammoth Yosemite Airport has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA) [2-1] and FAA Order 5050.4A, *Airport Environmental Handbook* [2-2]. According to Paragraph 46 of the Order, an environmental assessment requires enough analysis for the following seven purposes:

- To understand the problem and identify reasonable alternative solutions, including the proposed action (if selected)
- To determine whether any potential environmental impacts are significant, which would then require an environmental impact statement (EIS) process
- To provide a basis for the FAA's finding of no significant impact (FONSI) if the proposed action is determined to have no significant impact
- To identify and satisfy any special purpose federal laws, regulations, and executive orders
- To identify and satisfy state and local laws and regulations applicable to the proposal
- To identify any permits, licenses, or other entitlements required by the proposal
- To indicate agencies consulted in completing the above and to identify cooperating agencies for Environmental Impact Statement (EIS) preparation purposes, assuming an EIS is required by the FAA

2.5 Schedule

Design of the runway extension would begin upon receipt of environmental approval. Construction, scheduled to begin in 2001, would include the widening, strengthening, and extension of the runway and landside facilities with completion anticipated by the winter of 2001/2002. Temporary closures that may be required during construction would be coordinated with the Mammoth Yosemite Airport management to minimize any adverse impact on operations.

2.6 Persons and Organizations Contacted

A list of persons and organizations notified of the preparation of this document is provided in Appendix A. Responses and comments received are provided in Appendices D, I, J, and K.

III. Alternatives

3.1 Range of Alternatives

The proposed action and the alternatives address airside development of Mammoth Yosemite Airport. The alternatives considered in this EA include (1) Airport infrastructure alternatives developed for the *Mammoth Lakes Airport Expansion Project Benefit Cost Analysis (BCA)*, [3-1] (2) two alternatives developed specifically for this EA, and (3) an alternative of no action (i.e., operate the airfield with the current runway).

In addition to the no-action alternative (7,000-foot runway), airfield improvements resulting in runway lengths ranging from 7,000 to greater than 9,000 feet were identified. An aircraft performance analysis was conducted to determine the potential for providing air service to various markets from Mammoth Yosemite Airport. This aircraft performance analysis can be found in Appendix B. On the basis of aircraft performance analysis and airport design criteria, five alternatives were retained for future consideration. The extensions could be accomplished both to the east and to the west.

3.2 Alternatives Retained for Future Consideration

The five alternatives retained for further consideration are listed below. All of the retained alternatives, with the exception of Alternative 1 (No Action), have the following common airfield infrastructure developments:

- Strengthen the runway and taxiways to accommodate narrow-body air carrier aircraft up to the size of a B-757-200 aircraft
- Widen the runway from 100 to 150 feet on the south side of the runway, shifting the runway centerline 25 feet to the south
- Widen the parallel taxiway from 50 to 75 feet by 20 feet on the south side and five feet on the north side
- Widen selected connecting taxiways from 50 to 75 feet
- Extend the parallel taxiway to match the runway extension
- Add an air carrier apron for three air carrier aircraft with expansion capabilities to accommodate up to six air carrier aircraft
- Construct Airport access road improvements
- Expand the automobile surface parking facilities
- Acquire land to the east of the Airport that is currently leased for Airport use
- Improve security fencing to include a 6 to 8 foot high perimeter fence around the airfield
- Construction of a passenger terminal complex and related support areas as depicted in **Exhibit III-1**.

Additionally the infrastructure improvements will occur in all alternatives.

3.2.1 Alternative 1 – 7,000-Foot Runway (No Action)

Alternative 1 is depicted in **Exhibit III-2**. This alternative retains Runway 9-27 at its existing length of 7,000 feet. There are no further improvements to the existing airport infrastructure, except those required for maintenance or required by the FAA for safety reasons.

It is important to note that the Airport currently possesses a limited FAR Part 139 certificate for operations. A limited FAR Part 139 certificate allows air carrier aircraft to operate into the airfield on an unscheduled (i.e. charters) basis. The regulation governing the criteria for air carriers was changed in the mid 1990s to include aircraft whose seating capacities are 19 seats or greater. Many aircraft of this type have served Mammoth Yosemite Airport on a scheduled basis in the past under the old regulations and may do so in the future under the current regulations. Should aircraft of these types elect to provide regularly scheduled service to the Airport in the future, Mammoth Yosemite Airport would have to have a full FAR Part 139 certification. An important part of meeting FAA safety regulations for scheduled operations is the required security fencing and a secure terminal building for the airport. Before scheduled operations could start the Airport would have to install improved security fencing and a terminal building that meets FAA security regulations. While this EA does not specifically analyze this scenario, it should not be precluded under Alternative 1 No Action.

3.2.2 Alternative 2 – 8,200-Foot Runway (Proposed Action)

Alternative 2, illustrated in **Exhibit III-3**, extends Runway 09-27 1,200 feet to the west resulting in a runway length of 8,200 feet. While all aeronautical pavement would be on Airport property, required safety areas that meet specific guidelines would be located on property owned by the United States Forest Service (USFS). The Town of Mammoth Lakes would be required to obtain a special use permit for the additional 25 feet of land to the south and 25 feet of land to the west of Airport property for the runway safety area.

3.2.3 Alternative 3 – 9,000-Foot Runway

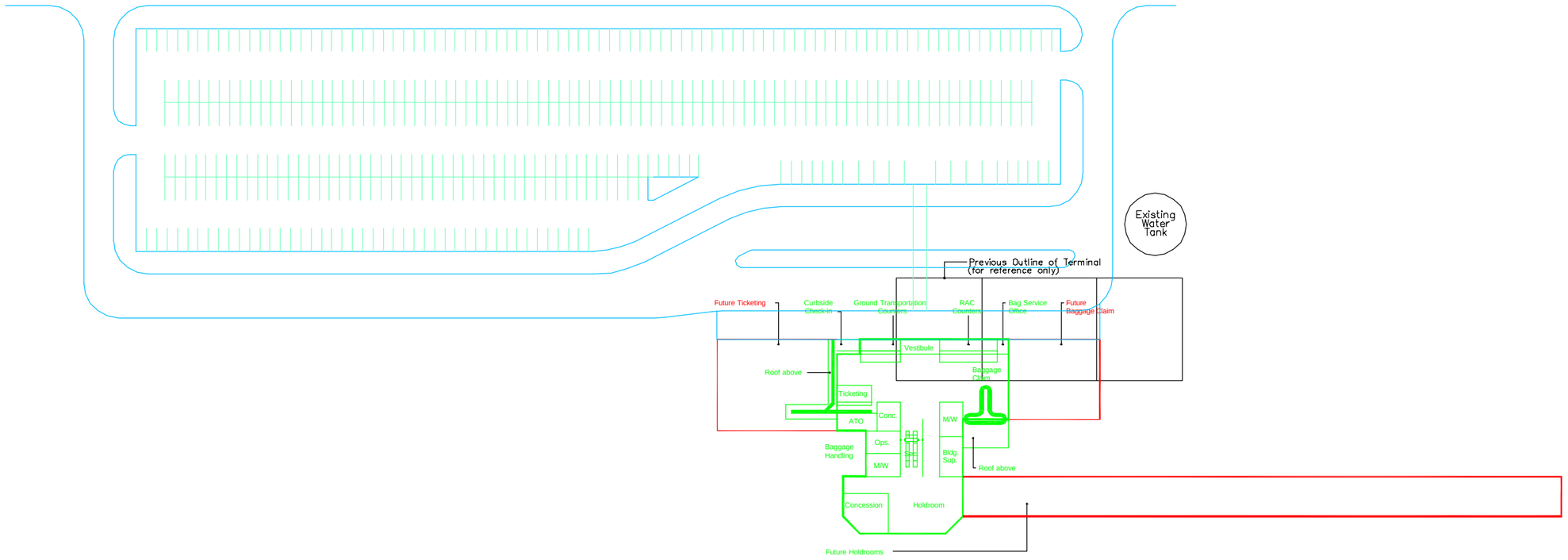
Alternative 3, illustrated in **Exhibit III-4** extends Runway 09-27 to the west to achieve a length of 9,000 feet. While all aeronautical pavement would be on Airport property, required safety areas that must meet specific guidelines would be located on property owned by the United States Forest Service (USFS). This would require the Town of Mammoth Lakes to purchase the property or obtain a special use permit from the USFS for the additional 25 feet of land to the south and 825 feet of land to the west of Airport property for the runway safety area.

3.2.4 Alternative 4 – Extend Runway Beyond 9,000 Feet

Alternative 4, illustrated in **Exhibit III-5,** extends Runway 09-27 to the west to achieve a length greater than 9,000 feet. Depending on the ultimate runway length desired, some aeronautical pavement along with the required safety areas, would not be on Airport property. This would require the Town of Mammoth Lakes to purchase the property or obtain a special use permit from the USFS.

3.2.5 Alternative 5 – Extend Runway to the East

Alternative 5, illustrated in **Exhibit III-6,** is the extension of Runway 09-27 to the east to achieve possible runway lengths of 8,200, 9,000, or greater than 9,000 feet. The City of Los Angeles owns



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Assoicates, Inc.

Exhibit III-1

0 1,200 ft.

north

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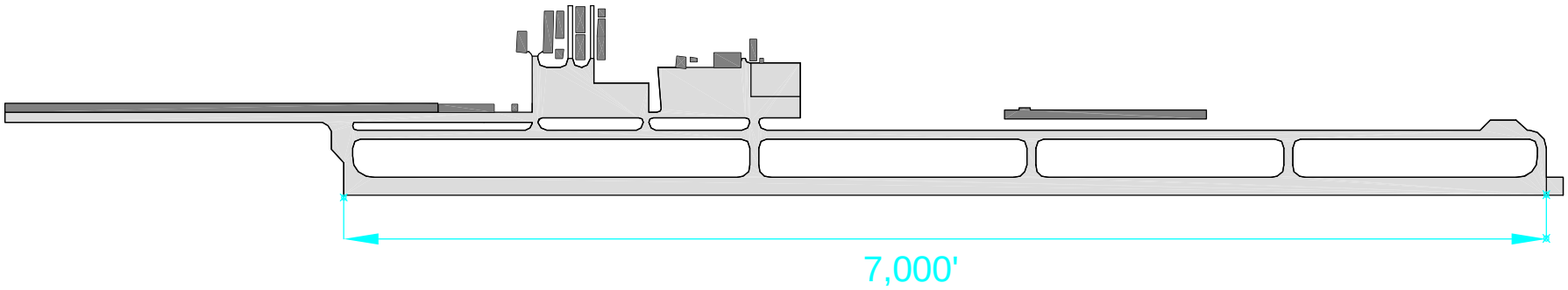
Terminal Concept

Mammoth Lakes Airport Expansion
Environmental Assessment

December 2000



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-2

0 1,200 ft.

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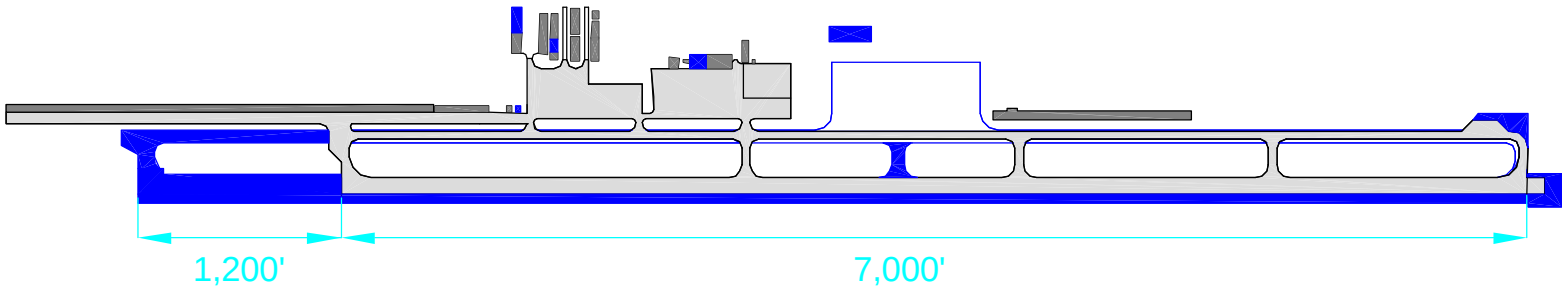
Legend

Existing Airfield

Potential Airport Improvement

Alternative 1 - No Action



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-3

0 1,200 ft.

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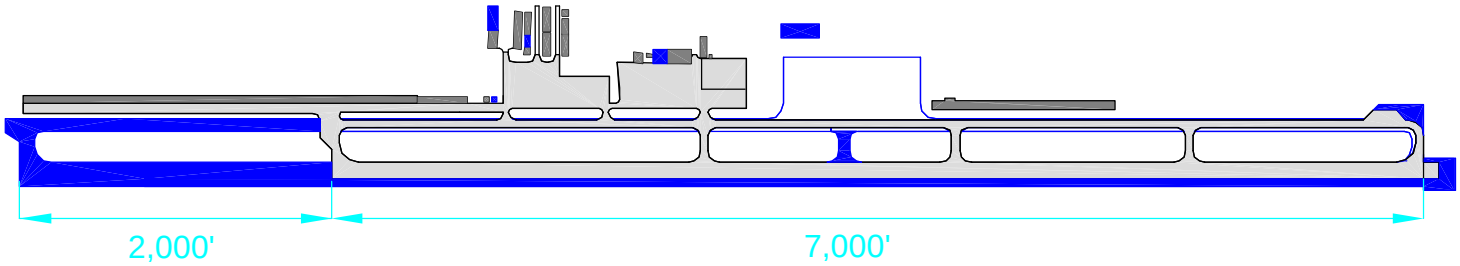
Legend

Existing Airfield

Potential Airport Improvement

Alternative 2 - Proposed Action, 8,200 ft. Runway



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-4

0 1,200 ft.

Legend

Existing Airfield

Potential Airport Improvement

Alternative 3 - 9,000 ft. Runway

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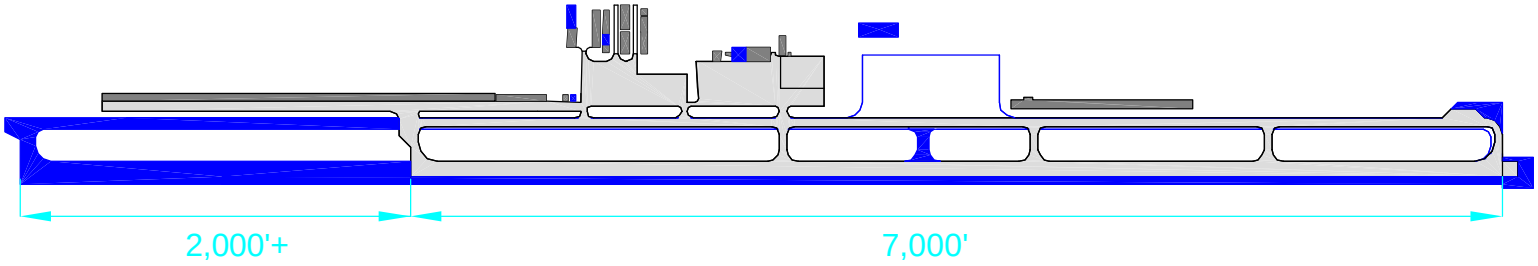

Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-5

0 1,200 ft.

Legend

Existing Airfield

Potential Airport Improvement

Alternative 4 - Extend Runway Beyond 9,000 ft.

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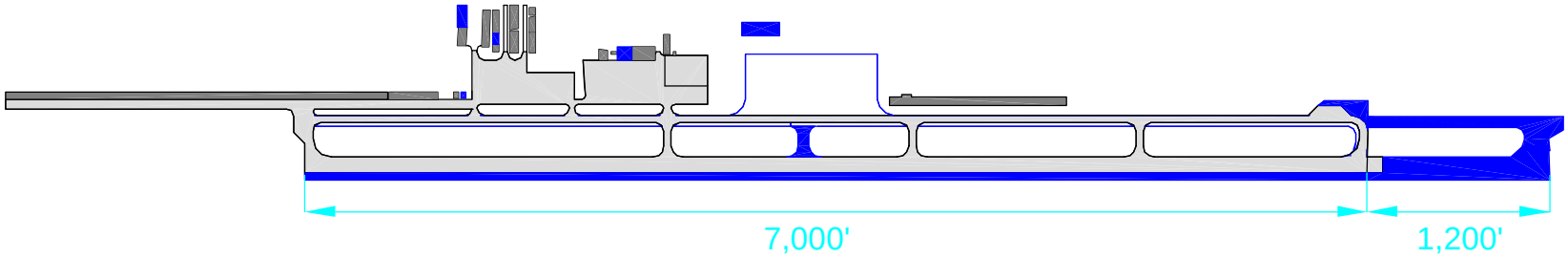

Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit III-6

0 1,200 ft.

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Legend

Existing Airfield

Potential Airport Improvement

Alternative 5 - Extend Runaway to the East

the land east of the airfield and it is currently used for recreational purposes. Extensions of aeronautical facilities to the east would require the Town of Mammoth Lakes to acquire or lease the required land from the City of Los Angeles. Benton Crossing Road would have to be relocated, because it would conflict with associated safety areas or aeronautical pavement.

3.3 Alternatives Eliminated from Further Consideration

3.3.1 Reasons for Eliminating Alternative 6 - Widen 7,000 Foot Runway

This alternative's runway length, 7,000 feet, is less than the length required by the air carrier that is scheduled to begin operations from Mammoth Lakes to Dallas/Fort Worth and Chicago during the winter season of 2001/2002. Additionally, other major airline hubs (such as Denver, Los Angeles, Houston, and Salt Lake City) have previously been identified as feasible origin and destination points for Mammoth Lakes. Results of the aircraft performance analysis (Appendix B) showed that only very short-range destination cities, such as Denver, Los Angeles, and Salt Lake City, could be effectively served year-round from a 7,000-foot runway. Significant weight penalties for air carrier aircraft serving longer distance destinations could be imposed, making air carrier service unfeasible. As a result of this alternative's failure to provide service to the targeted markets, it would not meet the purpose and need criteria set forth in Section II and was eliminated from further consideration.

3.3.2 Reasons for Eliminating Alternative 7 - Widen the Runway Without Shifting the Runway 25 Feet to the South

Based on the Airport elevation, type of passenger service anticipated, and current airline scheduling plans, the design aircraft selected for Mammoth Yosemite Airport is the Boeing 757-200. The current runway centerline to taxiway centerline separation is 300 feet. The Boeing 757 requires runway centerline to taxiway centerline separation of 312 feet. By widening the runway 50 feet on the south side of the runway, thereby shifting the runway centerline 25 feet south, the required runway centerline to taxiway centerline separation would be provided. Widening the taxiway to the north would place the taxiway too close to the east hangars.

Taxiway centerline to a fixed or movable object separation for a Boeing 757 is 97.5 feet. The current taxiway centerline to a fixed or movable object is 90.5 feet. By widening the parallel taxiway 20 feet on the south side and five feet on the north side, the taxiway centerline would be shifted 7.5 feet to the south. This provides a runway to taxiway separation of 317.5 feet and a taxiway centerline to a fixed or movable object (east hangers) of 98 feet. The 317.5-foot runway to taxiway separation protects for both the RSA and Taxiway Safety Area and provides an additional five feet for the airfield drainage system.

This runway location in Alternative 7 would not allow the parallel taxiway to have adequate clearance from the east general aviation hangars, thus precluding the use of the taxiway by Boeing 757 aircraft. Boeing 757 aircraft would have to back taxi on the runway for departure. Air carrier aircraft at other non-hub air carrier airports in the United States perform back taxiing operations on runways, although it is not preferred operating practice and should only be used when other design options are not possible. Because of the inability of this alternative to normally serve the design aircraft, it does not meet the purpose and need criteria set forth in Section II and was eliminated from further consideration.

3.3.3 Reasons for Eliminating Alternative 8-Develop Another Airport in the Region

The next closest airfield to Mammoth Lakes is a general aviation airport located at Bishop, California. Bishop is approximately 40 miles southeast of Mammoth Lakes. U.S. Highway 395 between Bishop and Mammoth Lakes has a steep grade making for difficult driving during periods of inclement winter weather. The airfield is currently not certified for FAR Part 139 and is not planning to obtain FAR Part 139 certification in the immediate future, while Mammoth Lakes currently has a limited FAR Part 139 certification. Runways at Bishop would have to be widened and strengthened and taxiway and terminal improvements similar to what is being proposed for Mammoth Lakes would have to be undertaken. Given the time required for planning, engineering, and construction of the required facilities, it is unlikely that Bishop Airport could be made ready for air carrier service by the winter of 2001. Moreover, the Town of Mammoth Lakes has no control over the development of the Bishop Airport and is uncertain as to whether the air carriers would opt to serve the Mammoth Lakes market from Bishop Airport.

An early coordination meeting was held with representatives of Bishop on January 31, 2000 and a copy of a letter to the FAA Airports District Office documenting the discussions at that meeting is provided in Appendix D of this EA. Representatives from Bishop indicated their potential plans to attract commuter service to Bishop Airport. It was agreed that the use of Mammoth Yosemite Airport as an air carrier airport and Bishop Airport as a commuter airport would be complimentary in nature rather than competitive. Each jurisdiction is planning in areas to meet the needs of their respective communities and the region as a whole.

A further discussion with the Airport Manager at Bishop Airport was held on November 30, 2000. Bishop is planning several airfield maintenance projects and the construction of a 4,900 square foot general aviation terminal. However, they are not planning on obtaining an FAR Part 139 certification because of the high costs of upgrading the facilities to meet the requirements for commuter operations. Based upon the air carrier service proposed schedule, this alternative does not meet the purpose and need criteria set forth in Section II and was eliminated from further consideration.

3.3.4 Reasons for Eliminating Alternative 9 - Use Alternate Modes of Transportation

Visitors would have to fly to either Reno or Los Angeles and drive to the Mammoth Lakes area. This itinerary would not reduce visitor travel time to the region, which the Town of Mammoth Lakes has identified as a problem in attracting new visitors to the region. There are currently no imminent plans to provide high-speed rail from existing airports, such as Reno or Los Angeles, to the Mammoth Lakes area. Based upon the unavailability of certain modes of alternative transportation (high-speed rail) and the inability of other alternative modes (private car and bus) to reduce visitor travel time, this alternative does not meet the purpose and need criteria set forth in Section II. It was considered the same as the no-action Alternative 1 and was eliminated from further consideration.

3.3.5 Reasons for Eliminating Alternative 10-Develop a New Airport in the Region at a Different Site

The construction of a new airport at a different site in the region to replace or augment Mammoth Yosemite Airport has been considered by Mono County. The reports *Mammoth Lakes/June Lake Airport, Site Selection & Master Plan,* 1978, Wadell Engineering Corporation [3-2], and *Final Environmental Impact Report, Mammoth Lakes Area Airport, Site Selection and Master Plan,* 1975,

Wadell Engineering Corporation [3-3], document the evaluations and findings conducted for Mono County. Public workshops were conducted as part of the studies.

Eight potential airport sites were evaluated of which most were eliminated due to excessive earthwork, inaccessibility, rugged terrain, distance from users, and airspace obstructions. Several sites in Long Valley, between Benton Crossing Road and Lake Crowley, were considered potential options with few airspace obstructions and relatively open development areas. However, environmental impacts associated with the development of a new airport within a recreational area, disruption of sage grouse strutting grounds, disruption of wetlands, and other impacts within a natural area were considered "overwhelming." [3-2] It was recommended, and adopted by Mono County, that the existing Airport site be continued to be developed rather than the development of a new airport. As stated in the Final Environmental Impact Report:

> "The existing airport site has been developed in airport use for more than 30 years and is adjacent to State Highway 395 and other improved roads, such that the adverse impacts of airport expansion and development on the natural environment would be significantly less than within the essentially natural setting of the Lake Crowley site." [3-3]

The County adopted plans to continue the development of Mammoth Yosemite Airport and, since then, significant public and private development has occurred at the Airport.

The physical and environmental conditions that existed at the sites evaluated in the previous site selection studies have not changed significantly since the completion of the previous studies. New environmental regulations, however, have been adopted that would make such development of a new airport even more onerous today than at the time of previous studies.

Construction costs would also likely be several times the cost associated with continued development at Mammoth Yosemite Airport. General construction costs for new airport facilities of this size are conservatively estimated to be at least $100 million and could be significantly greater. The U.S. Forest Service, Bureau of Land Management, and Los Angeles Department of Public Works own most of the land at the potential sites. The Town of Mammoth Lakes and Mono County do not have control over the land at the potential new airport sites and significant land acquisition costs could be incurred. Given the time required for the environmental, planning, financial, land acquisition, and construction process, it is likely that a new airport would not be operational for at least five years or more.

Based upon the evaluations previously conducted regarding the development of a new airport in the region and local adopted plans, this alternative was eliminated from further consideration.

3.4 Summary of Permits and Agreements Required

The following is a list of laws, regulations, permits, and agreements to be obtained for the proposed action:

- Industrial plant operations, including airports, are required to obtain storm water permits under the 1987 amendments to the *Clean Water Act* [5-16]. A National Pollution Discharge Elimination System (NPDES) permit would be required. As part of the NPDES permit, all contracts prepared for construction of this project will include a requirement for the contractor to develop a Storm Water Pollution Prevention Plan (SWPPP) and submit this plan

and have it approved prior to start of any construction. The plan will be submitted for review by the California Regional Water Quality Control Board staff. This plan will include grading, drainage, and erosion control plans. The plan will be enforced on the contractor by the Project Manager.

- The State would require air quality and water quality certifications**.**
- The acquisition of land from the Los Angeles Department of Public Works that is used by the Airport is in progress.
- An easement would be required for the Los Angeles Department of Public Works for land east of the Airport within the runway safety area although no development is planned for this area.
- A revised special use permit would be required from the U.S. Forest Service for the land within the runway safety area including a strip of land 25 feet wide on the south side of the Airport and an additional strip of land 25 feet wide on the west side of the Airport.
- A building permit and grading permit will be required from the Town of Mammoth Lakes.
- If future modifications were made to the intersection of U.S. 395 and Hot Creek Road, a new Access Control Agreement between Caltrans and Mono County would be required.
- Any work required in the State right-of-way for U.S. 395 would require an Encroachment Permit.
- Airport and Airway Improvement Act of 1982, as amended.
- Airport Noise and Capacity Act of 1990.
- Archaeological and Historic Preservation Act of 1974.
- Aviation Safety and Noise Abatement Act of 1979.
- Aviation Safety and Capacity Expansion Act of 1990.
- Clean Air Act and Amendments.
- Comprehensive Environmental Response Compensation Liability Act (CERCLA).
- Department of Transportation Act of 1966, as amended.
- Executive Order 11988 – Floodplain Management.
- Executive Order 11990 – Protection of Wetlands.
- Executive Order 12898 – Environmental Justice.
- Farmland Protection Policy Act.
- Federal Aviation Act of 1958, as amended.
- Fish and Wildlife Coordination Act.
- Land and Water Conservation Fund Act of 1965.
- National Environmental Policy Act of 1969.
- National Historic Preservation Act of 1966.
- President's Council on Environmental Quality (CEQ) (Title 40 CFR Parts 1500-1508).
- Resource Conservation and Recovery Act (RCRA).

- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
- Water Pollution Control Act, as amended by the Clean Water Act of 1977.
- Water Quality Assurance Revolving Fund (WQARF).
- Wild and Scenic Rivers Act, as amended.

IV. Affected Environment

4.1 Airport Facilities

The primary airfield components consist of runways, taxiways, and parking aprons. Also included are the runway safety areas (RSA) and runway protection zones (RPZ). Mammoth Yosemite Airport has one runway, which is designated as 9-27. This runway is served by a full parallel taxiway with all aircraft parking aprons located north of the runway/taxiway complex. These facilities are depicted on the current approved FAA Airport Layout Plan, which is presented in **Exhibit IV-1**.

The Airport features a Global Position System (GPS) non-precision instrument approach to Runway 27. Aircraft executing this approach and requiring Runway 9 for landing must circle north of the airfield due to rising terrain south of the Airport.

4.2 Historical and Forecast of Aviation Demand

Historical and forecast levels of aviation demand were based on available data and on forecasts provided and prepared by the Town of Mammoth Lakes. Forecasts of commercial airline demand for the Airport were projected through the year 2022, 20 years from the start of air carrier operations, including passenger enplanements and airline operations. The airline forecasts provide the basis for proposed future Airport development over the 20-year planning horizon. Airport operational levels allow for estimates of the timing of certain events, and thereby serve as the basis for effective planning and decision making.

Developing an aviation forecast is both an analytical and subjective process. Regardless of the methodology used, assumptions must be made regarding events impacting the Airport's activity. Many of the factors influencing aviation demand cannot necessarily or readily be quantified. As a result, actual activity projections realized in individual years may be different from this forecast, due to unforeseen events. The forecast presented should be viewed as an estimate of future airline activity at the Airport.

Two methodologies were used in evaluating the enplanement and operations demand at Mammoth Yosemite Airport. The first methodology is prescribed in the FAA's Benefit Cost Analysis Guidance whereby forecasts for airports without a history of a type of aviation demand should rely on evaluations of similar airports.

The second methodology used a sensitivity test to the case study analysis and focused on city pair market assessments. As a starting point in this market analysis, the 5-year agreement with American Airlines for air service was used. The case study airports as well and potential markets were used in this evaluation as well as input from airlines and Mammoth Mountain's air service consultant. This second methodology is discussed in Appendix F, Section F.7.

4.2.1 Mammoth Lakes Market Area

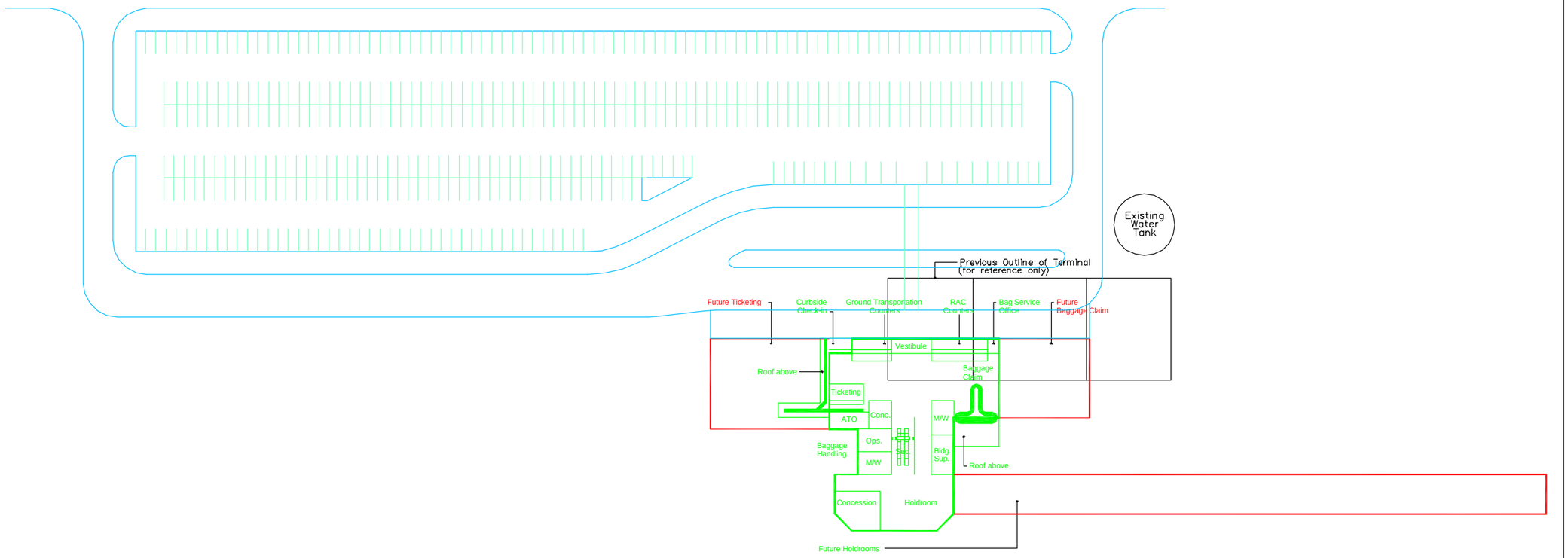
The Mammoth Lakes region is abundant with mountains, lakes, streams, and forests. Based on statistics provided by the California Department of Transportation (CalTrans), approximately 1.5 million summer visitors are attracted to the Mammoth Lakes region yearly. As a result, the tourism industry is a major contributor to the region's economic health. Information on the demographics and growth of the region is provided in Appendix F, Section F.1.

The region has two distinct seasonal attractions, consisting of skiing in the winter and numerous outdoor recreational activities in the summer. **Table IV-1** presents historical skier day statistics for the Mammoth Mountain Ski Resort since 1960. As shown, through the early 1980's skier days increased dramatically to over 1.5 million skier days in 1986. During the early 1980's, Mammoth Mountain was the number one ski resort in the country, based on skier visits. The massive influx of skiers was reportedly taken for granted, as very little was done to maintain the success of the region. While new ski facilities were built to meet demand, very little was done to improve guest service at the resort as well as the region. Other resorts such as Vail and Aspen began to emphasize guest service, which attracted skiers from Mammoth. Since the mid-1980's, skier days have decreased from their peak levels, to approximately one million skier day visits in the 1998/99 winter season. Since the mid-1980's, with the exception of the 1986/87 and 1990/91 seasons, the number of skier days has remained relatively constant averaging around one million skier days. During the 1986/87 and 1990/91 seasons, a drought and the nationwide economic recession resulted in unusually low skier day visits, for each of these seasons respectively. Since then, improvements in snow making capabilities, lodging, and ski facilities have increased the number of winter visitors.

During the summer, major attractions include Yosemite National Park, Death Valley National Park, Kings Canyon National Park, Mono Lake, June Lake, and Devils Postpile National Monument, among many others. Popular summer activities in the Mammoth Lakes area include mountain biking, golfing, hiking in the Ansel Adams and John Muir Wilderness Areas, fishing, horseback riding, and rock climbing. Concerts and weekend festivals are occur during the summer season. **Table IV-2** presents historical national park visitors for Yosemite, Death Valley, Kings Canyon, and the total U.S. since 1980. As shown, nearly 5.3 million tourists visited nearby Yosemite, Kings Canyon and Death Valley National Parks in 1999. Overall, national park visitors to the region's four national parks increased at an annual compounded growth rate of 1.6 percent as compared to 1.9 percent for the nation. The U.S. Park Service plans anticipate decreasing automobile use in Yosemite National Park with increased use of buses from accommodations and staging areas outside of the park. Mammoth Lakes, Mariposa, and Merced are three communities from which the Yosemite Area Regional Transportation System (YARTS) has started bus service. A letter from YARTS discussing this service is provided in Appendix D.

Over the last several years, interests within the Mammoth Lakes area have explored the opportunity of providing air carrier service to the Mammoth Lakes region. Discussions have been conducted with American Airlines to provide air carrier and commuter service to Mammoth Lakes during both winter and summer seasons. Agreements between the airline and local business interests have been negotiated with air carrier service scheduled to initiate in the 2001/2002 winter season from both Chicago and Dallas/Fort Worth. A copy of the Air Service Agreement is provided in Appendix N. It is the intent of American Airlines and local business interests to increase the air service over the term of the agreement, as outlined in the attached Table 1 from the Air Service Agreement. From 2002 to 2006, the American Airlines service is based on the recently negotiated agreement with American, and results in an estimated 256 annual flights and approximately 22,500 enplanements in the 2001/2002 winter season growing to an estimated 576 annual flights and nearly 66,000 enplanements for the 2005/2006 winter season. As discussed below, additional service, including summer service and additional markets, to Mammoth Yosemite Airport is anticipated to develop over time.

Airline operations in the national airspace system largely operate using a "hub and spoke" system. Major air carriers establish central hub airports where passengers can arrive from outlying or spoke airports, transfer or connect with another flight, and continue to their destination airport. In the case of the proposed service from American Airlines to and from Mammoth Yosemite Airport, initial



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Assoicates, Inc.

Exhibit IV-1

Not to Scale

north

Terminal Concept

Table IV-1

Historical Mammoth Mountain Skier Day Statistics

Season Year	Paid Skier Visits	Total Skier Visits [1]	Annual Increase/ Decrease
1960-61	151,554	178,834	--
1961-62	143,717	169,586	-5.2%
1962-63	147,221	173,721	2.4%
1963-64	212,075	250,249	44.1%
1964-65	221,064	260,856	4.2%
1965-66	262,938	310,267	18.9%
1966-67	301,690	355,994	14.7%
1967-68	312,394	368,625	3.5%
1968-69	324,425	382,822	3.9%
1969-70	401,524	473,798	23.8%
1970-71	362,169	427,359	-9.8%
1971-72	443,289	523,081	22.4%
1972-73	560,915	661,880	26.5%
1973-74	693,402	818,214	23.6%
1974-75	819,316	966,793	18.2%
1975-76	595,688	702,912	-27.3%
1976-77	300,672	354,793	-49.5%
1977-78	1,050,990	1,240,168	249.5%
1978-79	932,430	1,100,267	-11.3%
1979-80	1,131,855	1,335,589	21.4%
1980-81	894,526	1,055,541	-21.0%
1981-82	1,235,796	1,458,239	38.2%
1982-83	1,144,691	1,350,735	-7.4%
1983-84	1,164,362	1,373,947	1.7%
1984-85	1,118,864	1,320,260	-3.9%
1985-86	1,299,053	1,532,883	16.1%
1986-87	711,757	839,873	-45.2%
1987-88	1,112,980	1,313,316	56.4%
1988-89	1,053,908	1,243,611	-5.3%
1989-90	981,935	1,158,683	-6.8%
1990-91	463,987	547,505	-52.7%
1991-92	889,387	1,049,477	91.7%
1992-93	905,236	1,068,178	1.8%
1993-94	700,617	826,728	-22.6%
1994-95	964,561	1,138,182	37.7%
1995-96	799,838	943,809	-17.1%
1996-97	786,934	928,582	-1.6%
1997-98	879,853	1,038,227	11.8%
1998-99	829,569	959,738	-7.6%
1999-00 (est.)	790,000	930,000	-3.1%
Annual Compounded Growth Rate			
1960 - 1970	9.1%	9.1%	
1970 - 1980	9.5%	9.5%	
1980 - 1990	-6.4%	-6.4%	
1990 - 1999	6.1%	6.1%	
1960 - 1999	4.3%	4.3%	

[1] Skier visits from 1960-61 through 1997-98 are calculated by taking actual paid skier visits and adding an additional 18% (8% for complimentary tickets and 10% for season passes) which are standard industry figures.
Skier visits data for the 1998-99 season are based on actual records.

Source: Mammoth Mountain Ski Resort, June 2000.
Prepared by: Ricondo & Associates, Inc., October 2000.

Table IV-2

Historical National Park Visitor Statistics

Season Year	Yosemite National Park Visitors	Death Valley National Park Visitors	Kings Canyon National Park Visitors	Total National Park Visitors	Annual Increase/ Decrease	Total U.S. National Park Visitors	Annual Increase/ Decrease
1980	2,490,282	618,140	819,065	3,927,487	--	62,068,871	--
1981	2,516,893	630,402	776,850	3,924,145	-0.1%	65,109,868	4.9%
1982	2,415,587	679,992	831,044	3,926,623	0.1%	66,260,713	1.8%
1983	2,457,464	635,582	765,755	3,858,801	-1.7%	66,820,348	0.8%
1984	2,738,467	621,197	937,262	4,296,926	11.4%	67,442,783	0.9%
1985	2,831,952	576,679	874,456	4,283,087	-0.3%	68,093,505	1.0%
1986	2,363,756	586,668	1,028,785	3,979,209	-7.1%	73,047,438	7.3%
1987	2,573,194	665,345	1,081,172	4,319,711	8.6%	78,087,260	6.9%
1988	2,182,113	692,267	1,007,695	3,882,075	-10.1%	80,371,507	2.9%
1989	2,644,442	664,449	1,037,349	4,346,240	12.0%	82,518,266	2.7%
1990	2,823,572	690,965	1,062,867	4,577,404	5.3%	79,653,630	-3.5%
1991	3,423,101	743,608	1,071,022	5,237,731	14.4%	82,798,847	3.9%
1992	3,819,518	869,183	637,446	5,326,147	1.7%	82,926,372	0.2%
1993	3,839,645	998,474	636,515	5,474,634	2.8%	85,171,601	2.7%
1994	3,962,117	971,487	725,930	5,659,534	3.4%	87,205,340	2.4%
1995	3,958,406	1,109,421	832,794	5,900,621	4.3%	89,012,480	2.1%
1996	4,046,207	1,189,215	502,749	5,738,171	-2.8%	86,569,839	-2.7%
1997	3,669,970	1,188,212	484,718	5,342,900	-6.9%	89,662,333	3.6%
1998	3,657,132	1,177,746	540,212	5,375,090	0.6%	88,922,796	-0.8%
1999	3,493,607	1,227,583	559,534	5,280,724	-1.8%	88,350,924	-0.6%
Projected							
2000	3,369,463	1,245,892	559,534	5,174,889	-2.0%	87,467,415	-1.0%
2001	3,237,595	1,268,377	559,534	5,065,506	-2.1%	86,592,741	-1.0%
Annual Compounded Growth Rate							
1980 - 1990	1.3%	1.1%	2.6%		1.5%		2.5%
1990 - 1999	2.4%	6.6%	-6.9%		1.6%		1.2%
1980 - 1999	1.8%	3.7%	-2.0%		1.6%		1.9%
1999 - 2001	-3.7%	1.6%	0.0%		-2.1%		-1.0%

Source: National Park Service, 2000.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table 1

Mammoth/Yosemite Airport City Pair Growth Scenario - American Airlines Winter Season Only

City Pair	Airline--AA	Aircraft	Seats	2002	2003	2004	2005	2006
	DFW-MMH							
	Annual Departures	757-200	176	W	W	W	W	W
	Load Factor			128	144	288	288	288
	Enplanements			50%	55%	60%	65%	65%
				11,264	13,939	30,413	32,947	32,947
	ORD--MMH							
	Annual Departures	757-200	176	W	W	W	W	W
	Load Factor			128	144	144	288	288
	Enplanements			50%	55%	60%	65%	65%
				11,264	13,939	15,208	32,947	32,947
	Total Departures			256	288	432	576	576
	Total Operations			512	576	864	1,152	1,152
	Total Seats			45,056	50,688	76,032	101,376	101,376
	Total Enplanements			22,528	27,878	45,619	65,894	65,894

W--Winter Service 112 Days

16 weeks of 8 flights per week=128
16 weeks of 9 flights per week=144

Operations are for 112 days from mid-December to early April.
Air Service from DFW and ORD with American Airlines for years beyond 2006 will grow at a level above the national average.
Mammoth Mountain and American Airlines are currently investigating 737-800 air service from two additional markets that are not included in this forecast.

service would be provided from two of American Airlines' hubs: Chicago and Dallas/Fort Worth. Service from these two airports could carry passengers that connect from locations throughout the Eastern, Southern, and Midwest U.S. in additional to international passengers such as from Europe, South America, Canada, and Mexico. Many of the visitors traveling from these locations to or from the Mammoth Lakes area currently use Los Angeles or Reno airports and drive between the Mammoth Lakes area and these airports.

Based on the comparisons wit the case study airports (See Section 4.4.2), future service is anticipated from other hub airports such as Los Angeles, San Francisco and/or Denver by American Airlines and/or other air carrier/commuter operators. However, as may be the case with air service from Denver or some of the other hub airports, only a small percentage of the passengers may originate from those locations with the majority of passengers being connecting passengers from other originating points.

4.2.2 Case Study Airports

In order to provide a basis for potential air carrier service at Mammoth Yosemite Airport, historical activity, local demographics, and tourism-related visitor statistics were reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:

- Yampa Valley Regional Airport (Steamboat Springs, CO)
- Vail/Eagle County Airport (Vail, CO)
- Aspen-Pitkin County Airport (Aspen, CO)
- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MO)

In order compare each airport's market characteristics, the following factors were examined:

- Number of annual ski visitors (represented as skier days)
- Number of ski lifts, trails and skiable acreage
- Number of area beds/pillows
- Number of annual national park visitors
- Driving distances from competing commercial service airports
- Historical enplanement levels

These factors, along with each case airport's commercial activity levels, serve to give an overall idea of the level of service that might be expected at Mammoth Lakes. **Table IV-3** presents each case study airport's historical growth in aviation activity from 1990 through 1998. Appendix F, Section F.2, provides a historical aviation activity and tourism related visitor statistics for each comparison airport.

4.2.3 Basis for Enplanement Projections

For the purposes of case study methodology in this analysis, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. As such, actual statistics for skier-days at each of the comparable airports were obtained. Skier-days represent the number of days (i.e., duration) multiplied by the number of skiers visiting each of the ski resorts. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport. Skier-day statistics also represent a reliable source of data since this data is collected by the ski resorts through lift ticket sales, and is used by the ski resorts to track historical skier activity at each

Table IV-3

Historical Activity at Case Study Airports

YAMPA VALLEY REGIONAL AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (100%)	Skier Days 1	EPs per Ski Visitor
1990	46,075	--	94,335	48.8%	46,075	N/A	N/A
1991	60,309	30.89%	125,416	48.1%	60,309	N/A	N/A
1992	58,643	-2.76%	91,981	63.8%	58,643	N/A	N/A
1993	66,317	13.09%	90,233	73.5%	66,317	N/A	N/A
1994	69,299	4.50%	106,945	64.8%	69,299	1,037,320	0.0668
1995	93,173	34.45%	154,790	60.2%	93,173	1,027,701	0.0907
1996	97,975	5.15%	150,310	65.2%	97,975	1,035,110	0.0947
1997	110,170	12.45%	168,662	65.3%	110,170	1,121,487	0.0982
1998	110,621	0.41%	165,817	66.7%	110,621	1,068,091	0.1036
(1990-1998) Annual Compounded Growth Rate		11.6%	7.3%			0.7%	

VAIL/EAGLE COUNTY AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (90%)	Skier Days 1	EPs per Ski Visitor
1990	5,956	--	16,302	36.5%	5,360	N/A	N/A
1991	28,341	375.84%	58,608	48.4%	25,507	N/A	N/A
1992	35,317	24.61%	56,513	62.5%	31,785	N/A	N/A
1993	55,490	57.12%	102,541	54.1%	49,941	N/A	N/A
1994	57,821	4.20%	86,495	66.8%	52,039	4,667,635	0.0111
1995	77,882	34.70%	115,514	67.4%	70,094	5,476,402	0.0128
1996	110,063	41.32%	149,519	73.6%	99,057	5,896,743	0.0168
1997	159,874	45.26%	263,144	60.8%	143,887	6,136,048	0.0234
1998	169,740	6.17%	301,324	56.3%	152,766	5,935,018	0.0257
(1990-1998) Annual Compounded Growth Rate		52.0%	44.0%			6.2%	

ASPEN-PITKIN COUNTY AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (60%)	Skier Days 1	EPs per Ski Visitor
1990	214,725	--	448,770	47.8%	128,835	N/A	N/A
1991	206,041	-4.04%	435,057	47.4%	123,625	N/A	N/A
1992	238,097	15.56%	472,268	50.4%	142,858	N/A	N/A
1993	251,914	5.80%	460,037	54.8%	151,148	N/A	N/A
1994	239,050	-5.11%	438,874	54.5%	143,430	1,542,094	0.0930
1995	200,685	-16.05%	312,216	64.3%	120,411	1,518,723	0.0793
1996	210,672	4.98%	345,494	61.0%	126,403	1,433,187	0.0882
1997	224,815	6.71%	431,884	52.1%	134,889	1,536,309	0.0878
1998	248,510	10.54%	541,496	45.9%	149,106	1,661,775	0.0897
(1990-1998) Annual Compounded Growth Rate		1.8%	2.4%			1.9%	

Table IV-3

Historical Activity at Case Study Airports

JACKSON HOLE AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (35%)	National Park Visitors 2	EPs per NP Visitor
1990	148,144	--	299,613	49.4%	51,850	4,411,825	0.0118
1991	170,458	15.06%	335,281	50.8%	59,660	4,546,289	0.0131
1992	192,283	12.80%	390,526	49.2%	67,299	4,889,041	0.0138
1993	192,982	0.36%	391,856	49.2%	67,544	5,480,882	0.0123
1994	181,080	-6.17%	328,837	55.1%	63,378	5,586,844	0.0113
1995	169,062	-6.64%	289,470	58.4%	59,172	5,856,300	0.0101
1996	180,120	6.54%	327,931	54.9%	63,042	5,745,610	0.0110
1997	191,057	6.07%	334,045	57.2%	66,870	5,548,275	0.0121
1998	199,693	4.52%	334,364	59.7%	69,893	5,877,890	0.0119
(1990-1998) Annual Compounded Growth Rate		3.8%	1.4%			3.7%	

GLACIER PARK INTERNATIONAL AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (50%)	National Park Visitors 3	EPs per NP Visitor
1990	70,883	--	198,591	35.7%	35,442	2,173,164	0.0326
1991	76,652	8.14%	206,852	37.1%	38,326	2,300,619	0.0333
1992	85,953	12.13%	205,748	41.8%	42,977	2,411,191	0.0356
1993	89,553	4.19%	220,138	40.7%	44,777	2,383,980	0.0376
1994	101,715	13.58%	226,570	44.9%	50,858	2,403,603	0.0423
1995	114,971	13.03%	252,711	45.5%	57,486	2,091,783	0.0550
1996	121,341	5.54%	223,545	54.3%	60,671	2,025,179	0.0599
1997	130,620	7.65%	253,713	51.5%	65,310	2,055,902	0.0635
1998	133,515	2.22%	231,389	57.7%	66,758	2,234,456	0.0598
(1990-1998) Annual Compounded Growth Rate		8.2%	1.9%			0.3%	

[1] Colorado Ski County USA.

[2] National Park Service. Includes Yellowstone National Park and the Grand Teton National Park.

[3] National Park Service. Includes Glacier National Park and Glacier Bay National Park.

Source: Individual Airport Records.

Prepared by: Ricondo & Associates, Inc., October 2000.

respective resort. This historical data is also used by the ski resorts to provide estimates of future skier activity for the ski resorts, which can be used as a basis for estimating future winter enplanements at the Airport.

Summer season enplanements at the Airport are assumed to be a function of the number of national park visitors to the region's national parks. As a result, the number of annual national park visitors at the respective national parks served by each of the comparable airports was gathered. This data served to provide an estimate of the level of summer enplanements that might be expected to occur at the Airport. Summer season enplanements were then determined based on an estimate of a percentage of the Airport's annual enplanements anticipated to occur during the summer season.

Enplanements at the Airport by regional residents are anticipated to be a small percentage of the summer and winter traffic at the Airport. Local passengers were included as part of the overall statistics for the case study airports and forecasts for Mammoth Yosemite Airport.

The following sections provide a discussion of the assumptions used to project passenger enplanements at the Airport.

4.2.4 Estimated Base Year Demand

The Airport's base year demand for 1999 was developed through a review of each case study airport's activity levels and visitor statistics. The goal of estimating the Airport's base year demand is to define a current "potential" demand level that might occur at Mammoth Yosemite Airport based on the level of tourists and visitors attracted to the region, and without other significant influences from other sources (i.e., competing commercial service at other airports capture of area visitors that would otherwise drive, etc.). Under this scenario, some demand is assumed to continue to occur at other airports (i.e., primarily Los Angeles), with those visitors driving to the Mammoth Lakes region.

Table IV-4 presents the estimated base year demand enplanements for 1999 based on a ratio of enplanements to skier visits, and percentage of summer enplanements to total airport enplanements. As shown, there is a total of approximately 135,500 potential enplanements, or unmet demand, for the Airport in 1999. It is important to note that this level of enplanements is considered to be the total demand potential for the Airport today, and is not representative of the level of enplanements that would occur in the first year of operation at Mammoth Lakes. As experienced in the Vail/Eagle County market, it would likely take the Mammoth Yosemite Airport up to five years to reach its total demand potential.

Table IV-4

Estimated Base Year (1999) Enplanements

Winter Season Enplanements (60% of Total)	
1999 Mammoth Skier Visits	956,573
Ratio of Enplanements to Skier Visits	0.085
Estimated Potential Winter Enplanements (1999)	81,300
Summer Season Enplanements (40% of Total)	
Estimated Potential Summer Enplanements (1999)	*54,200*
ESTIMATED TOTAL POTENTIAL AIPRORT ENPLANEMENTS	**135,500**

Source: Ricondo & Associates, Inc., July 2000.
Prepared by: Ricondo & Associates, Inc., October 2000.

Of the Airport's total estimated potential demand for 1999, approximately 81,300 enplanements were estimated to occur during the winter season from late November through early April. This estimate was derived based on an assumed ratio of 0.085 enplanements per skier. As shown previously in Table IV-3, enplanements per skier at Yampa Valley Regional, Vail/Eagle County, and Aspen-Pitkin County airports were 0.104, 0.026, and 0.090 in 1998, respectively. The ratio for Mammoth Lakes would be considered conservative when compared with Yampa Valley and Aspen-Pitkin. The somewhat higher enplanement per skier ratio for Mammoth Lakes when compared with Vail/Eagle is based on the fact that the Mammoth Lakes region is further from other competing commercial service airports.

Similar to the visitor characteristics occurring at each of the other case study airports, it is assumed that a majority of the enplanements at Mammoth Lakes would be derived from the winter skiing activities. This is primarily due to the change in tourism demographics, from more affluent individual visitors in the winter to more discretionary family-oriented visitors in the summer. In addition, many visitors choose to make their trips via automobile in the summer months. As exhibited by each of the case study airports, anywhere from between 50 percent and 100 percent of each airport's annual enplanements occur during the winter season. Excluding Yampa Valley Regional and Vail/Eagle County airports, which serve predominately winter skiers, the percentage of winter enplanements ranges from 50 percent to 65 percent of total annual enplanements. Based on an assumption of 60 percent of the Airport's annual enplanements occurring in the winter season and the previous estimate of 81,300 winter enplanements, a total of approximately 54,200 enplanements were estimated to occur in the summer months from April through November. Because of the potential restrictions currently being proposed by the National Park Service on private vehicles in Yosemite National Park, there is the potential of an even greater percentage of summer visitors in the future given the Mammoth Lakes higher quality and larger bed base and expansion of the recently initiated day trips to Yosemite via the bus system.

4.2.5 Projection of Passenger Enplanements

This section presents projections of enplanements for the Airport based on the assumption that commercial airlines would initiate service at the Airport beginning in the winter season of 2001/2002. Projections of passenger enplanements were prepared on the basis of local skier statistics, national park visitors, and anticipated trends in activity at the Airport. This section discusses the factors and assumptions made in projecting passenger enplanements at the Airport.

Three enplanement scenarios were examined for the Airport to give an estimate of the range of enplanement activity that might occur at the Airport: Base Case scenario, Low Case scenario, and High Case scenario. Each of these scenarios is discussed in greater detail in the Appendix F, Section F.4. The Base Case scenario was selected as the most reasonable forecast level to use for planning, design, engineering, and environmental analyses and is discussed below.

The Base Case scenario, which is modeled after the ratio of enplanements to skier days experienced at Aspen-Pitkin County Airport, is presented in **Table IV-5**. As presented earlier in Table IV-3, Aspen-Pitkin County Airport experiences more of an average enplanement to skier ratio - higher than those experienced at Vail/Eagle County Airport, but lower than those experienced at Yampa Valley Regional Airport. As shown under this scenario, the Airport's enplanements are projected to increase from approximately 37,000 in 2002 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent.

As mentioned previously, it is anticipated that the Airport would not immediately realize its full demand potential. As such, a ratio of only 0.035 winter enplanements per skier was assumed for the Airport's first full year of operation in 2002. Beyond 2002, estimated winter enplanements per ski visitor for the Airport are assumed to increase from a ratio of approximately 0.035 winter enplanements per skier to approximately 0.085 winter enplanements per skier by 2022. This level of winter enplanements per skier approximates those experienced at Aspen-Pitkin County Airport.

Initially, the Airport is anticipated to provide commercial service only during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 37,000 in 2002 to 200,300 by 2022. Summer enplanements are projected to increase from approximately 48,000 in 2007 to 133,500 in 2022.

4.2.6 Potential Nonstop Markets

This section provides an estimate of the Airport's top origin and destination (O&D) passenger markets. Utilizing the estimated top O&D markets for the Airport, an assessment can be made as to the feasibility of providing nonstop air service between Mammoth Lakes and various hub airports.

The Airport's estimated top O&D markets were determined based on survey efforts undertaken at the Mammoth Mountain ski resort, as well as the top O&D markets for the five case study airports. **Table IV-6** presents the top 10 geographic markets, on a state-by-state basis, for the Mammoth Mountain ski resort. As shown, California represents the largest source of business by far, for the Mammoth Mountain ski resort, with approximately 87 percent of the lift ticket revenue for the resort. Of the California ski visitors, it is estimated that approximately 70 percent reside in the Los Angeles

Table IV-5

Projected Base Case Enplanements

Year	Projected Mammoth Lakes Area Skier Days[1]	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2002	1,058,000	0.035	37,000	100.0%	0	0.0%	37,000
2007	1,473,000	0.076	111,900	70.0%	48,000	30.0%	159,900
2012	1,775,000	0.082	145,600	60.0%	97,100	40.0%	242,700
2017	2,053,000	0.084	172,500	60.0%	115,000	40.0%	287,500
2022	2,356,000	0.085	200,300	60.0%	133,500	40.0%	333,800
Annual Compounded Growth Rate							
2002-2022	4.1%		8.8%		--		11.6%
2007-2022	3.2%		4.0%		7.1%		5.0%
2012-2022	2.9%		3.2%		3.2%		3.2%
2017-2022	2.8%		3.0%		3.0%		3.0%

[1] Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

region. San Diego and the San Francisco Bay Area are the next largest markets in California. The United Kingdom represents the second largest market for the resort accounting for approximately 2.4 percent of the lift ticket revenue for the resort.

Table IV-6

Mammoth Mountain Top Markets[1]

Rank	State	Percentage
1	California	87.1%
2	United Kingdom	2.4%
3	Nevada	0.7%
4	Illinois	0.4%
5	Texas	0.4%
6	Arizona	0.3%
7	Florida	0.3%
8	New York	0.3%
9	Washington	0.2%
10	Hawaii	0.2%
	All Other Markets	7.7%
		100.0%

[1] Mammoth Mountain Source of Business Report, May 12, 1999.

Source: Ricondo & Associates, Inc., July 2000.
Prepared by: Ricondo & Associates, Inc., October 2000.

Table IV-7 presents the Airport's estimated top O&D markets. As shown, the top O&D market for Mammoth Lakes is assumed to be Los Angeles (7 percent). In addition to serving domestic travelers, Los Angeles would also likely serve as the gateway for international air travelers. While some visitors that are currently driving from Los Angeles to the Mammoth Lakes region will change their mode of transportation from automobile to airplane, the vast majority of the region's visitors originating from Los Angeles are anticipated to continue to make the six hour drive northeast from Los Angeles by automobile. It is estimated that between 5 and 10 percent of the visitors now traveling to Mammoth Lakes from Los Angeles will choose to travel by air. San Francisco would likely serve as a gateway for international travelers as well, however, these travelers would likely drive to Mammoth Lakes or connect through Los Angeles until such time as nonstop air service is provided. Similar to the other case study airports, Chicago O'Hare, New York (LaGuardia, John F. Kennedy, and Newark), and Dallas/Ft. Worth are also anticipated to be top O&D markets for the Airport.

Based on the estimated top O&D markets for the Airport, several hub airports were reviewed for their potential to provide nonstop service to Mammoth Lakes, and are briefly discussed below:

- Dallas/Ft. Worth (DFW) – American Airlines has currently committed to providing service to the Mammoth Yosemite Airport starting the 2001/2002 winter season with nonstop flights to and from DFW on B-757 aircraft. DFW provides excellent connecting service to key

Table IV-7

Mammoth Yosemite Airport
Estimated Top O&D Markets

Rank	Airport	Percent
1	Los Angeles Intl	7.0%
2	O'Hare Intl	6.1%
3	Newark Intl	5.0%
4	La Guardia	4.8%
5	Dallas/Ft Worth	4.4%
6	Denver Intl	3.0%
7	San Francisco Intl	3.1%
8	Atlanta	3.0%
9	George Bush Intl	2.7%
10	Boston	2.6%
11	Miami Intl	2.6%
12	Dulles Intl	2.4%
13	Seattle	2.2%
14	Philadelphia Intl	2.2%
15	Detroit	1.8%
16	Phoenix	1.5%
17	Orlando Intl	1.4%
18	Salt Lake Intl	1.4%
19	St Paul Intl	1.4%
20	San Diego	1.4%
21	Tampa Intl	1.2%
22	Baltimore/Wash Intl	1.1%
23	Minneapolis	1.0%
24	John Wayne Intl	1.0%
25	San Jose	0.7%
26	New Orleans	0.7%
27	Nashville	0.7%
28	Hopkins Intl	0.7%
29	St Louis	0.7%
30	Las Vegas	0.7%
TOTAL - TOP 30 MARKETS		67.3%
TOTAL - ALL OTHER MARKETS		32.7%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

markets in Texas, Florida, Washington D.C, other southern U.S. cities, and the United Kingdom.

- Chicago O'Hare (ORD) – American Airlines has currently committed to providing service to the Mammoth Yosemite Airport starting the 2001/2002 winter season with nonstop flights to and from ORD on B-757 aircraft. Chicago O'Hare would provide excellent nonstop service between the Chicago market, as well as good connections between major East Coast, Midwest, and European markets.

- Los Angeles (LAX and other region airports) – Given the strong market demand from the Los Angeles area, Los Angeles is considered to be an excellent potential nonstop market for Mammoth Lakes. LAX would serve as a good connecting point for many domestic travelers from both the east coast (New York, Chicago, Washington D.C., Philadelphia, etc.), as well as the west coast (Seattle, Portland, Phoenix, etc.). In addition, as mentioned previously, LAX has served, and would continue to serve, as a good connecting point for international travelers traveling to the Mammoth Lakes region. Given the stage length of roughly 230 miles between Mammoth Lakes and LAX, as well as the strong O&D demand, the LAX market could be a good market for commuter, regional jet and narrow-body jet service.

- Denver (DEN) – Denver would serve as a strong connecting hub airport primarily for travelers from major East Coast markets, north-central U.S. markets and Midwest markets. In particular, due to United Airline's hubbing activities at both Denver and Chicago O'Hare, Denver would provide excellent connecting service for travelers from the Chicago market area. At a stage length of approximately 750 miles, Denver could also be a good potential market for nonstop service.

- Other Hub Airports – In addition to the above airports, a number of other hub airports could also potentially provide potential nonstop service to the Airport, including:

  - *Short-Range Hub Airports* – Phoenix and Seattle
  - *Mid-Range Hub Airports* – Minneapolis, Houston (Intercontinental), and St. Louis
  - *Long-Range Hub Airports* – Pittsburgh, Detroit, New York, and Atlanta

Potential service from these hubs would likely be dependent on the airlines electing to provide service, as well as the location of the airline's hub, and potential aircraft they would use to service the Mammoth Lakes market. However, in order to provide an idea of how the Airport's nonstop air service to various hub airports might evolve over time, a review of the evolution of hub service at each case study airport was undertaken. **Table IV-8** presents the historical growth of nonstop service to major hub airports from each of the case study airports since 1985. As shown, each airport began nonstop service to either one or two major hub airports. As each airport's nonstop hub service matured, service to other major hub airports was added. In each case, the airport's hub service fully matured within a five to ten year period. While this type of maturity may not necessary occur for Mammoth Lakes, it is reasonable to assume that given time and the proper marketing by the region, the Airport could provide nonstop service to at least three or four major hub airports within a five to ten year period after the initiation of commercial service.

Table IV-8

Evolution of Major Hub Service at Case Study Airports

Case Study Airport	1985-1989	1990-1994	1995-1999	2000
Yampa Valley Regional Airport	Chicago Dallas Los Angeles	Chicago Dallas Los Angeles Denver Minneapolis	Chicago Dallas Denver Minneapolis Houston St. Louis	Chicago Dallas Denver Minneapolis Houston St. Louis
Vail/Eagle County Airport	-	Chicago Dallas Denver	Chicago Dallas Denver Atlanta Los Angeles Minneapolis Houston Newark	Chicago Dallas Denver Atlanta Los Angeles Minneapolis Houston Newark
Aspen-Pitkin County Airport	Denver Los Angeles	Denver Los Angeles Dallas	Denver Los Angeles Dallas Minneapolis Phoenix	Denver Los Angeles Minneapolis Phoenix
Jackson Hole Airport	Denver Salt Lake City	Denver Salt Lake City Dallas Chicago	Denver Salt Lake City Dallas Chicago	Denver Salt Lake City Dallas Chicago
Glacier Park International Airport	Salt Lake City	Salt Lake City	Salt Lake City Minneapolis Seattle	Salt Lake City Minneapolis Seattle

Source: Offical Airline Guides, Inc. (OAG), June 2000.
Prepared By: Ricondo & Associates, Inc., October 2000.

4.2.7 Projection of Airline Departures

Operations projections were developed for the commercial air carrier and regional/commuter carriers anticipated to serve the Airport. Enplaned passenger projections presented in the previous section were used in conjunction with historical and expected trends in load factors and average seats per departure in order to develop projected passenger airline operations. Assumptions were also made in regards to which markets would be provided with nonstop service from the Airport in the future. Projected nonstop service to future markets is purely hypothetical, however, and would be based on the Airport's actual passenger demand and individual airline decisions.

As mentioned previously, it is anticipated that it would take the Airport roughly five years to reach its full demand potential. As such, during the first full year of operation (2002), it is assumed that the Airport would have service only during the winter season from two to four hub airports, via B-757 and commuter aircraft.

In general, aircraft load factors during the winter season are estimated to increase from approximately 50 percent in 2002 to approximately 65% percent by 2022. The predominate increase in load factors is anticipated to occur between 2002 and 2007, as the Airport's market matures. Aircraft load factors during the summer season are projected to be slightly less than those during the winter season, increasing from approximately 50 percent in 2002 to approximately 60 percent in 2022. This lower load factor during the summer season is based on changing visitor demographics discussed previously.

Details concerning the airline departure projections for the Base Case scenario are described below. Departure projections for the other projection scenarios are presented in Appendix F, Section F.5.

Under the Base Case scenario, it is assumed that the Airport would initially (the first few years) be provided with nonstop service to Dallas/Ft. Worth, Chicago O'Hare, Los Angeles, and San Francisco and/or San Jose. In later years, regular nonstop service may be provided to short-range hubs (such as Denver and Phoenix), and longer-range hub (such as St. Louis, Houston, and Atlanta). Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table IV-9 presents projected airline departures for the Base Case scenario. As shown, total annual aircraft departures are projected to increase from 1,040 in 2002 to 5,800 in 2022, representing an annual compounded growth rate of approximately 9.0 percent. By 2022, the winter season is projected to account for 3,410 annual airline departures, while the remaining 2,390 annual airline departures are anticipated to occur in the summer season. Similarly, of the 5,800 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 2,500 annual departures (43 percent), while regional/commuter aircraft are projected to account for the remaining 3,300 annual departures (57 percent).

Table IV-9

Summary of Projected Aircraft Departures - Base Case

	WINTER SEASON DEPARTURES			SUMMER SEASON DEPARTURES			TOTAL ANNUAL DEPARTURES		
Year	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total
2002	300	740	1,040	0	0	0	300	740	1,040
2007	840	1,420	2,260	370	620	990	1,210	2,040	3,250
2012	1,130	1,500	2,630	770	1,020	1,790	1,900	2,520	4,420
2017	1,290	1,720	3,010	890	1,180	2,070	2,180	2,900	5,080
2021	1,470	1,940	3,410	1,030	1,360	2,390	2,500	3,300	5,800
Annual Compounded Growth Rate									
2002-2022	8.3%	4.9%	6.1%	–	–	–	11.2%	7.8%	9.0%
2007-2022	3.8%	2.1%	2.8%	7.1%	5.4%	6.1%	5.0%	3.3%	3.9%

Source Ricondo & Associates, Inc., July 2000.

Prepared By Ricondo & Associates, Inc., October 2000.

4.2.8 General Aviation Forecasts

A forecast of general aviation activity was developed for the 1997 Environmental Impact Report (EIR). A review of this forecast was conducted by examining existing records (FAA Form 5010 dated 01/16/96) and interviewing personnel from airport management.

The airport manager confirmed the general aviation activity, that was forecasted in the 1997 EIR, has failed to materialize. These sources indicated that Mammoth Yosemite Airport experiences approximately 600 operations per month during peak seasons. General aviation activity reported on FAA Form 5010 for the 12 months ending July 1996, was 12,000 annual operations. However, based on interviews with the airport manager and FBO operator, the annual operations for 1999 was estimated to be 6,000.

Although the annual general aviation operations levels are well below the estimates in the FAA Terminal Area Forecast, it is anticipated that there would be growth in general aviation activity of about 3% annually over the next 20 years up to the 12,000 annual operations level of the FAA Terminal Area Forecast. This growth is anticipated as a result of recent construction of high quality hanger facilities at the Airport and the leasing of these hanger facilities to new airport users. Additional hanger development is also planned. **Table IV-10** summarizes the general aviation component for the forecast. It is also assumed that military operations would remain consistent with the FAA Terminal Area Forecast at 50 annual operations from year 2000 on.

Table IV-10

General Aviation Operations Forecast

Year	General Aviation Annual Operations
2002	6,600
2007	7,600
2012	8,900
2017	10,300
2022	12,000

Source: Ricondo & Associates, Inc., July 2000.
Prepared by: Ricondo & Associates, Inc., October 2000.

4.2.9 Summary of Aviation Demand Forecasts

Table IV-11 summarizes projected general aviation and airline activity, in terms of passenger enplanements and aircraft departures, for the Airport for the skier-day enplanement projects and case study projects described above. The following points summarize key findings with regard to this projected airline activity:

- Initially, a number of enplanement scenarios were examined for the Airport to give an idea of the range of enplanement activity that might occur at the Airport. These enplanement projections were based on a relationship of skier-days to annual enplanements at several comparable airports.

- In order to provide a basis for the potential for air carrier service at Mammoth Yosemite Airport, historical activity, local demographics and tourism-related visitor statistics were

reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:

- Yampa Valley Regional Airport (Steamboat Springs, CO)
- Vail/Eagle County Airport (Vail, CO)
- Aspen-Pitkin County Airport (Aspen, CO)
- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MT)

- For the purpose of the initial enplanement projections, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. Skier-days represent the number of days multiplied by the number of skiers visiting the ski resort. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport.

- It is anticipated that the Airport would not immediately realize its full demand potential. As a result, the Airport's growth during the first five years of operation is expected to be strong until the market's full potential is realized. Once the market matures, the Airport's growth is expected to slow to more typical growth levels as experienced at airports throughout the U.S. This high initial growth is best illustrated by examining the enplanement growth that occurred at Vail/Eagle County Airport. During the first five years of operations from 1990 to 1995, enplanements at Vail/Eagle County Airport increased at an annual compounded growth rate of over 67 percent. From 1995 to 1998, however, enplanement growth at the airport has increased at an annual compounded growth rate of 27 percent. While this growth is still much higher than that of the U.S. overall, it is lower than exhibited during the initial startup of service at the Airport.

Table IV-11

Summary of Forecast Aviation Activity at Mammoth Yosemite Airport

	Annual Airline Enplanements					
	1999	2002	2007	2012	2017	2022
Enplanements	--	37,000	159,900	242,700	287,500	333,800
	Annual Aircraft Operations					
Air Carrier	--	600	2,420	3,800	4,360	5,000
Regional/Commuter/RJ	--	1,480	4,080	5,040	5,800	6,600
General Aviation/Military	6,050	6,650	7,650	8,950	10,350	12,050
Total Operations	6,050	8,730	14,150	17,790	20,510	23,650

Note: Enplanements represent passengers boarding an aircraft. Total passengers are twice that number. Aircraft operations refer to total takeoffs and landings. It should also be noted that these forecasts are estimates assuming the certain airfield and other improvements are constructed and airline service commences in 2002. The actual numbers may be materially different than those indicated.

Source: Ricondo & Associates, Inc., July 2000.
Prepared by: Ricondo & Associates, Inc., October 2000.

- Under the Base Case Scenario, the Airport's enplanements were projected to increase from approximately 37,000 in 2002 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent overall (34.0 percent ACG from 2002-2007 and 5.0 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.035 winter enplanements per skier in 2002 to approximately 0.085 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022.

4.3 Study Area Land Use

The Airport is located approximately seven miles east of the Town of Mammoth Lakes. The Airport property is not contiguous to the Town of Mammoth Lakes. Unincorporated portions of Mono County borders the airfield on all sides. The Airport location and vicinity is depicted in **Exhibit IV-2**.

4.3.1 Existing Land Use

The Airport environs are primarily undeveloped open spaces used for agriculture, natural resource management, recreation, and stream conservation. Small parcels are used for public agency purposes, industrial/manufacturing, and residential uses. Existing land use is depicted on **Exhibit IV-3**.

The Hot Creek Ranch, a privately owned family fly fishing camp, is located approximately one mile north of the Airport along Hot Creek. The facility has nine cabins for rent and the Ranch retains ownership of the two and a half acres of the stream that the facility occupies.

The U.S. Forest Service (USFS) gravel/borrow pit lies to the north of the current Airport Access Road by approximately one-quarter mile. Most resource extraction has stopped and the site is currently being used for the disposal of non-organic waste, principally rock, soil, concrete, and asphalt.

Approximately one and one-half miles northwest of Mammoth Lakes Airport lies the abandoned Mammoth Lakes Elementary School on Hot Creek Road. Most of the structure has been demolished.

Northwest of the Airport approximately, one and one-half miles along Hot Creek, is the Hot Creek Fish Hatchery. The Fish Hatchery produces approximately 11 million trout eggs annually, which are distributed to other fish hatcheries in the State of California.

The Mammoth Geothermal Project is located approximately two miles northwest of the Airport. This facility generates electricity for the regional power grid.

To the east of the airfield, on either side of Benton Crossing Road, lies the Whitmore Hot Springs Recreational Area and the Mono County Animal Shelter. These facilities are located approximately one mile from the Airport. The recreation area consists of various athletic fields and a swimming pool. The animal shelter facility makes abandoned companion animals available for adoption, controls pet over-population, and assists in other animal welfare issues.

The Sierra Nevada Aquatic Research Laboratory (SNARL) is located about one-mile southeast of the Airport and south of U.S. Highway 395. It is a unit of the University of California's Natural Reserve System (NRS). The campus offers lab office and computer facilities to researchers studying stream ecology. Part of off campus SNARL facilities is the former High Sierra Community Church. Known locally as the "Green Church," it is across from the SNARL facility located southeast of the Airport at the northeast corner of U.S. Highway 395 and Benton Crossing Road. SNARL uses this building as a large classroom and lecture hall.

The California Department of Transportation (CALTRANS) Maintenance Station and Bureau of Land Management (BLM) Gravel Pit are located approximately two miles and one and one-half miles, respectively, southeast of the airfield along U.S Highway 395. The CALTRANS Maintenance Station provides state road right of way maintenance and snow removal services.

Due south of the Airport, approximately one and one-half miles, is the Convict Lake Recreational Area. Campground facilities, fishing, and water activities are available to users.

West of the Airport, approximately three miles along U.S. Highway 395, are the Mono County Sheriff Substation and Mono County Government Center. These buildings were abandoned in the early to mid 1990s due to health and welfare concerns. The County governmental units moved to within the limits of the Town of Mammoth Lakes, while the Mono County Sheriff moved to facilities at Crowley Lake.

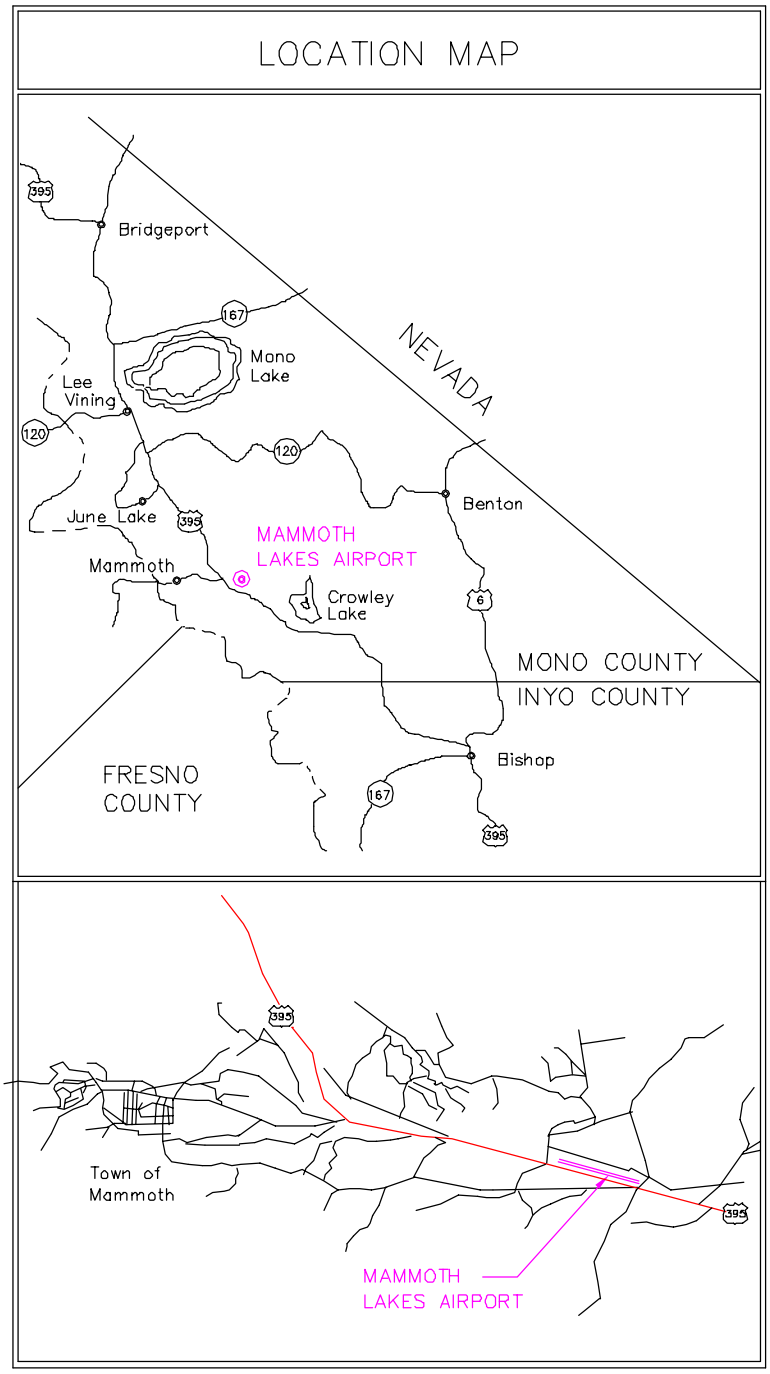
Sierra Quarry is located south of the intersection of U.S. Highway 395 and Hot Creek Road. A portion of this site is currently seasonally leased for a dog sled concession, which consists of a domestic water well and miscellaneous buildings used for office, storage, and kennel space. A concrete batch plant is also located at this site and has been in operation since 1995. The remainder of this property is unused.

4.3.2 Land Ownership

The ownership of the land around Mammoth Yosemite Airport is an important factor in the existing and planned land use. Existing land ownership in the Airport vicinity is shown on **Exhibit IV-4**. Most of the land surrounding the Airport is in public ownership. There are only three small privately owned parcels of land.

The area north and northwest of the Airport is owned by the U.S. Forest Service and includes the area occupied by the USFS gravel/borrow pit and a portion of the Mammoth Geothermal Project. Two of the three generations of the facility reside on privately held land. The City of Los Angeles owns the land northwest of the Airport, which occupies the abandoned Mammoth Lakes Elementary School and Hot Creek Fish Hatchery. The land on which Hot Creek Ranch lies is privately owned. A large area northeast of the Airport is owned by the BLM and is undeveloped.

The area immediately east and southeast of the Airport is owned by the City of Los Angeles. This land contains the "Green Church," the Whitmore Hot Springs Recreational Area, the Mono County Juvenile Probation Facility, and the Mono County Animal Shelter. The eastern portion of the Airport, including portions of the runway, is on land owned by and leased from Los Angeles Department of Public Works (LADWP). This land is currently in the process of being acquired by the Town of Mammoth Lakes for Airport use.



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit IV-2

NOT TO SCALE north

Airport Location and Vicinity

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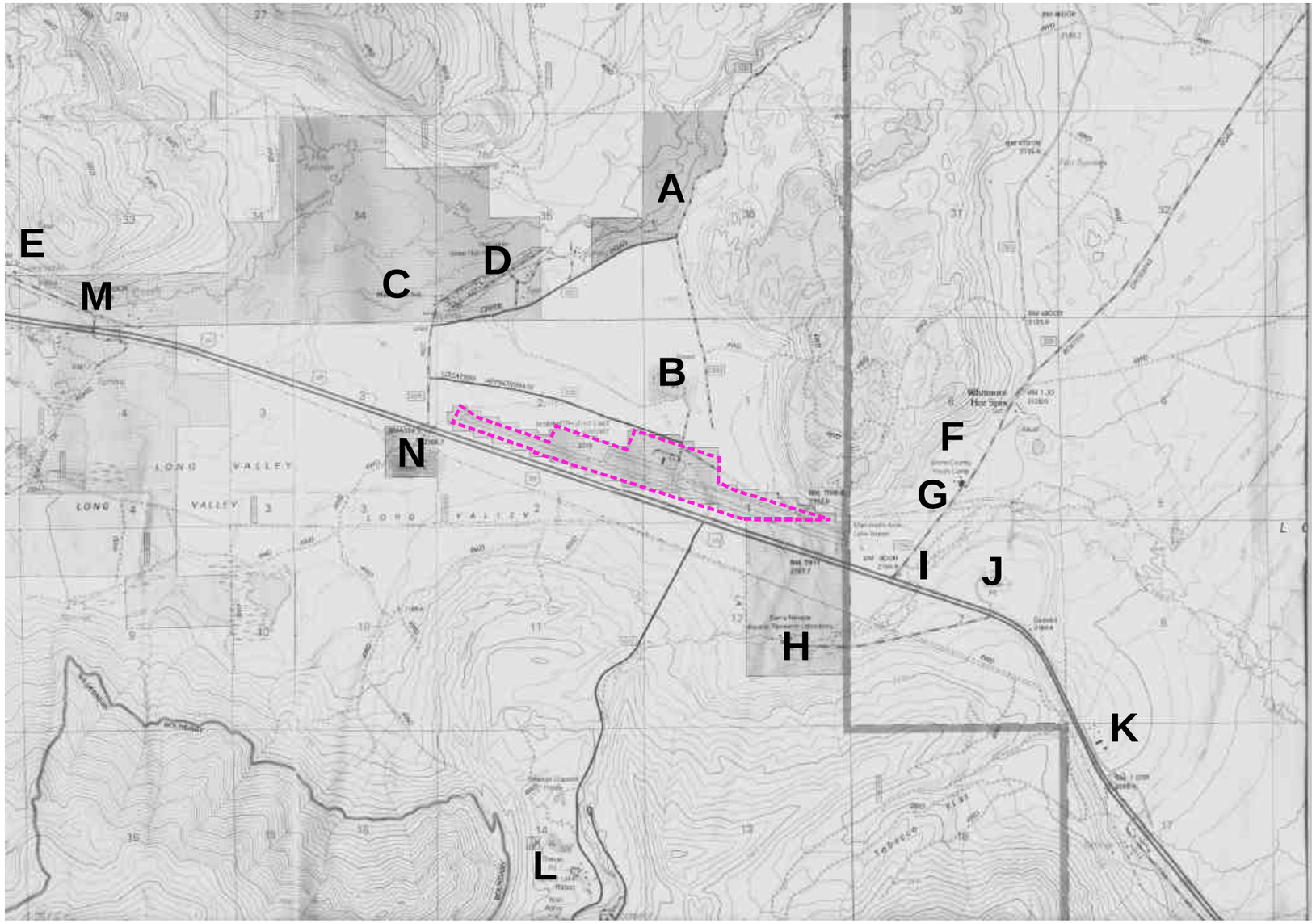

Legend

- A Hot Creek Ranch
- B USFS Gravel / Borrow Pit
- C Mammoth Lakes Elementary School (abandoned)
- D Hot Creek Fish Hatchery
- E Mammoth Geothermal Project
- F Whitmore Hot Springs Recreational Area
- G Mono County Animal Shelter
- H Sierra Nevada Aquatic Research Laboratory (SNARL)
- I Green Church
- J BLM Gravel Pit
- K CalTrans Maintenance Station
- L Convict Lake Recreational Area
- M Mono County Sheriff Substation / Government Center (Abandoned)
- N Sierra Quarry, Proposed Site for Morgan Industrial Park
- Existing Property Line

Source: U.S. GeologicalSurvey; Mammoth Lakes Airport Expansion Subsequent EIRand UpdatedEA, March 1997.
Prepared by: Ricondo &Associates, Inc.

Exhibit IV-3

north

Scale 1” = 3,700’

Current Land Use

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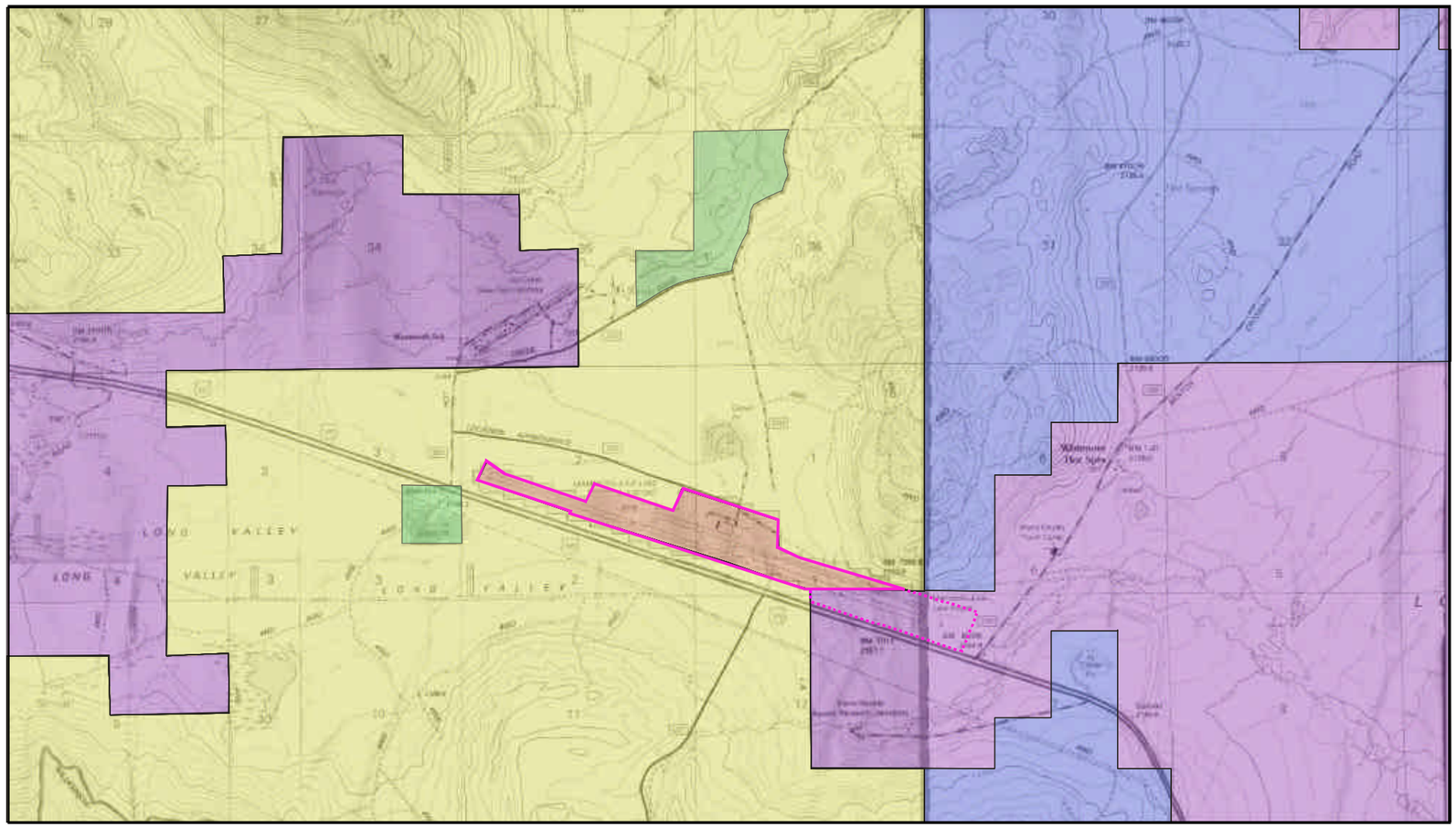

Legend

- Town of Mammoth Lakes
- City of Los Angeles
- INYO National Forest
- Bureau of Land Management
- Private
- Current Airport Property Line
- Proposed Airport Property Line

Source: U.S. Geological Survey Revised: U.S. Forest Service
Prepared by: Ricondo &Associates, Inc.

Exhibit IV-4

north

Scale 1” = 3,700’

Area Land Ownership

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The land southeast of the Airport, on which the CALTRANS Maintenance Station and Gravel Pit are located, is owned by the BLM. The City of Los Angeles owns the land to the south where SNARL's facilities are located, while the U.S.F.S. owns the land to the south, which contains the Convict Lake Recreational Area.

The Mono County Sheriff Substation and Mono County Government Center is on land owned by the City of Los Angeles. The second private land parcel is occupied by the Sierra Quarry just west of the Airport.

4.3.3 Zoning

The Airport is situated approximately seven miles east of city limits and is not contiguous with the Town of Mammoth Lakes proper. Unincorporated Mono County surrounds the Airport. Therefore, the various land uses designated in the Airport Land Use Plan are intended to be consistent with either the provisions of Title 19, Mono County Zoning an Development Code or Title 17 of The Town of Mammoth Lakes as appropriate. The land use areas, as prescribed by these two governmental bodies, are depicted in **Exhibit IV-5**.

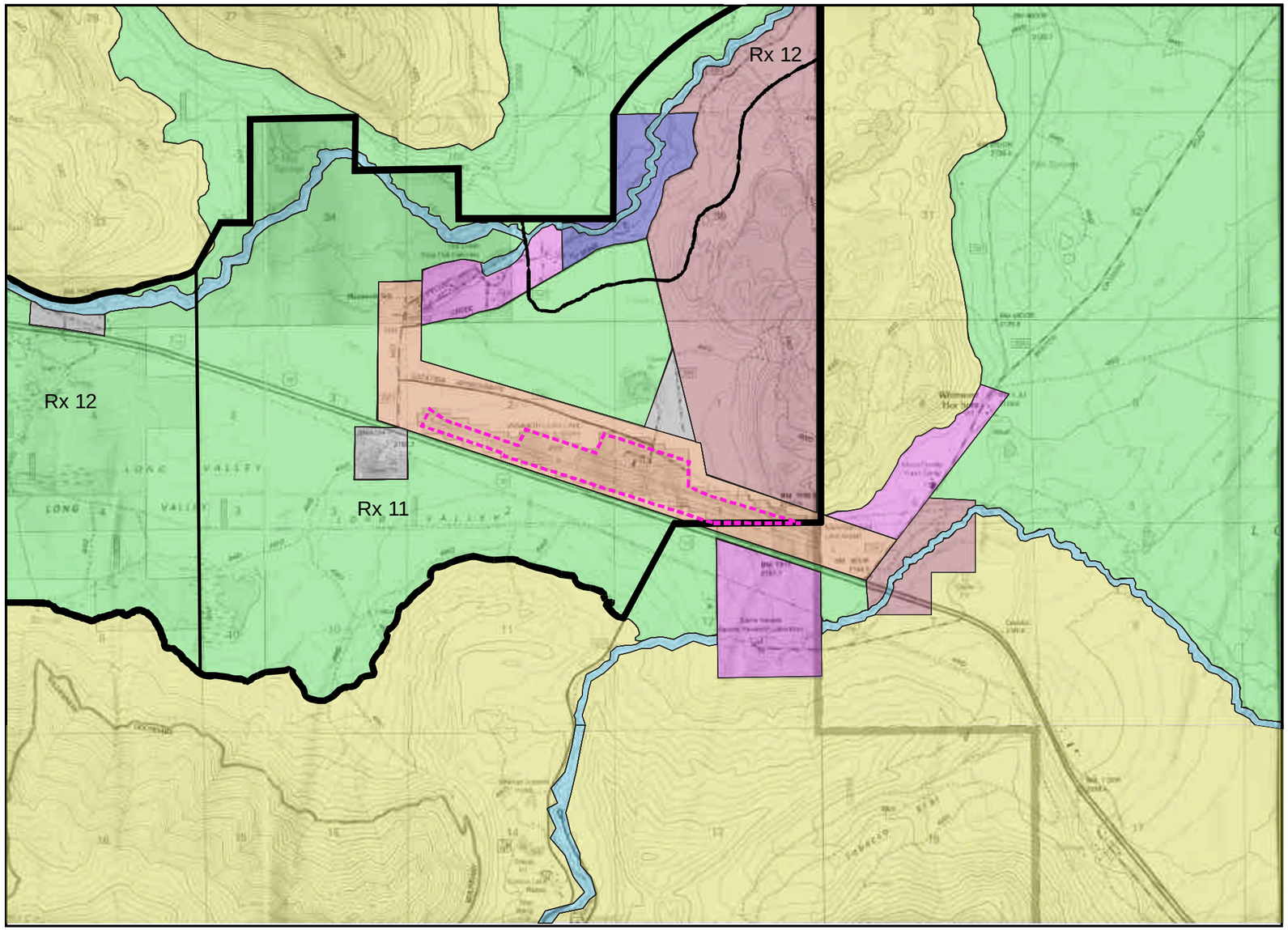
The open area (OA) designation is intended to protect and preserve those lands that provide low-intensity recreational opportunities, visual open space, habitat for wildlife resources, open range, and permitted land uses as defined in Chapter 19.18 of the Zoning Code. Residential land uses are not permitted in the OA district. An additional identifier has been utilized to specify acceptable uses of open area lands, subject to use permit procedures, as follows:

- OA-A indicates open space land that is presently utilized for non-intensive agricultural uses. Designation primarily includes Inyo National Forest, Bureau of Land Management (BLM), and City of Los Angeles range lands utilized for stock grazing.
- OA-M indicates open space land that requires resource management for the protection of visual quality, wildlife habitat, and wilderness value. Designation primarily includes Inyo National Forest and BLM lands under federal jurisdiction.
- OA-R indicates open space land that provides specific low-intensity recreational opportunities. Designation reflects existing picnic, day use, hot spring facilities along Hot Creek, and an existing campground adjacent to Convict Creek. The westerly portion of Doe Ridge is designated for future recreational uses including nordic and cross-country ski trails and equestrian facilities.
- OA-SC designates stream conservation zones along Mammoth Creek/Hot Creek and Convict Creek for the protection of water quality, riparian vegetation, and fishery resources. Conservation zone extends 100 feet on each side of all stream channels. No significant grading alterations, vegetative removals, or building structures are permitted within the stream conservation zone.
- The institutional/public land (PA) designation is intended to define those public lands which are utilized for regional recreational, natural resource development, institutional, and governmental service purposes. The PA District is described in Chapter 19.0 of the Zoning Code, which emphasizes resource development and recreational land uses. The chapter notes that the county may not have permitting authority over lands under state or federal jurisdiction, but indicates the intent of the county to review PA development proposals on the basis of the code.

- Industrial/Manufacturing (I) designation conforms with Chapter 19.17 of the County Zoning and Development Code. Virtually all uses within this category are subject to use permit procedures due to the inherent potential for environmental impacts, safety hazards, and nuisances. Lands considered suitable for industrial and manufacturing uses are limited to two existing sites in the airport planning area: the Sierra Quarry private property and the Mono County gravel pit on Inyo National Forest land.
- The use of the Planned Unit Development (PUD) designation for resort land uses subject to natural resource protection requirements and environmental constraints. Maximum overall development density for the property is equivalent to one residential unit per acre. The intent of the PUD zoning designation is to require the approval of an overall master plan for the property prior to any additional development. Criteria applicable to such development includes the preservation of open space areas, conservation of sensitive riparian and stream zones, and clustering of proposed resort residential uses to minimize environmental disturbances and impacts. The 130-acre Hot Creek Ranch property is the only site within the planning area that is designated for Planned Unit Development land use.
- The intent of the Airport Development District (ADD) designation is to permit the development of appropriate commercial, industrial, and other related uses on lands adjacent to the Mammoth Yosemite Airport. The ADD was specifically created to recognize the economic development potential associated with the expansion of services and facilities at the airport site. Although light industrial, manufacturing, and warehousing developments are necessary for economic stability and growth, these land uses are frequently incompatible with resort recreational, residential, and agricultural land uses. This inherent incompatibility has limited the land resources available for economic development within the county. Subject to the constraints associated with the proximity of aircraft activities, the following land uses are appropriate for the Airport Development District:
    - Airport operational facilities
    - Aviation products and services
    - Housing for airport employees
    - Hotel and residential condominium developments
    - Light industrial and warehousing
    - Office, business, and commercial
    - Public buildings
    - Retail sales and services ancillary to airport terminal or hotel/motel facilities
    - Automobile service stations
    - Recreational vehicle park
    - Low intensity recreational development

The USFS has instituted a land management plan for the Inyo national Forest. The plan described in *Inyo National Forest Land and Resource Management Plan [4-1]* divides the forest into various Management Areas. These Management Areas are a contiguous area of planning to which one or more sets of management practices, called prescriptions, are applied. Prescriptions are applied to a certain area to attain specific objectives. These management prescriptions are written as a result of allocating solutions to specific Management Areas and imposing identified standards and guidelines.

The Airport is located within Management Area #9. The Management Area and prescription area boundaries are depicted in Exhibit IV-5. The Airport lies with prescription area 11, which has been designated as Range Emphasis. Prescription areas designated for Range Emphasis are areas readily



Legend

OA-A		Open Space-Agriculture
OA-M		Open Space-Resource Management
OA-R		Open Space-Recreation
OA-SC		Open Space-Stream Conservation
ADD		Airport Development District
I		Industrial/Maufacturing
PA		Institutional/Public Land
PUD		Planned Unit Development
		Existing Property Line
		Management Area Boundary
		Prescription Area Boundary
Rx 11		Range Emphasis
Rx 12		Concentrated Recreation Area

Source: U.S. Geological Survey Revised: U.S. Forest Service,Mammoth LakesAirport LandUsePlan
Prepared by: Ricondo &Associates, Inc.

Exhibit IV-5

north

Scale 1” = 3,700’

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Planned Land Use

accessible, have available water and would be given priority to be used for grazing before livestock would graze in other areas. A prescription area 12 lies both north and west of the Airport. This prescription area is designated a Concentrated Recreation Area. Areas with this prescription currently receive or would potentially receive high-density recreation use.

4.3.4 Planned Land Use

Because of the public ownership of most of the land surrounding the Airport, planned land use does not significantly differ from the existing land use.

There is currently no development planned for the privately owned parcel of land that contains Hot Creek Ranch. The other privately owned parcel has plans for the development of an industrial park. This proposed project, named the Sierra Business Park, is located on a 36-acre parcel that formerly was used by the Sierra Quarry. The developers propose to subdivide this parcel into 37 parcels to be used for industrial use. The use of these individual lots will be pursuant to the requirements of the individual lot purchasers. The individual lots will be developed by the respective lot purchasers.

The Town of Mammoth Lakes has entered into a public-private partnership with a local developer with the goal of making the Airport a self-sustaining and profitable enterprise that would provide substantial long-term benefits to the local economy and traveling public. A phased development is planned to add additional aircraft hangars, a general aviation terminal, and fuel storage facilities on the airside. Planned landside improvements could include a hotel/condominium complex, a recreational vehicle park, restaurants and retail facilities. This development is proposed to remain within airport property.

V. Environmental Consequences

The potential environmental consequences associated with the five alternatives for the expansion of Mammoth Airport are discussed in this section. These consequences, as specified in FAA Order 5050.4A, Airport Environmental Handbook, are as follows:

- Aircraft noise
- Compatible land use
- Social impacts and environmental justice
- Induced socioeconomic impacts
- Air quality
- Water quality, water supply, and stormwater control
- U.S. Department of Transportation, Section 4(f) lands
- Historic, architectural, archaeological, and cultural resources
- Biotic communities
- Endangered and threatened species of flora and fauna
- Wetlands
- Floodplain management
- Coastal zone management
- Coastal barriers
- Wild and scenic rivers
- Farmlands
- Energy supply and natural resources
- Light emissions
- Solid waste / hazardous waste impacts
- Construction impacts
- Visual impacts
- Cumulative impacts
- Other considerations

Although not specified in FAA Order 5050.4A, environmental justice and hazardous materials impacts are also addressed.

5.1 Aircraft Noise

FAA Order 5050.4A [5-1] prescribes the methodology for preparing aircraft noise exposure maps. In accordance with these guidelines, an aircraft noise exposure analysis was performed, which is discussed in greater detail in Appendix C. The noise analysis, prepared for 1999 (the last complete calendar year prior to the start of this analysis) as well as for 2002 and 2022, was used to assess the effects of noise from aircraft operations on the Airport environs for each alternative. Alternative 1, the no action alternative, represents the "base case" with which the effects of all other alternatives are compared. A discussion of noise analysis techniques and noise exposure metrics, as well as the assumptions used for the noise analysis, is included in Appendix C.

As required by the California Airport Noise Regulation (CCR Title 21, Subchapter 6) [5-2], aircraft noise exposure has been quantified using the Community Noise Equivalent Level (CNEL). Paragraph 85.a of FAA Order 5050.4A [5-1] specifies the use of the FAA's average day-night noise level metric (DNL) when performing noise exposure analyses in order to be consistent with those used for environmental impact statements and environmental assessments as well as in FAR Part 150 Noise Compatibility Programs [5-3]. However, in the State of California, the FAA accepts the CNEL metric as a substitute for the DNL metric. Noise exposure criterion levels of CNEL 60, 65, 70, and 75 were selected, as required by the California Department of Transportation, Division of Aeronautics [5-4]. Because of the relatively small size of the CNEL 70 and 75 noise exposure areas, which do not extend beyond the airfield, only the CNEL 60 and 65 are presented on the noise exposure maps.

Typically, in noise exposure analyses, the population and numbers of dwelling units, schools, and religious facilities that could be affected are estimated within each of these noise exposure ranges. However, in this case, there are no noise sensitive land uses within the noise exposure areas.

Estimates of total noise exposure resulting from aircraft operations, as expressed in CNEL, can be interpreted in terms of their probable effect on land uses. Suggested guidelines for evaluating land use compatibility in aircraft noise exposure areas were originally developed by the FAA and are shown in **Table V-1**. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular level might not accurately reflect an individual's perception of an actual noise environment. Compatible or incompatible land use is determined by comparing the predicted or measured CNEL at a site with the levels given in the table.

Each generalized land use listed in Table V-1 includes a wide range of human activities that have various sensitivities to noise intrusions. CNELs in the table should be interpreted only as indications of potential aircraft noise effects on people living and working in areas surrounding an airport. Although specific CNELs are obtained from a noise analysis, they do not dictate specific reactions that residents affected by those noise levels may have, nor do they require specific mitigation. The noise levels are intended only as guides for land use development.

Table V-1

Suggested Land Use Compatibility Guidelines in Aircraft Noise Exposure Areas

The designations in this table do not constitute a federal determination that any use of land is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities.

Land use	CNEL 65 to 70	CNEL 70 to 75	CNEL 75+
Residential			
Residential other than mobile homes and transient lodgings	NLR required *(a)*	NLR required *(a)*	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required *(a)*	NLR required *(a)*	NLR required *(b)*
Public use			
Schools, hospitals, and nursing homes	NLR required *(a)*	NLR required *(a)*	Incompatible
Churches, auditoriums, and concert halls	NLR required *(a)*	NLR required *(a)*	Incompatible
Governmental services	Compatible	NLR required	NLR required *(b)*
Transportation	Compatible	Compatible *(c)*	Compatible *(c)*
Parking	Compatible	Compatible *(c)*	Compatible *(c,d)*
Commercial use			
Offices, business, and professional	NLR required	NLR required	NLR required *(b)*
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible *(c)*	Compatible *(c,d)*
Retail trade—general	NLR required	NLR required	NLR required *(b)*
Utilities	Compatible	Compatible *(c)*	Compatible *(c,d)*
Communication	NLR required	NLR required	NLR required *(b)*
Manufacturing and production			
Manufacturing—general	Compatible	Compatible *(c)*	Compatible *(c, d)*
Photographic and optical	Compatible	NLR required	NLR required *(b)*
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming and breeding	Compatible	Compatible	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible	Compatible	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible *(b, c)*

CNEL = Community Noise Equivalent Level average sound level, in A-weighted decibels.

Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.

NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

(a) The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.
(b) NLR required between DNL 75 and 80; incompatible for DNL 80 and above.
(c) NLR required in offices or other areas with noise-sensitive activities.
(d) Incompatible for DNL 85 and above.

Source: Ricondo & Associates, 2000, as derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, *Airport Noise Compatibility Planning*, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended

5.1.1 Environmental Setting

The types of aircraft (fleet mix), the number of operations by time of day, and the number of departures by stage length for an average day at the Airport in 1999 are presented in Table C-3 in Appendix C. On an average day in 1999, a total of approximately 16 aircraft departures were performed at the Airport, the majority of which were by single or twin-engine propeller general aviation aircraft. The noise exposure associated with operations on an average day in 1999 is shown on **Exhibit V-1**.

As shown on Exhibit V-1, the area exposed to aircraft noise of CNEL 65 and higher remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Airport through leases (LADWP land at the east end of the Airport) or use permits (Forest Service lands south of the Airport property boundary). The CNEL 60 and higher noise exposure area remains largely on either Airport property, vacant land, or the U.S. 395 right-of-way. Current land use plans show this area would remain compatible.

Procedures have been proposed that would require aircraft departing Runway 27 to face east or west for engine run ups. This would reduce the noise reflection off of Doe Ridge towards the SNARL facility. Additionally, Mammoth Yosemite Airport has a policy, which restricts low level flights over both the Hot Creek Fish Hatchery and SNARL facility.

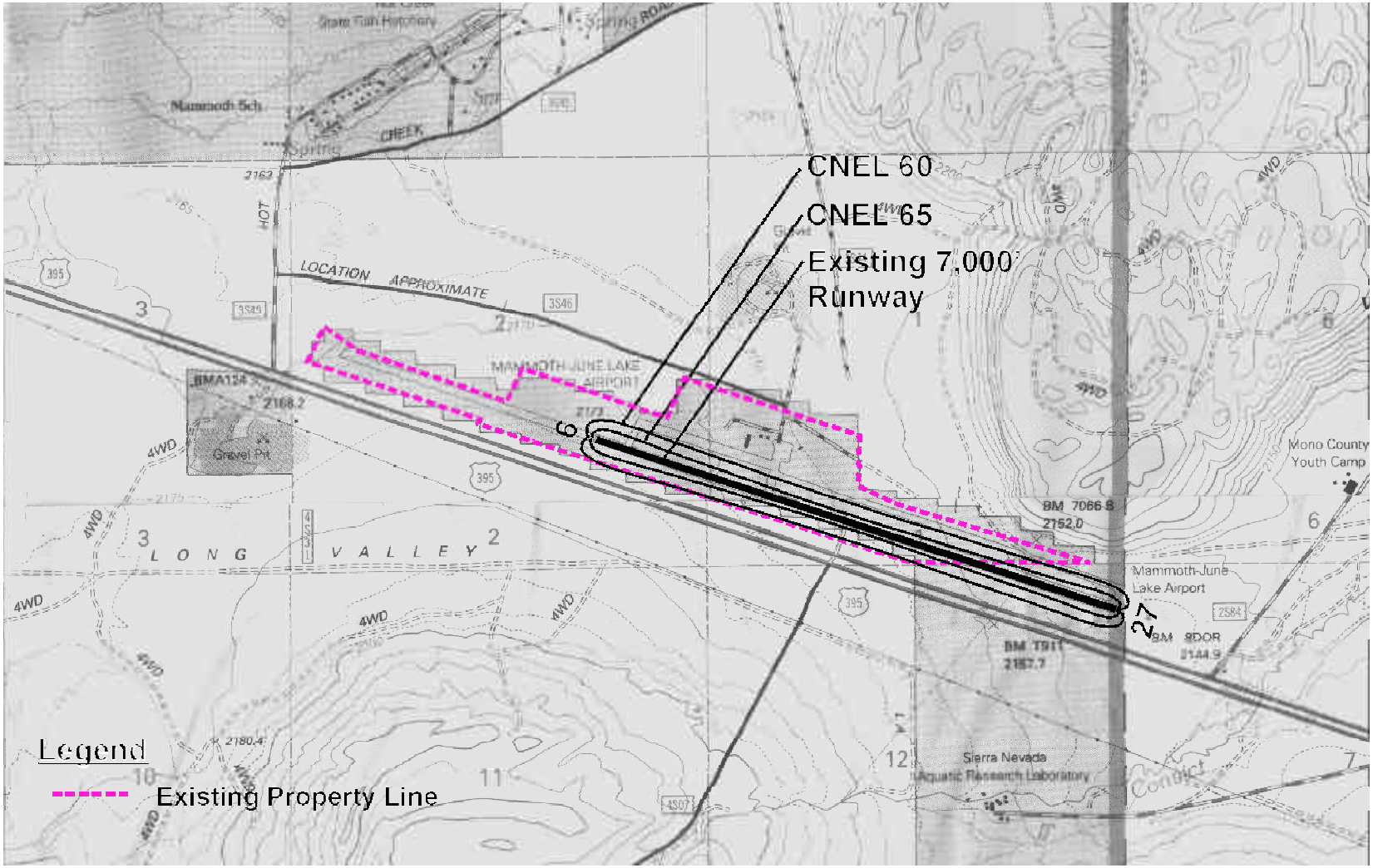
5.1.2 Environmental Impacts

Noise exposure maps were prepared for all of the alternatives for the years 2002 and 2022 to estimate and compare the potential effects of aircraft noise on existing land uses. Noise exposure maps were prepared for 2002 to demonstrate the changes in noise exposure that could occur with the Airport expansion in the earliest year that the development would be operational and for 2022 to evaluate the longer-range impacts of the Airport development alternatives.

In this analysis, the primary factor contributing to the changes in noise exposure between each alternative is the location of the proposed extension (east vs. west) and length of the extension. The projected annual distribution of runway use is presented in Table C-8 in Appendix C.

Moving the start-of-roll point for departures with the runway extensions results in existing aircraft operating at the Airport climbing for a longer distance, and subsequently at higher altitudes, over Airport property when overflying areas in the vicinity of the Airport. In certain instances, this results in some reduction in aircraft noise exposure for the general aviation fleet of aircraft at the Airport. However, because the runway development permits the use of the Airport by larger air carrier aircraft, the resulting increase in operations would cause an increase in the overall noise exposure area.

Forecast Aircraft Noise Exposure by Alternative for 2002 and 2022. For the no-action alternative, Alternative 1, the fleet mix and number of aircraft operations are indicated in Table C-4 in Appendix C. It was assumed for each development alternative that the fleet mix and number of aircraft operations at the Airport by time of day in 2002 and 2022 would increase over the no-action alternative due to the introduction of air carrier aircraft operations. This increased level of operations would be consistent for each of the build alternatives, as indicated in Table C-5 in Appendix C. The differences in departure flight tracks, departure stage lengths, and runway use among the development alternatives are discussed in Appendix C.



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-1

north Scale 1" = 2000'

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Existing 1999 Noise Contours

Noise exposure maps showing the CNEL 60 and 65 noise exposure areas were developed for each of the alternatives for both 2002 and 2022. The following indicates the exhibits associated with each alternative:

- ***Alternative 1—Existing 7,000-Foot Runway (No Action).*** Aircraft noise exposure in 2002 and 2022 for Alternative 1 is shown on **Exhibit V-2** and **Exhibit V-3**, respectively.
- ***Alternative 2—8,200-Foot Runway (Proposed Action).*** Aircraft noise exposure in 2002 and 2022 for Alternative 2 is shown on **Exhibit V-4** and **Exhibit V-5**, respectively.
- ***Alternative 3—9,000-Foot Runway.*** Aircraft noise exposure in 2002 and 2022 for Alternative 3 is shown on **Exhibit V-6** and **Exhibit V-7**, respectively.
- ***Alternative 4—Greater than 9,000-Foot Runway.*** Aircraft noise exposure for this alternative would be dependent on the exact length of the runway. It is anticipated to be similar to Alternative 3 but shifted to the end of the proposed runway.
- ***Alternative 5—8,200-Foot Runway, Extension to the East.*** Aircraft noise exposure in 2002 and 2022 for Alternative 5 is shown on **Exhibit V-8** and **Exhibit V-9**, respectively.

As shown on the exhibits for the alternatives, the area exposed to aircraft noise of CNEL 65 and higher for each of the alternatives remains within the airfield boundary of the Airport on either Airport property or vacant land controlled by the Airport through leases or use permits. There are no noise sensitive land uses and no people living within the CNEL 65 noise exposure area for any of the alternatives. Based on these findings, the FAA has determined that neither the proposed action nor any of the alternatives meets the criteria set forth in FAA Order 5050.4A for classification as a major runway extension. The CNEL 60 and higher noise exposure area remains largely on Airport property, vacant land, or the U.S. 395 right-of-way. Current land use plans show this area as remaining as compatible land uses. Areas west of the Airport are compatible land uses and therefore, it is anticipated that noise impacts for Alternative 4 would not be significantly different than Alternative 3.

A hotel and residential condominium development is planned on Airport property, north of the airfield. This area would be outside the CNEL 60 noise exposure area for each of the alternative

In addition to the noise exposure maps, a grid point analysis was conducted to evaluate potential changes in noise exposure at specific points in the vicinity of the Airport. These areas, as shown on **Exhibit V-10,** include the Hot Creek State Fish Hatchery, the Hot Creek Ranch, the planned hotel/condominium complex on Airport property and the Sierra Nevada Aquatic Research Laboratory (SNARL). **Table V-2** summarizes the CNEL values calculated by the INM for Alternatives 1, 2, 3, and 5 at these locations. As described in Table V-2, Grid Points 1 and 2 refer to the location of the hatchery, Grid Point 3 refers to the location at the Hot Creek Ranch, Grid Points 4 and 5 refer to locations along Hot Creek, Grid Point 6 refers to the location at the on-Airport hotel/condominium complex, and Grid Point 7 refers to the location of SNARL facilities. None of these facilities are located within the existing or future CNEL 65 noise exposure area for any of the alternatives. Although each grid point would show some increase in noise exposure levels with the development alternatives, the noise exposure levels remain low. It is anticipated that these areas would also not experience direct overflights of air carrier jet aircraft because the planned operating procedure is for air carrier jet aircraft to arrive on a straight-in arrival procedure from the east and depart using an initial turn to the south, away from these development areas for departures to the west.

Exhibits V-11 and **V-12** show the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the communities in the region. Also depicted are the portion of Hot Creek that is potentially eligible for the National Wild and Scenic Rivers System, the land fill site, Devils Postpile National Monument, and the Bureau of Land Management (BLM) lek sites of concern. Aircraft altitudes in the vicinity of these areas are also depicted on the exhibits. Aircraft noise levels at the outlying areas would be well below the level of significance. General aviation aircraft would be the primary source of aircraft noise in the vicinity of the lek sites north and east of the Airport because the downwind and base legs of the general aviation approach patterns and earlier turns on departure. The flight patterns north of the Airport are depicted on Exhibit C-4 in Appendix C.

Table V-2

CNEL Values at Grid Locations

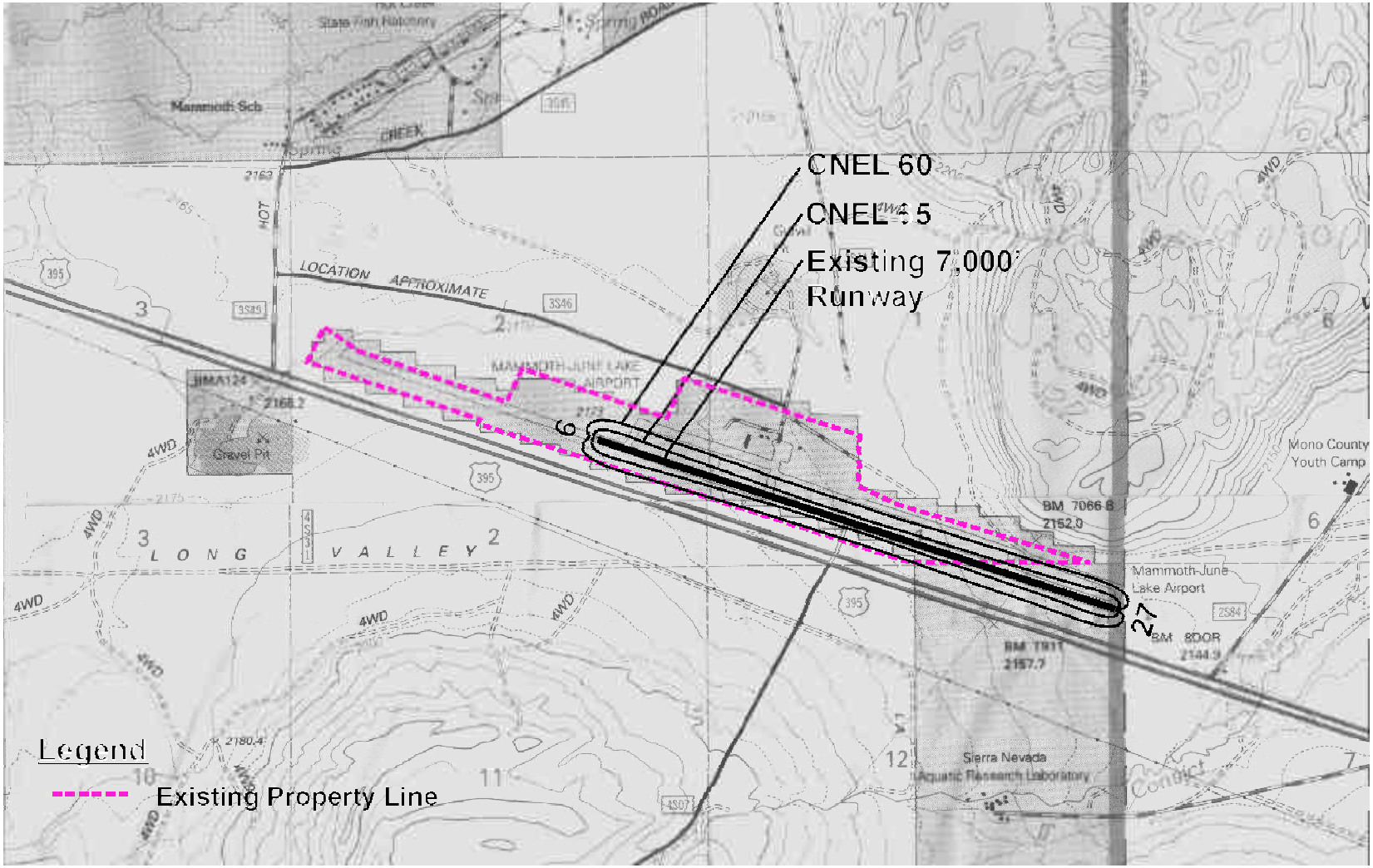
	Existing	Alternative (a)			
Grid Point	1999	1	2	3	5
2002					
1 – Hatchery-south	38.3	38.8	39.1	39.1	39.1
2 – Hatchery-north	37.5	37.9	38.2	38.3	38.6
3 – Hot Creek Ranch	35.9	36.3	36.5	36.5	36.7
4 – Hot Creek-south	35.6	36.0	36.3	36.2	36.4
5 – Hot Creek-north	33.0	33.4	33.7	33.6	33.7
6 – On-Airport hotel/	49.3	49.7	53.6	52.4	50.9
7 - Sierra Nevada Aquatic Research	30.5	30.9	35.2	35.3	35.1
2022					
1 – Hatchery-south		41.4	42.3	42.3	42.3
2 – Hatchery-north		40.5	41.4	41.5	41.7
3 – Hot Creek Ranch		38.9	39.5	39.5	39.8
4 – Hot Creek-south		38.6	39.3	39.2	39.4
5 – Hot Creek-north		36.0	36.8	36.7	36.9
6 – On-Airport hotel/		52.4	58.8	57.3	55.8
7 - Sierra Nevada Aquatic Research		33.5	41.0	41.0	40.7

CNEL = Community noise equivalent level, in A-weighted decibels.

(a) Alternative 1—7,000-foot runway (no action)
Alternative 2—8,200-foot runway (proposed action)
Alternative 3—9,000-foot runway
Alternative 5—8,200-foot runway, extension to the east

Source: Brown-Buntin Associates, July 2000
Prepared by: Ricondo & Associates, Inc.

Summary. In summary, **Table V-3** shows the area exposed to CNEL 60 to 65 and CNEL 65 and higher for the 1999 operating conditions and each of the alternatives for the forecast 2002 and 2022 operation levels. In terms of environmental impact, the extent of impact is often indicated by the number of people exposed to CNEL 65 and higher. There are no populated areas or other



Source:Brown-BuntinAssociates,Inc.
Preparedby: Ricondo & Associates,Inc.

Exhibit V-2

north Scale 1" = 2000'

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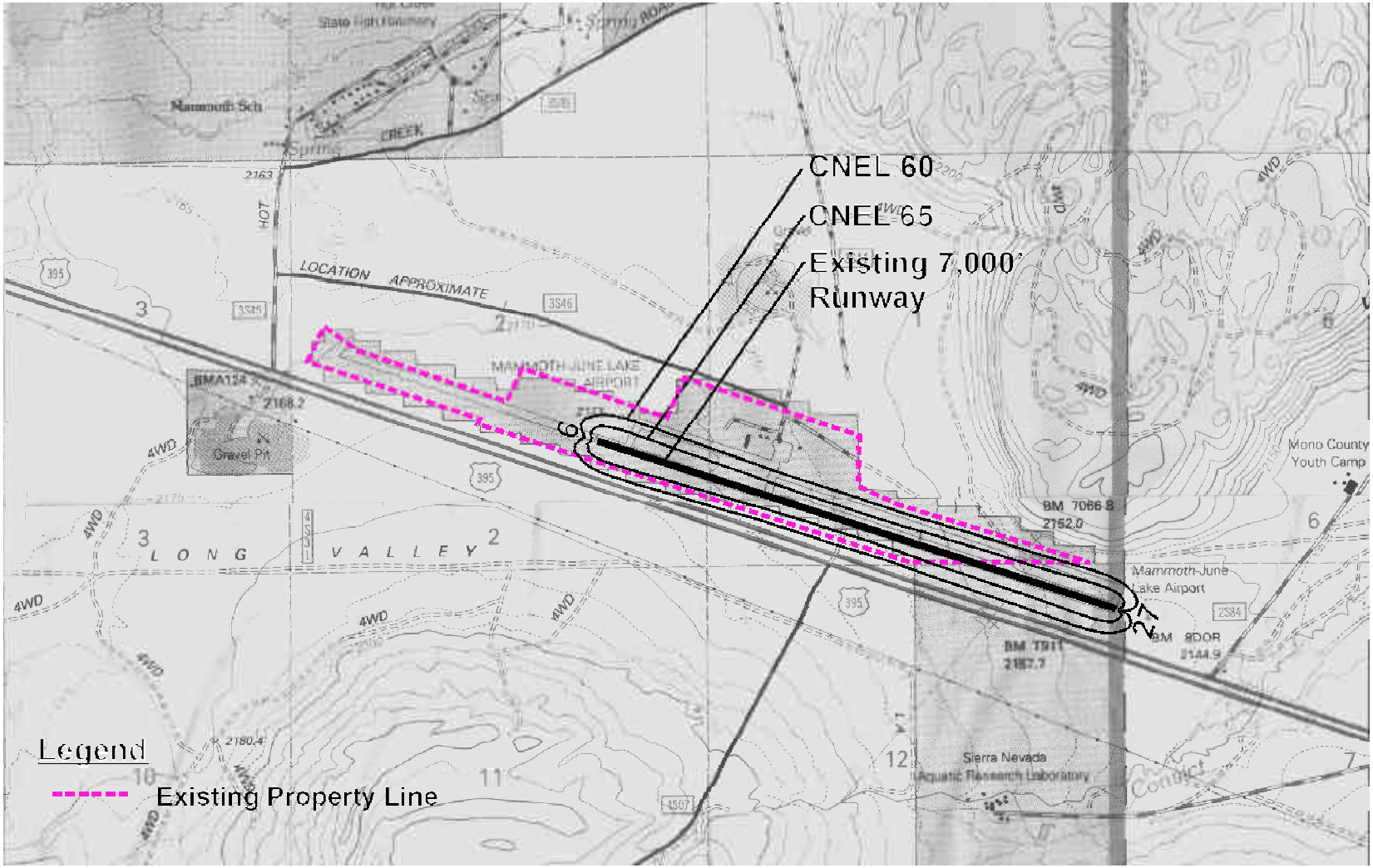
Alternative 1 (No Action) 2002 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-3

north Scale 1" = 2000'

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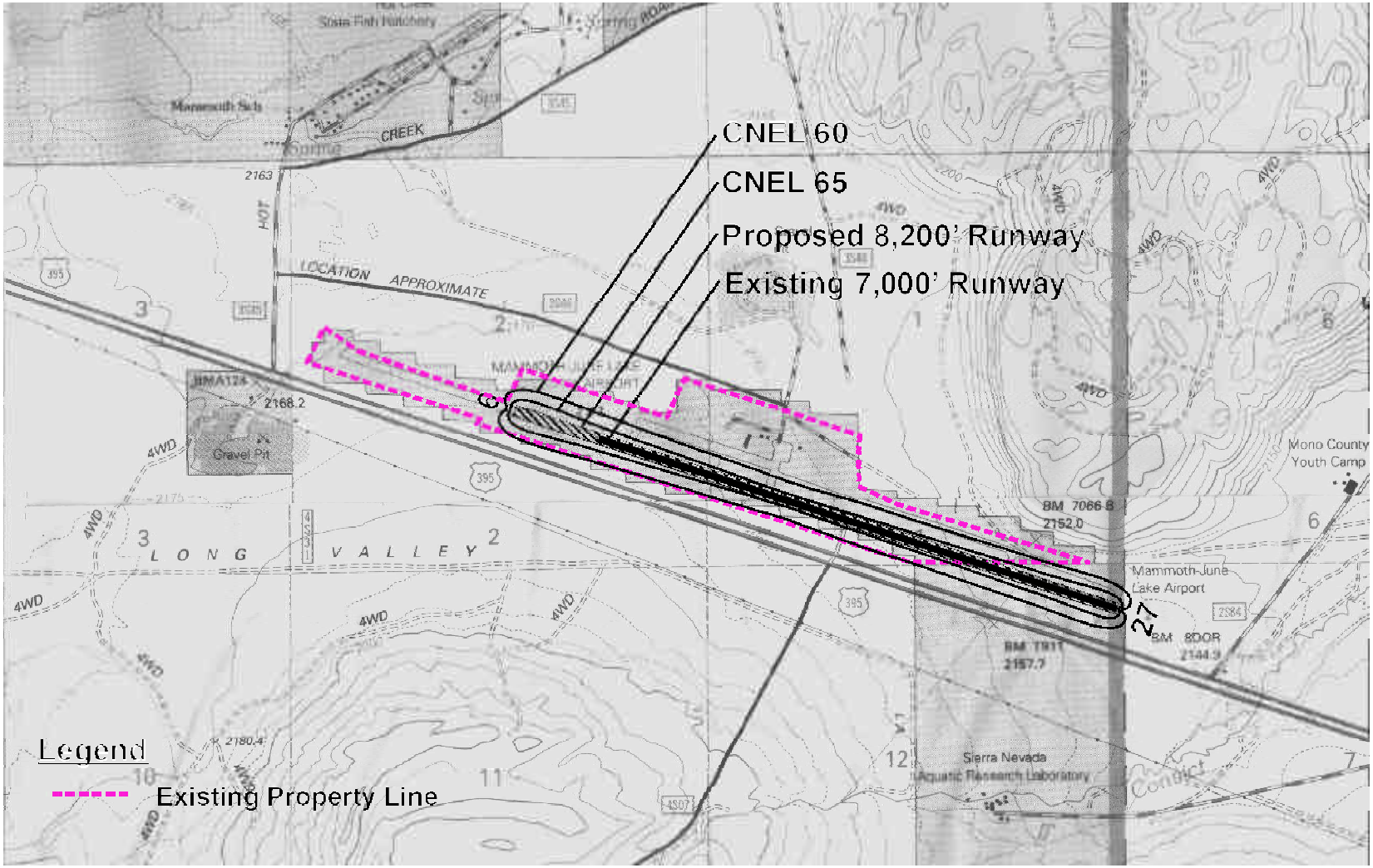
Alternative 1 (No Action) 2022 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-4

north Scale 1" = 2000'

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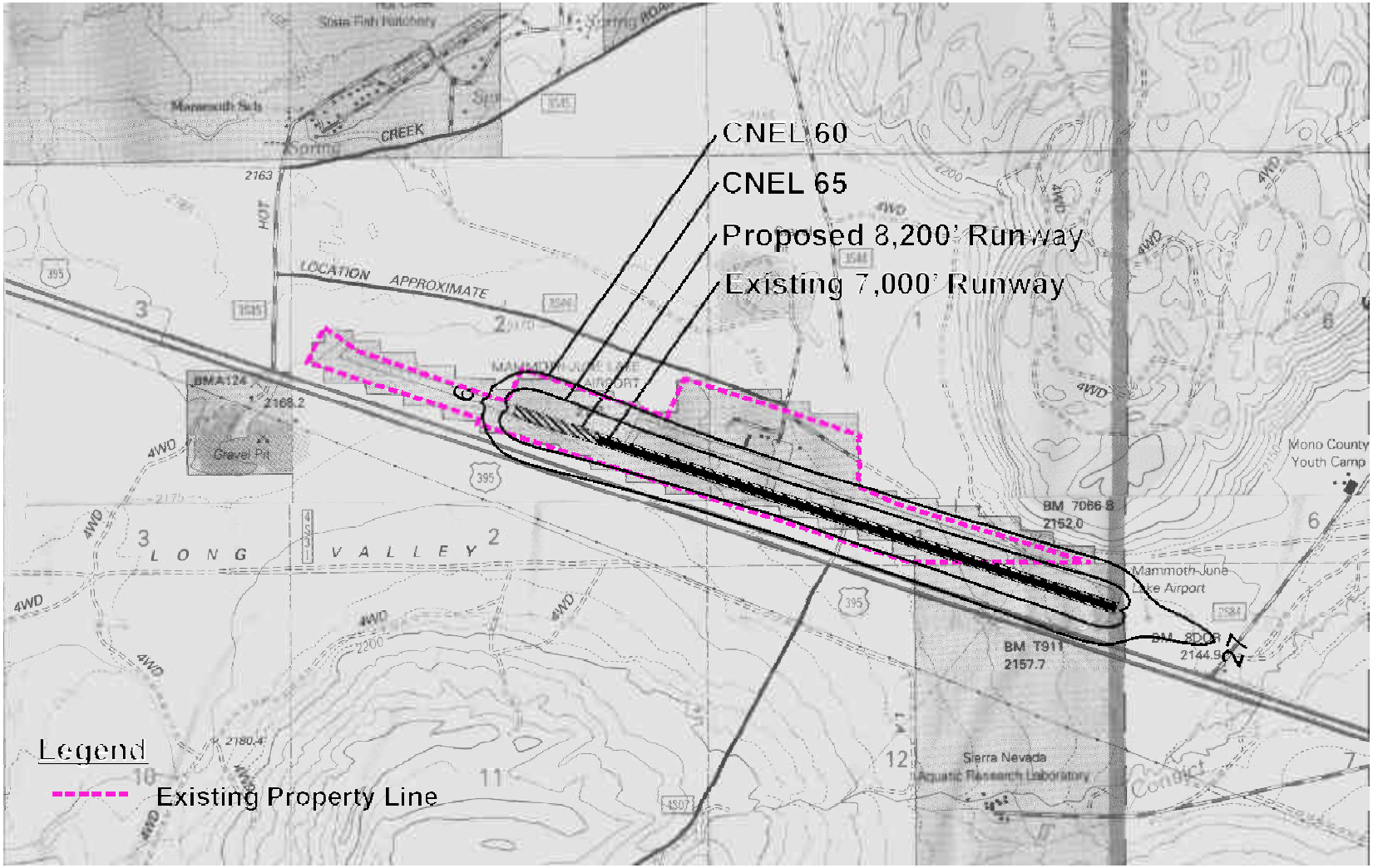
Alternative 2 (Proposed Action - 8,200' Runway) 2002 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-5

north Scale 1" = 2000'

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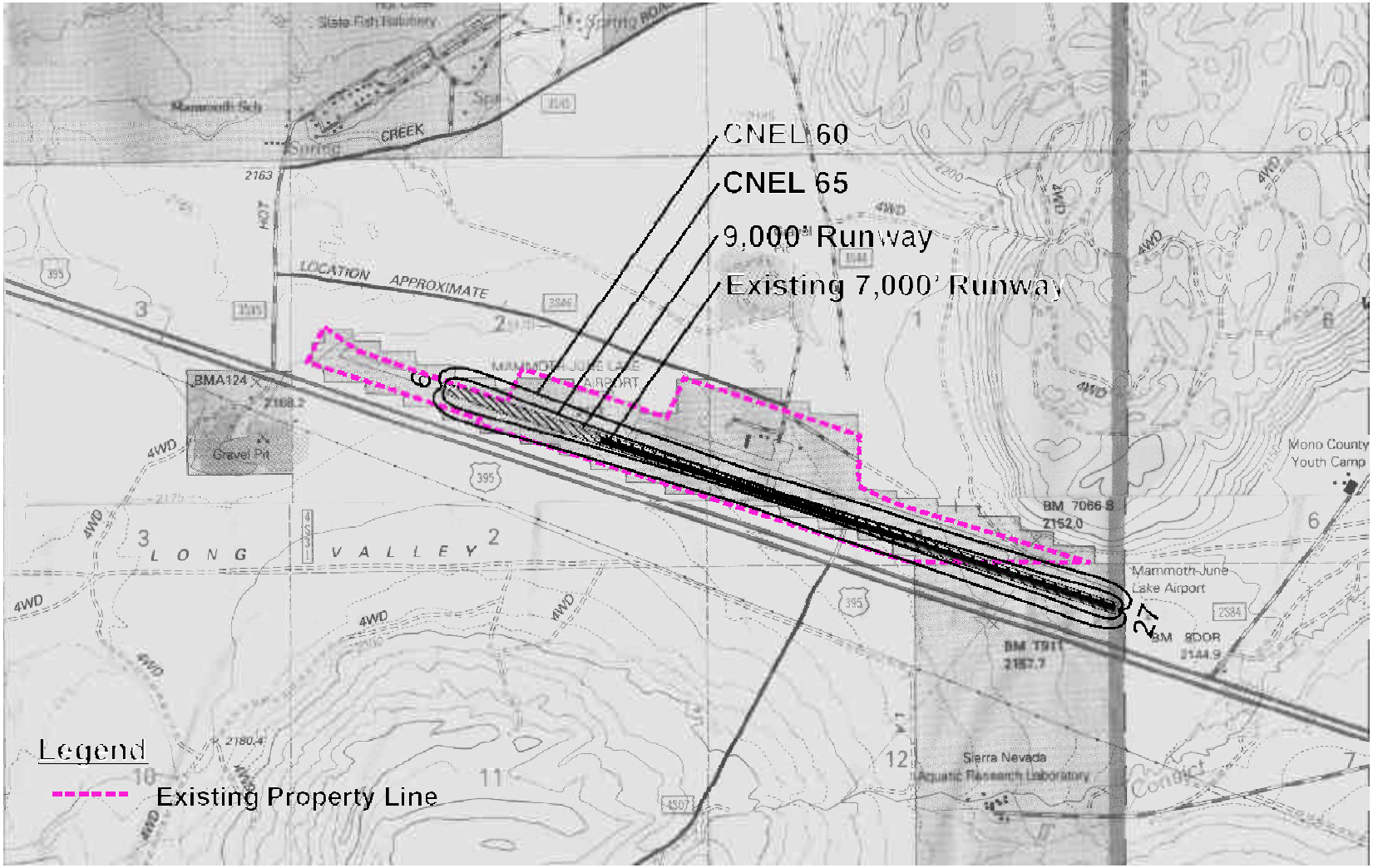
Alternative 2 (Proposed Action - 8,200' Runway) 2022 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-6

north Scale 1" = 2000'

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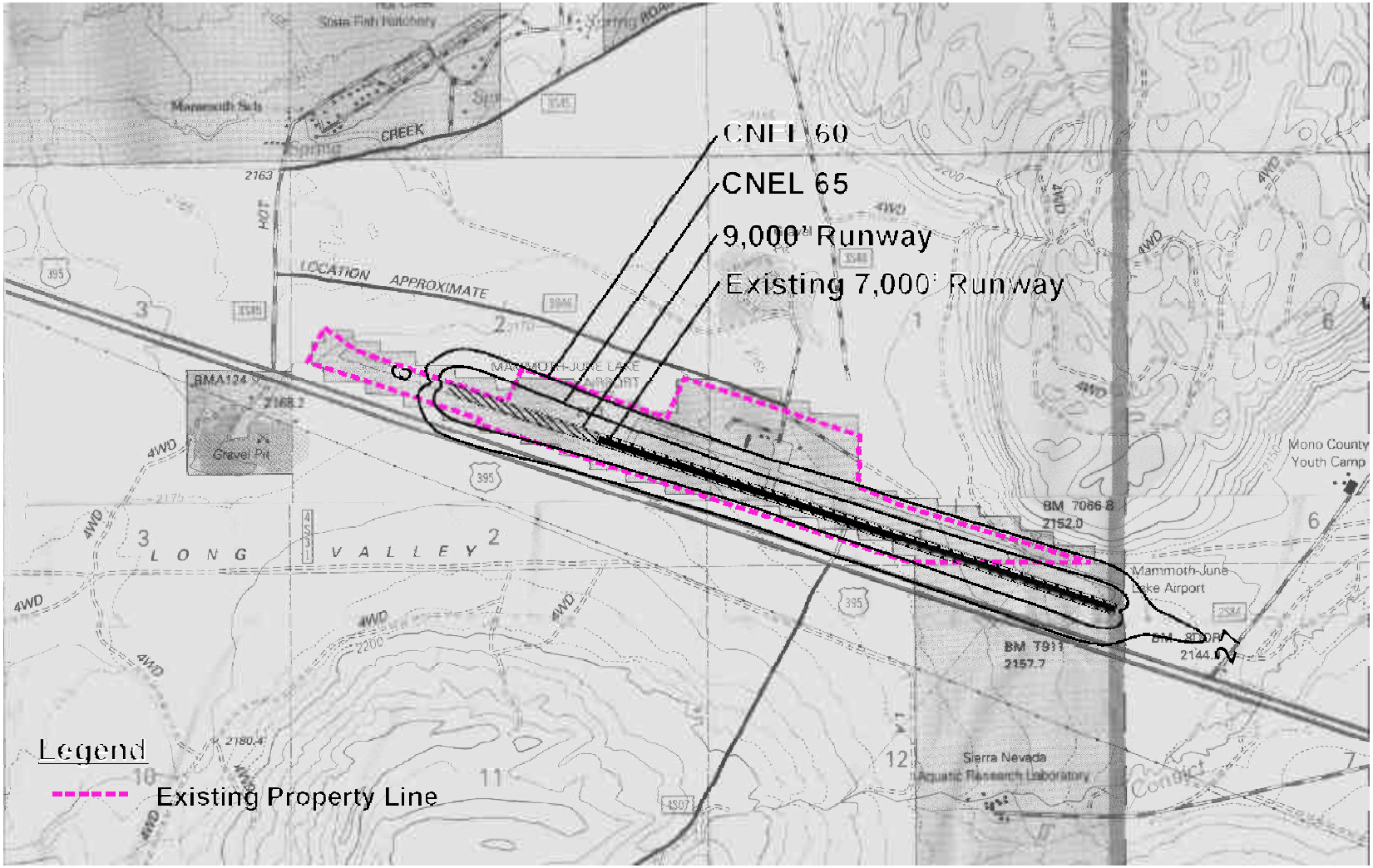
Alternative 3 (9,000' Runway) 2002 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-7

north Scale 1" = 2000'

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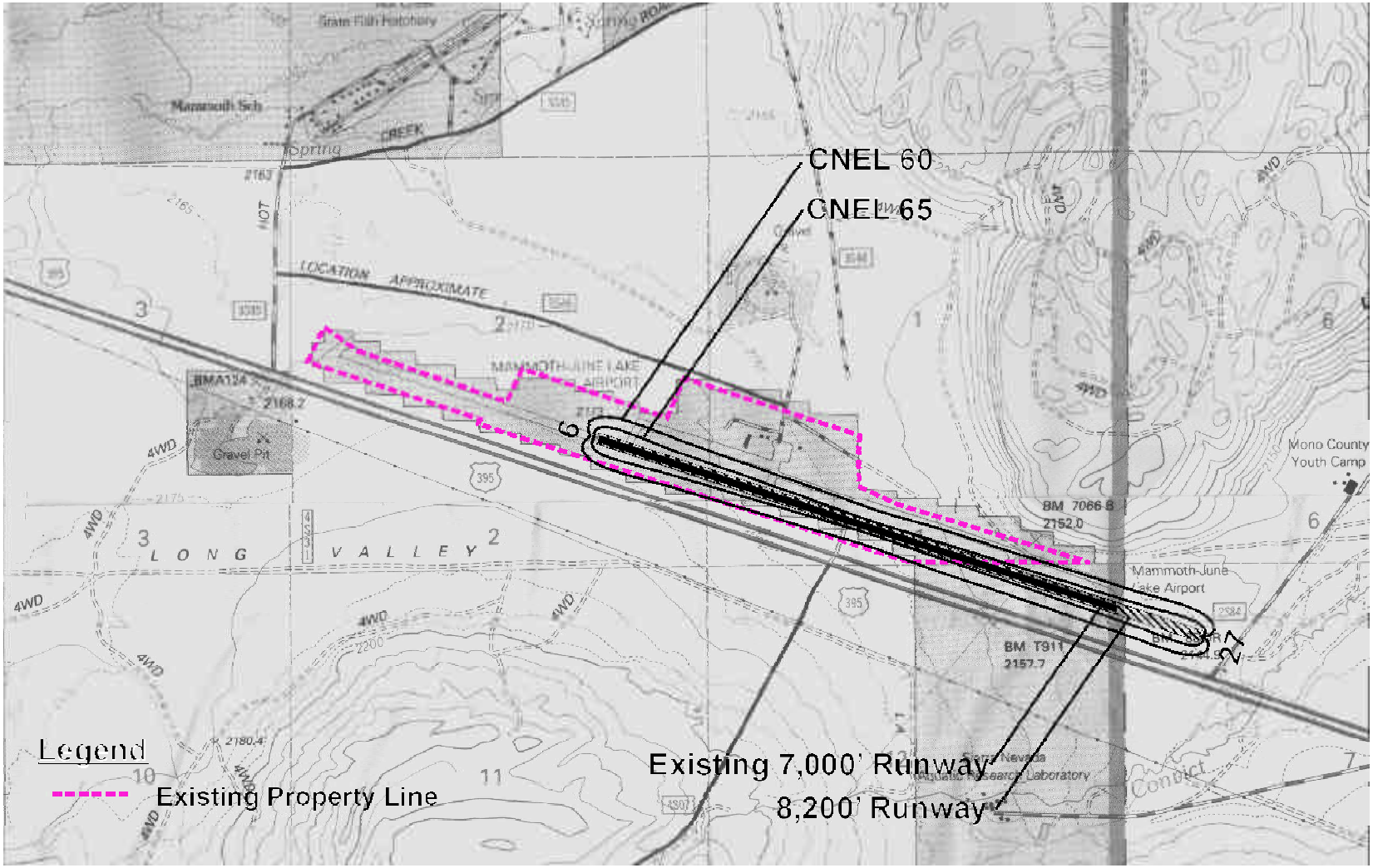
Alternative 3 (9,000' Runway) 2022 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-8

north Scale 1" = 2000'

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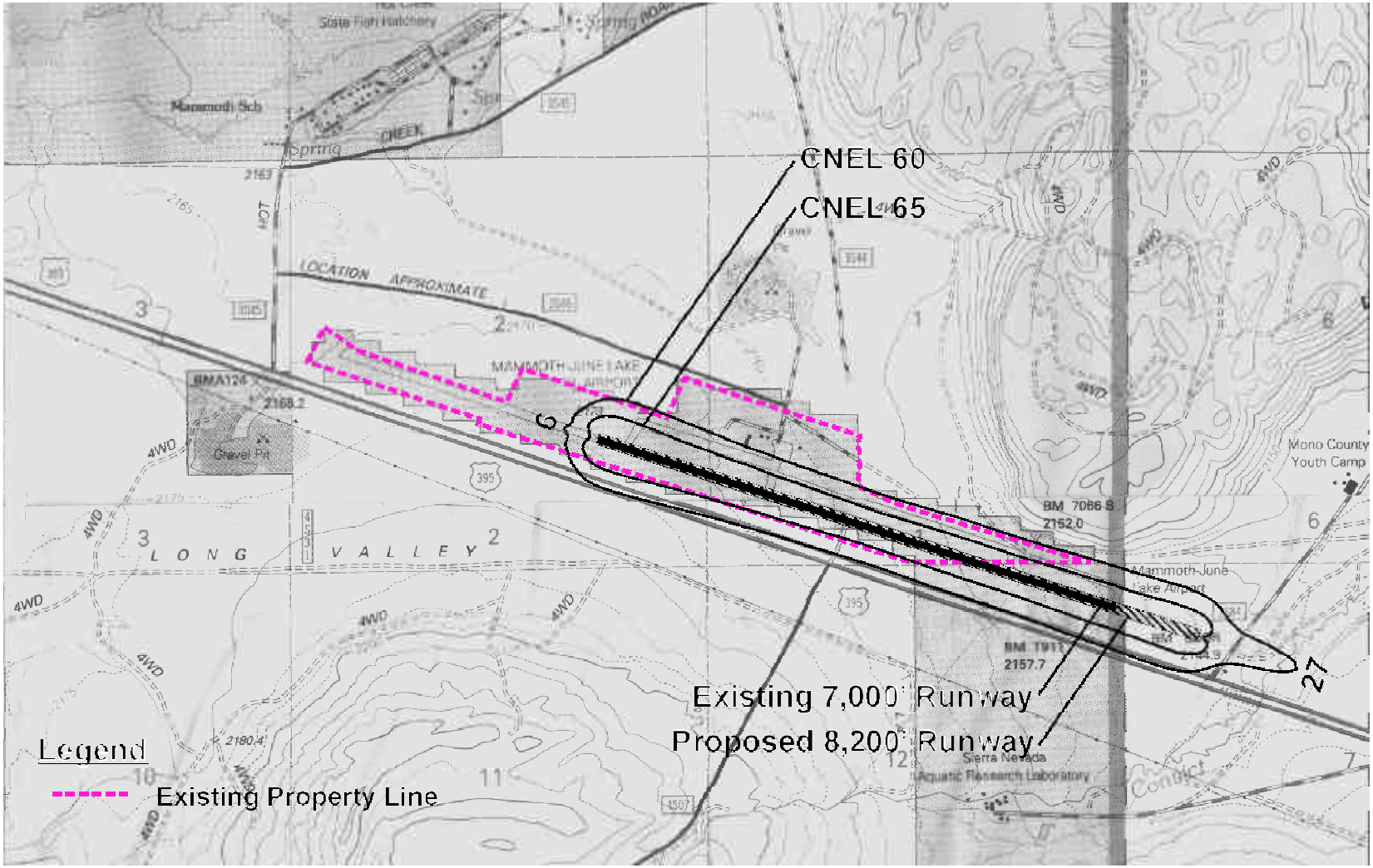
Alternative 5 (8,200' Runway - Eastward Extension) 2002 Noise Contours



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-9

north Scale 1" = 2000'

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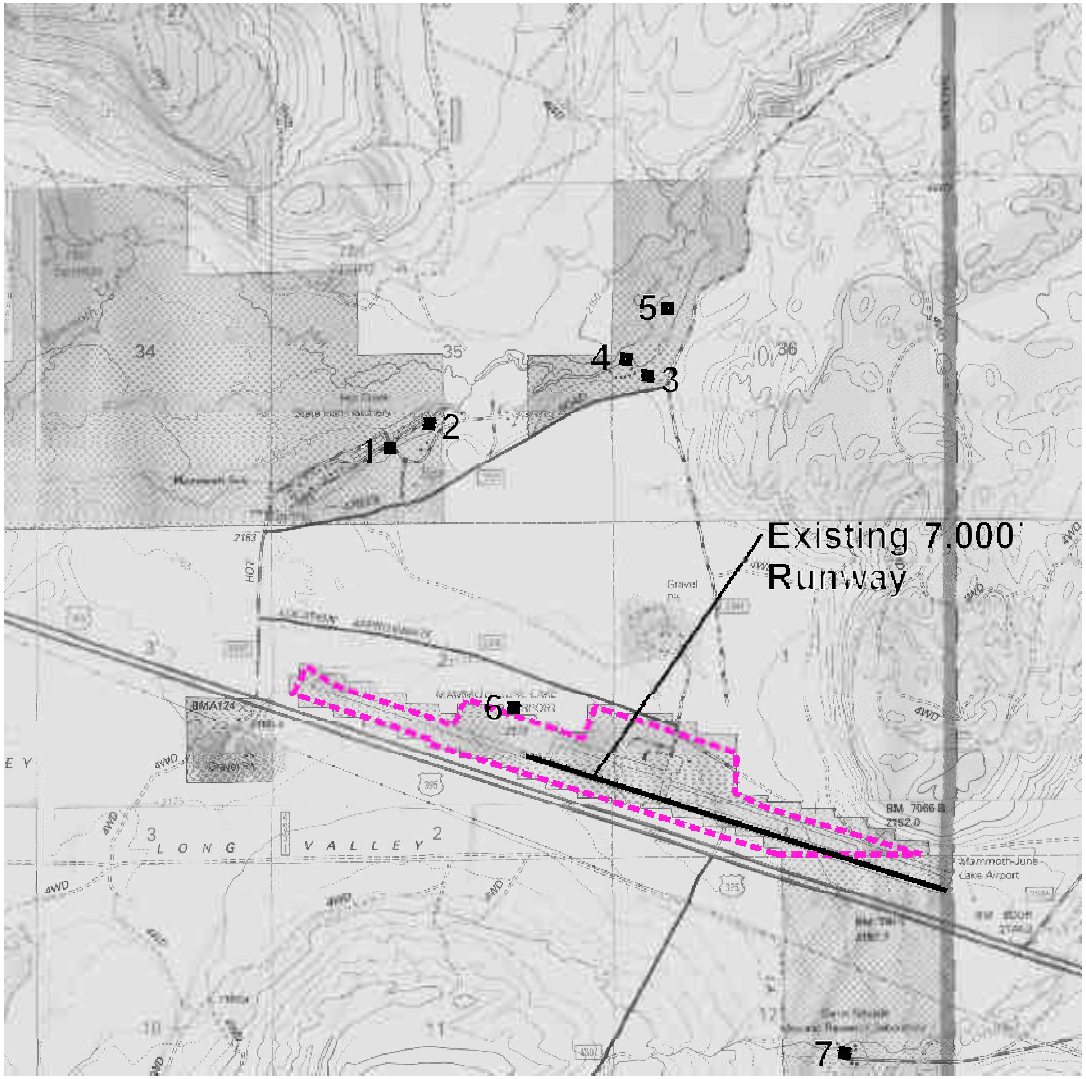
Alternative 5 (8,200' Runway - Eastward Extension) 2022 Noise Contours



Legend

1 Hatchery-South
2 Hatchery-North
3 Hot Creek Ranch
4 Hot Creek Ranch-South
5 Hot Creek Ranch-North
6 Planned Hotel/Condominium Complex
7 Sierra Nevada Aquatic Research Laboratory

Existing Property Line

Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-10

north Scale 1" = 3000

Aircraft Noise Analysis Grid Points

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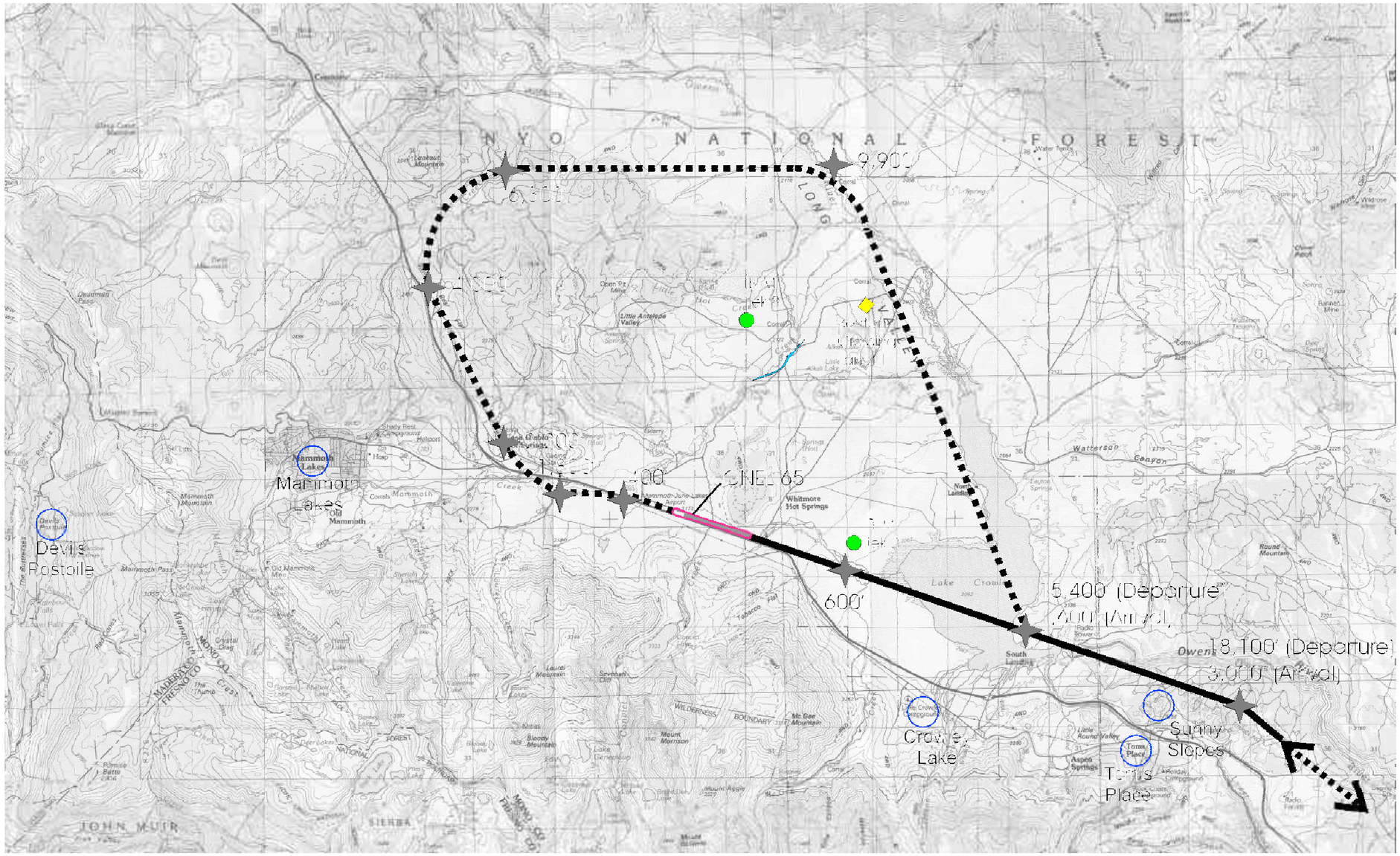

Legend

- Arrival Track
- Departure Track
- Runway
- Way Point (All height are above ground level.)
- BLM lek
- Wild Scenic River Eligible
- 2022 CNEL 65 Noise Exposure Level with Proposed Action
- Landfill

Source: AmericanAirlinesFlightTrack, Brown-Buntin Associates,Inc. Noise Contours, BureauofLandManagement leks & WildandScenicRiver,LandfillTownofMammothLakes.
Prepared by: Ricondo &Associates, Inc.

Exhibit V-11

north

Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 27

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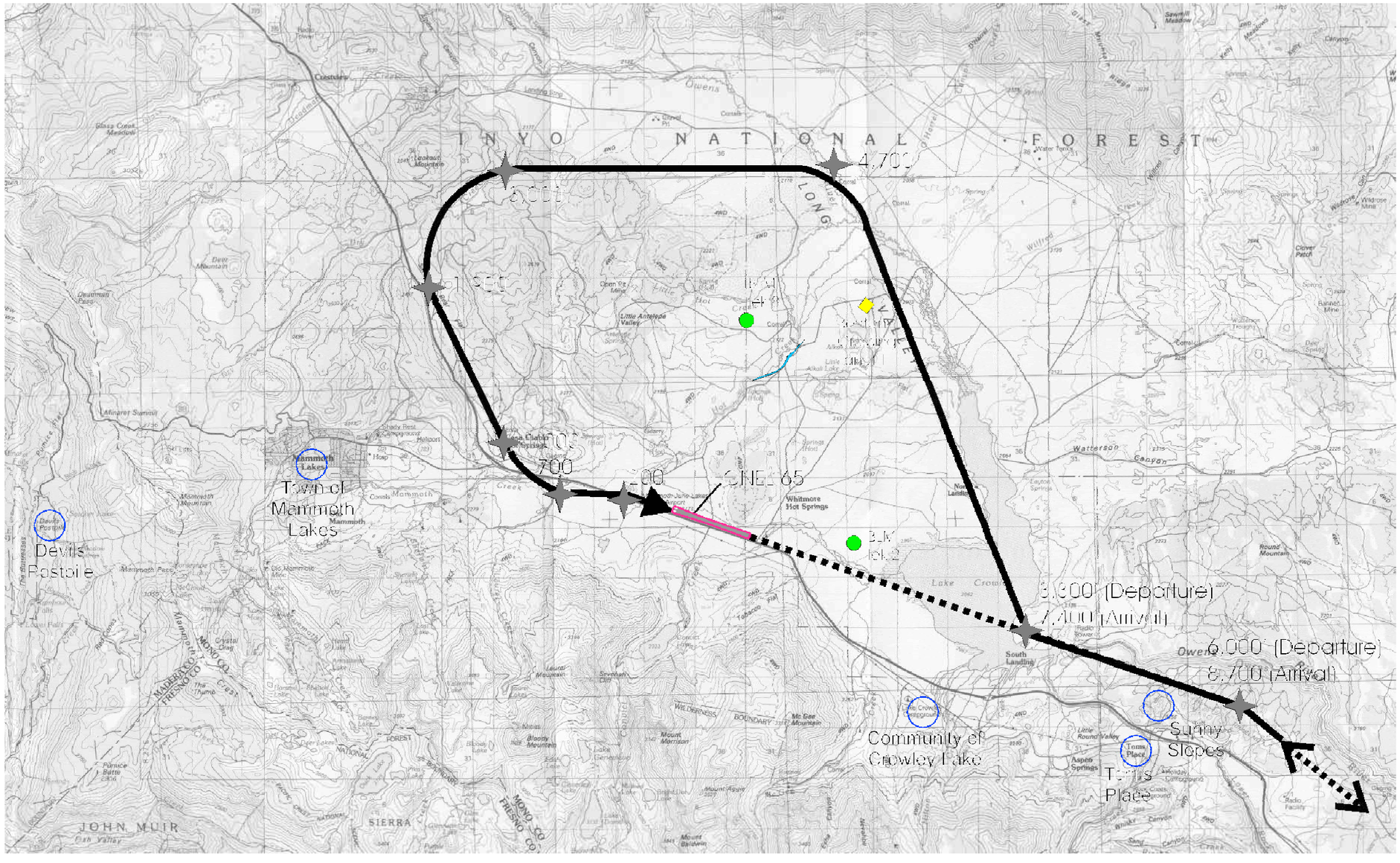

Source: AmericanAirlinesFlightTrack, Brown-Buntin Associates,Inc. Noise Contours, BureauofLandManagement leks & WildandScenicRiver,LandfillTownofMammothLakes.
Prepared by: Ricondo &Associates, Inc.

Exhibit V-12

north

Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 9

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incompatible land uses planned within the CNEL 65 or higher noise exposure areas for any of the alternatives for 2002 or 2022.

Table V-3

Comparison of Estimated Noise Exposure Areas by Alternative

	Existing	Alternative *(a)*			
Noise impact factor	1999	1	2	3	5
Area exposed (acres)					
2002					
CNEL 65+	39	39	48	48	48
CNEL 65-60	47	47	61	66	61
Total CNEL 60+		86	109	114	109
2022					
CNEL 65+		62	105	110	105
CNEL 65-60		56	105	112	105
Total CNEL 60+		118	210	222	210

CNEL = Community noise equivalent level, in A-weighted decibels.
(a) Alternative 1—7,000-foot runway (no action)
Alternative 2—8,200-foot runway (proposed action)
Alternative 3—9,000-foot runway
Alternative 5—8,200-foot runway, extension to the east

Source: Brown-Buntin Associates, July 2000

The closest potential noise sensitive area is the proposed on-Airport hotel and residential condominium development, which is outside the CNEL 60 noise exposure area. The Mono County Noise Element [5-5] and the Town of Mammoth Lakes Noise Element [5-6], in conformance with State Standards, recommends that interior residential noise levels not exceed CNEL 45. Standard building practice in the cold weather mountainous regions will generally reduce noise levels inside the buildings within this area to less than CNEL 45.

All of the commercial development areas, including the on-Airport commercial development areas, SNARL and the planned Sierra Business Park development area, would be located outside the CNEL 65 (and CNEL 60) noise exposure area for all the alternatives. As indicated in Table V-1, commercial uses in these areas would be compatible.

5.1.3 Mitigation Measures

None of the alternatives would result in a significant increase in noise exposure in populated or otherwise noise-sensitive areas. Therefore, no mitigation is required.

5.2 Compatible Land Use

The land use compatibility in the environs of an airport is usually associated with aircraft noise exposure and local jurisdictional actions to limit incompatible land use developments in areas exposed to significant levels of aircraft noise. Table V-1 illustrates land use compatibility standards. The potential for other impacts on land uses that are generally considered compatible with aircraft noise must also be addressed.

5.2.1 Environmental Setting

As described in Section IV, the Airport environs are primarily undeveloped open space. The planned land usage and zoning are generally consistent with the existing uses and significant changes are not expected to occur within the foreseeable future.

The Town of Mammoth Lakes purchased most of the land that the Airport is situated on from Mono County in 1992. The land surrounding the Airport lies in Mono County, and the County is the responsible governmental body with regard to zoning and land usage of that land.

California State Law, as stated in the Public Utilities Code, created the requirement for an Airport Land Use Commission in each county. The Mono County Board of Supervisors established the Mono County Airport Land Use Commission (ALUC) in 1986.

The purpose of the Mono County ALUC is to promote the orderly development of the Airport and the area around the Airport. The ALUC policies address land use around the Airport as it effects navigable airspace, general safety of people and property surrounding the Airport, and aircraft noise. The adoption or amendment of the general and specific plans, building regulations, zoning regulations, and airport master plans of Mono County, Bureau of Land Management (BLM), U.S. Forest Service, and the Town of Mammoth Lakes must be reviewed by the Mono County ALUC.

Section 21675 of the California Public Utilities Code requires that the Mono County ALUC formulate a comprehensive land use plan for the area surrounding each public airport in the county. The Mono County Airport Land Use Commission created the *Airport Land Use Policy Plan for the Mammoth/June Lake Airport* in 1986. [5-7] The Town of Mammoth Lakes also assures compatible land use per Section 511(a)(5) of Airport and Airway Improvement Act of 1982, as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987. A letter to this effect can be found in Appendix D.

Hot Creek Ranch and the Hot Creek Fish Hatchery lie northwest of the Airport and are considered noise-sensitive areas. Sierra Nevada Aquatic Research Laboratory (SNARL), located south of the Airport is also considered a noise-sensitive area.

The structure located approximately one half mile southeast of the Airport is known locally as the "Green Church," but it is not currently used for any religious activities. The “Green Church” is not listed as a historic structure by the State Historical Preservation Officer (SHPO). It is owned by SNARL and is used for administrative purposes. The land the structure is located on is owned by the City of Los Angeles and is leased to SNARL.

5.2.2 Environmental Impacts

The noise analysis reported in Section 5.1 shows that for all alternatives, the current and planned land use is, and would remain, compatible. There is no significant impact on noise-sensitive areas northwest of the Airport along Hot Creek.

Alternatives 2, 3, and 4 show that the location of the "Green Church" is incompatible with FAA airport design criteria. In these alternatives, the "Green Church" lies in the Runway Protection Zone (RPZ). FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, sets forth the criteria for development in a RPZ. The function of the RPZ is to enhance the protection of people and property on the ground. Land uses prohibited from the RPZ are residences and places of public assembly such as churches, schools, hospitals, office buildings, shopping centers, and other uses with similar concentrations of persons. The administrative use of the "Green Church" would constitute a place of public assembly. Therefore, in Alternatives 2, 3, and 4, the "Green Church" would not be available as a meeting location or otherwise used as a place of public assembly. In Alternative 5, because of the eastern runway extension, the structure would have to be removed.

The proposed action and all of the alternatives, except for Alternative 1, No Action, widen Runway 09-27 causing the runway centerline to move 25 feet to the south. U.S. Highway 395 lies south of Runway 09-27. The California Department of Transportation (CALTRANS) has established criteria for runway-highway separation. The *CALTRANS Highway Design Manual* [5-8] requires that the Highway 395 shoulder edge must be at least 5.2 meters below a 1:7 transition surface beginning at the edge of the Runway 09-27 primary safety area. The dimensions for primary safety area of Runway 09-27 are a rectangle 153 meters wide x 31 meters beyond each runway end. The rectangle is at the same elevation as the runway and is centered on the runway centerline. U.S. Highway 395's shoulder edge must be at least approximately 112.9 meters or 370 feet from the runway centerline. These separation requirements are established to protect both the aircraft occupants and persons on the ground and on the roadways. As illustrated in **Exhibit V-13** the distance between the proposed runway centerline and Highway 395 is 427 feet, exceeding CALTRANS requirements.

5.2.3 Mitigation Measures

Alternatives 2, 3, and 4 would involve the loss of use of the "Green Church" facility but would not require its demolition. In Alternative 5, the "Green Church" would have to either be demolished or removed. See Section 5.3.3 for mitigation measures for the "Green Church."

5.2.4 Summary of Findings

- The proposed action and alternatives would not significantly impact the land use in the vicinity of the Airport due to noise impacts.
- The implementation of the proposed action and any build alternative would adversely impact the "Green Church" and mitigation would be required as described in Section 5.3.3.
- The proposed action would require coordination with the City of Los Angeles to ensure compatible land use within the RPZ.

5.3 Social Impacts and Environmental Justice

FAA Order 5050.4A establishes the criteria for the principal social impact to be considered in an EA. The criterion for the principal social impact is "associated with the relocation or other community disruption that may be caused by the proposal." No homes or business would be disrupted or need to be relocated if the proposed project is built.

Federal agencies must identify and address disproportionately high and adverse effects of their programs, policies, and other actions on minority and low-income populations. To achieve this, Executive Order No. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, on February 11, 1994 [5-9] directs each federal agency to make achieving environmental justice part of its mission. To that end, the U.S. Department of Transportation Order 5610.2, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, has been used to prepare this portion of this EA. The federal threshold of poverty as defined by the U.S. Department of Health and Human Services for the year 2000 for a family of four is an annual income at or below $17,050.

5.3.1 Environmental Setting

The structure that formerly housed High Sierra Community Church is located east of the Airport, at the northeast corner of U.S. Highway 395 and Benton Crossing Road, and is known locally as the "Green Church." The structure was built in 1954 by local Presbyterians, at a time when the population of the area was more evenly distributed up and down Long Valley, and was used for religious purposes until the mid-1980s. By this time, the population of the area had shifted and was concentrated eight miles to the west, within the boundaries of the Town of Mammoth Lakes. Because of this population shift, the Presbyterian congregation relocated to the Town of Mammoth Lakes.

In 1989, Sierra Nevada Aquatic Research Laboratory (SNARL) began leasing the property from the City of Los Angeles. The structure is currently used by SNARL for classroom and lecture hall facilities. It is the only facility available to SNARL that can accommodate groups of 20 or more people.

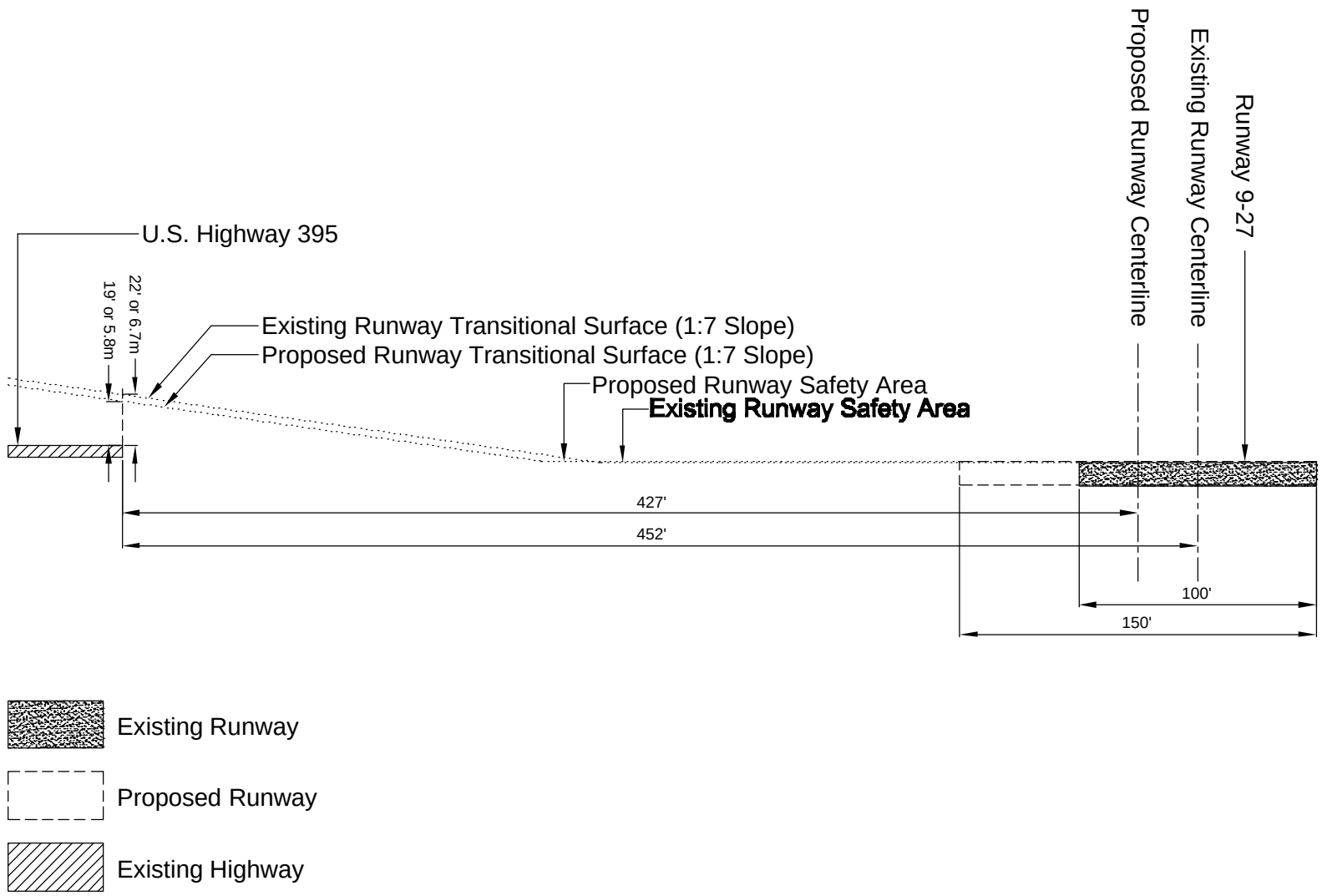
5.3.2 Environmental Consequences

5.3.2.1. Social Impacts

As was explained in Section 5.2, Compatible Land Use, the location of the "Green Church" is in the RPZ for Runway 27 in Alternatives 2, 3, and 4. Its use as a classroom or lecture hall would constitute public assembly, which is not compatible with an RPZ. By terms of the lease agreement between SNARL and the City of Los Angeles, if the building is permanently vacated, it must be razed and the natural features of the property restored. Alternative 5 would require demolition or removal of the "Green Church" due to the proximity of the structure to the extended runway.

5.3.2.2 Environmental Justice

The proposed action would be accomplished on existing Airport property and the CNEL 65 noise exposure area would remain mostly on Airport property. There would be no minority or low-income residents in the vicinity of the Airport within the CNEL 65 noise exposure area. Neither the



Source: Reinard W. Brandley, Engineer / Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-13

Runway-Roadway Separation

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proposed project nor any of the alternatives would result in adverse impacts on any neighborhood where residents are classified as minority or low income.

5.3.3 Mitigation Measures

5.3.3.1 Social Impacts

The Uniform Relocation Assistance and Real Acquisition Policies Act of 1970 requires that the owner of any business that must be relocated be offered assistance in finding a new location and reestablishing the business.

In Alternatives 2, 3, 4, and 5, to replace the SNARL facilities located in "Green Church", relocated or other comparable facilities would be provided to SNARL according to the provisions of the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970. Negotiations would occur between SNARL and the Town of Mammoth Lakes to find a suitable site for structure replacement on the existing site of the SNARL facility south of U.S. Highway 395 or alternative facilities for a classroom and lecture hall.

5.3.3.2 Environmental Justice

There are no adverse impacts on any neighborhood where residents are classified as minority or low income; therefore no mitigation measures are required.

5.3.4 Summary of Findings

- The SNARL facilities at "Green Church" would be replaced with similar facilities at another location, most probably on the site of the main SNARL campus in accordance with the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970.
- The proposed project and all alternatives would be consistent with the purposes of the Executive Order on environmental justice.

5.4 Induced Socioeconomic Impacts

Sometimes called secondary or indirect impacts, induced socioeconomic impacts are directly proportional to the scope of the project. This impact category normally involves shifts in population, public service demands, or changes in the business and/or economic climate.

It is anticipated that the Mammoth Yosemite Airport Expansion Project would beneficially contribute to the business and overall economic climate. Traditional techniques were used to estimate the aviation demand growth. Such analysis is documented in the study titled *Forecast of Aviation Demand [5-10]* prepared by Ricondo & Associates, Inc. In the study, projections of passenger enplanements were prepared on the basis of local skier statistics, national park visitors, and anticipated trends in activity at the Airport.

Bed Base Availability

The proposed plan may increase the tourism in the Mammoth Lakes area. The current level of winter tourism (approximately 1 million skier days) is below the peak level of 1.6 million experienced in the early 1980s. Winter tourism is forecasted to grow to over 2 million skier days within the next 20 years. It is anticipated that the number of hotel/motel bed base would increase from the current 14,730 to double that amount during the same period. Moreover, as the Mammoth Lakes area develops from a largely weekend ski area to a longer-stay destination resort, currently under-utilized rental properties (i.e., hotel rooms, condominiums, timeshares, etc.) would be restored for use, especially during the mid-week. As a result, the area would be sufficiently prepared to accommodate growth related to increased tourism and air service.

Increase Airport Usage

Additional services generated by the increase Airport usage would be accommodated through the Airport Fix Based Operator (FBO) and the airlines.

Fire Protection Services

The Airport currently has one Airport Rescue and Fire Fighting ARFF Vehicle. The Town of Mammoth Lakes would purchase another ARFF vehicle to support air carrier operations. The Town of Mammoth Lakes may choose to contract with the Long Valley Fire Department for supplemental Crash Fire and Rescue (CFR) services or it may choose to hire locally. Secondary emergency access for neighboring fire departments would be via a controlled gate located on Highway 395 between Hot Creek Road and Benton Crossing Road.

The Town of Mammoth Lakes would develop an emergency response plan to address both the proposed actions and commercial developments currently taking place on Airport property. This plan would meet not only the CFR needs of the Airport but would also the fire protection needs of the hotel-condominium complex, aircraft hangars and retail areas of the commercial development. A facility to house fire apparatus appropriate for these services would be identified. The Town of Mammoth Lakes would develop in conjunction with area emergency service providers would develop a unified emergency response/disaster plan. The capital improvement plan for the Airport also includes the acquisition of an additional CFR vehicle to meet FAA Part 139 certification requirements for air carrier operations. The Town would fund the emergency response equipment and training.

Vehicular Traffic

A traffic study, provided in Appendix M, has been prepared to assess the Airport specific short-range and long-range impacts, and to consider the cumulative impacts of two adjacent development projects: the on-Airport commercial development (Hot Creek Resort) and Sierra Business) Park. The study examines conditions in 2000 and 2020 and considers growth in through traffic on US-395. Information for the Sierra Business Park is taken from the traffic study dated May 2000, and November 2000, prepared by Traffic Safety Engineers.

Several different development combinations are considered in order to isolate the substantial impacts and to consider proportionate share responsibilities. An additional access to U.S. 395 at the existing Benton Crossing intersection is considered with the Hot Creek Resort project only.

When the intersection of U.S. 395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. In this case, a traffic signal is not considered acceptable by Caltrans due in part to the high vehicular speeds; therefore, either minor intersection channelization is recommended or alternative access locations on U.S. 395.

The following tables illustrate the various land and access alternatives and provide the LOS results.

YEAR 2000

	Route 395 (US-395)/Hot Creek Fish Hatchery Road [1]			
	Northbound		Southbound	
Scenario	Delay[2]	LOS	Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 199/2000 Conditions[3]	13.3 sec.	B	9.6 sec.	A
Existing + Airport	15.2 sec.	C	10.7 sec.	B
Existing + Airport + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Industrial Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport + Hot Creek + Industrial Park	**36.8 sec.**	**E**	21.9 sec.	C
- with Mitigation	19.6 sec.	C	--	--
WITH CONNECTION TO BENTON CROSSING[4]				
Existing + Airport + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport + Hot Creek + Industrial Park	23.4 sec.	C	17.6 sec.	C

YEAR 2020

	Route 395 (US-395)/Hot Creek Fish Hatchery Road [1]			
	Northbound		Southbound	
	Delay[2]	LOS	Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Year 2020 Baseline[3]	14.8 sec.	B	9.9 sec.	A
2020 + Airport	17.4 sec.	C	11.0 sec.	B
2020 + Airport + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Industrial Park	13.8 sec.	B	14.4 sec.	B
2020 +Airport + Hot Creek + Industrial Park	**58.7 sec.**	**F**	24.7 sec.	C
- with Mitigation	24.0 sec.	C	--	--
WITH CONNECTION TO BENTON CROSSING				
2020 + Airport + Hot Creek	19.2 sec.	C	12.3 sec.	B
202 + Airport + Hot Creek + Industrial Park	31.7 sec.	D	19.8 sec.	C

Note: See Table C in Appendix M for footnotes.

In summary, mitigation in the short range is necessary only in the case of all three projects without a Benton Crossing Road access. Similarly, mitigation in the long range is necessary when all three projects are developed without access to Benton Crossing Road.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes or construction of a connector road to Benton Crossing Road from the Airport would be required to reduce the impacts. A figure illustrating the median lanes is provided in Appendix M. The costs of either improvement should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short range and long range for the Airport and Hot Creek Resort.

There would be increased traffic on U.S. 395 and other highways in the region as a result of the growth in tourism. This would be offset on a micro scale by fewer tourists driving automobiles from farther airports or their homes, through which the air pollution emissions would be improved. The traffic congestion in town would also be reduced through the provision of bus service to the Airport as specified in memo on bus transportation provided in Appendix D.

Bus service between the Town and the Airport is anticipated to be the primary mode of ground transportation for passengers. This is in keeping with the Town's goals to reduce the reliance on private cars in the Town. However, other modes of ground transportation are anticipated including use of private vehicles by local area residents and Airport employees and rental car use. It is anticipated that approximately 70% of Airport users would use the bus system, 13% would use rental cars, and 17% would use other private or commercial vehicles. These modes of ground transportation were incorporated into the traffic and air quality analyses performed in this EA.

The Convict Lake Road is a direct emergency access point to the midpoint of the airfield from U.S. 395. This access is currently gated, thereby restricting access to only emergency vehicles. Discussions have taken place with Caltrans representatives (personal communication: Carolyn Yee) regarding the Convict Lake Emergency Road. Agreement has been reached that the emergency access point can remain for use only during emergency responses to the Airport. However, rather than a gated access, a knock-down fence would be utilized to discourage access by non-emergency vehicles. Such knockdown fencing is common at many airports and can reduce response time during emergency response since a gate does not have to be unlocked to gain access. Use of this access point would be only in the case of an aircraft emergency on the Airport, which would be extremely rare.

Coordination with the Fire Chief of the Long Valley Fire Protection District (LVFPD) has been ongoing throughout the planning of the Airport improvements. A letter from the fire chief is provided in Appendix D of the EA stating that this emergency access point is adequate for emergency response requirements.

Economic Growth

The extensive national and international advertising by local cities and counties to encourage tourism in the region would accelerate and induce growth with or without the air carrier jet service. The introduction of air carrier jet service may cause this growth to occur faster than it would otherwise. The benefits would be fewer miles driven by tourists, fewer air quality emissions, increased employment opportunities, and increased sales and property taxes to the towns and counties.

Consistency with the Regional Plan

Based on the amount of advertising being conducted by the towns and counties to encourage tourism in the region, it can be inferred that such increases are consistent with local and regional policies for growth and employment opportunities. A runway extension and terminal building facilities have been planned for the Airport since 1978 and is incorporated into local planning documents.

5.5 Air Quality

The federal *Clean Air Act [5-12]*, as amended, requires states to identify those areas where the National Ambient Air Quality Standards (NAAQS) are not met for specific air pollutants. The U.S. Environmental Protection Agency (EPA) has designated such areas as nonattainment areas. A state with a nonattainment area must prepare a State Implementation Plan (SIP) that details the programs and requirements that the state will use in order to meet the NAAQS by the deadlines specified in *Clean Air Act Amendments of 1990* (CAAA). *[5-13]*.

Additionally, the Clean Air Act, as amended, requires that federal actions be found in conformity with State Implementation Plans (SIPs). Projects not in conformity with the SIP may not be eligible for federal funding. The EPA has published a final rule regarding conformity determination *[5-14]*. The final rule includes annual emission thresholds for nonattainment areas and maintenance areas that trigger the need for a conformity determination. Generally, to comply with the basic conformity requirements, two criteria must be met: (1) it must be shown that total direct and indirect pollutant emissions resulting from a project are below *de minimis* emissions levels, and (2) it must be demonstrated that pollutant emissions from the project would not be regionally significant (i.e., the project would not contribute 10 percent or more of the region's total emissions for a criteria pollutant).

5.5.1 Environmental Setting

The Town of Mammoth Lakes is located in a valley on the eastern slopes of the Sierra Nevada mountains at an approximate elevation of 7,800 feet. The Airport is located approximately eight miles outside of the Town at an elevation of approximately 7,100 feet. The Town, which was incorporated in 1984, has grown steadily in the past four decades from a population of 390 in 1960 to a population of approximately 5,400 in 2000. The region in and around Mammoth Lakes, attracts several million visitors to the area every year.

Most homes and rental units in the vicinity of Mammoth Lakes have wood stoves or fireplaces. Temperature inversions during the winter season cause a buildup of wood smoke in the stagnant valley air. Particulate emissions from resuspended road dust and cinders adds significantly to the particulate emissions problem in the area.

Currently, the Great Basin Valleys airshed, which encompasses Mono County and Mammoth Yosemite Airport, is designated a nonattainment area for particulate matter less than 10 microns in diameter (PM-10) under federal and State standards. Mono County is also designated a nonattainment area for the State ozone standard. Mono County is currently designated an ozone transport region (OTR).

The 1982 Airport Act requires that Airport Improvement Program (AIP) applications for projects involving a major runway extension shall not be approved unless the governor of the state in which the project is located certifies that there is "reasonable assurance" that the project will be located, designed, constructed, and operated in compliance with applicable air quality standards. The FAA has determined that the proposed action and the alternatives do not meet the criteria of a major runway extension. Therefore a assurance letter from the State of California would not be required.

5.5.1.1 Jurisdictional Control

Jurisdictional control of air pollution is divided among federal, State, and local authorities. Over the past several decades, both the State and federal governments have set, and periodically revised, ambient air quality standards for the six criteria pollutants with greatest health risks. These standards encompass the most common varieties of airborne materials that may pose a health hazard.

Federal Clean Air Act (CAA)

Title I of the CAA identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and sets deadlines for all areas to reach attainment for the following criteria pollutants: ozone, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates (PM_{10}), carbon monoxide, and lead (Pb). The CAA requires each state with one or more nonattainment areas to prepare a State Implementation Plan (SIP) to describe how and when each area of the state will meet attainment for all criteria pollutants.

Title II of the CAA contains a number of provisions with regard to mobile sources, including requirements for reformulated gasoline, new tailpipe emission standards for cars and trucks, nitrogen oxides (NO_x) standards for heavy-duty vehicles, and a program for cleaner fleet vehicles. Identification and regulation of hazardous air pollutants are addressed in Title III. Under Title V, conditions for operating permits are specified. In 1997, EPA promulgated new ambient air quality standards for fine particulates (PM2.5) and ozone. The implementation guidelines, including deadlines, are under development.

California Clean Air Act (CCAA)

The CCAA designates air basins as either in attainment or nonattainment for State air quality standards. The CCAA set specific targets for achieving clean air, including an annual five-percent reduction in pollutants (averaged every five consecutive three-year periods) until attainment is reached. It also incorporates the permit programs of the CAA, including New Source Review (NSR) of stationary sources, and requires a mandatory vehicle inspection program for vehicles registered in nonattainment areas (smog check).

The Great Basin Unified Air Pollution Control District

The State of California is divided into Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs). These agencies are county or regional governing authorities that have primary responsibility for controlling air pollution in California's air basins. Their primary responsibility is preparing State Implementation Plans (SIPs) and/or air quality management plans for nonattainment areas under their jurisdiction.

Air quality in the Great Basin Valleys air basin is managed by the Great Basin Unified Air Pollution Control District (GBUAPCD). In 1990, the GBUAPCD prepared an air quality management plan *[5-15]* for the Town of Mammoth Lakes and its vicinity to address PM-10 pollution in the region. The plan contains several control measures geared to improve air quality in the region. The plan also contains air quality modeling information for the region including PM-10 emissions factors. To date, the GBUAPCD has not developed an air quality management plan to address ozone pollution in the region.

5.5.1.2 Standards and Pollutants

As discussed above, The Clean Air Act establishes federal air quality standards for six "criteria" pollutants. The "criteria" pollutants include the following: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), lead (Pb), and particulate matter less than 10 microns in diameter (PM-10). The California Clean Air Act establishes State standards for the six criteria pollutants and also promulgates standards for visibility reducing particulates, sulfates, and hydrogen sulfide. Federal and State air quality standards are summarized in **Table V-5**. Descriptions of the pollutants evaluated in the air quality analysis performed for Mammoth Yosemite Airport (PM-10 and ozone) are described below.

Table V-5

Ambient Air Quality Standards

Pollutant	Averaging time	Federal Standard	California Standard
Ozone	1-hour	0.12 ppm	0.09ppm
Carbon Monoxide	8-hour	9.0 ppm	9.0 ppm
	1-hour	35.0 ppm	20 ppm
Nitrogen dioxide	Annual	0.05 ppm	None
	1-hour	None	0.25 ppm
Sulfur dioxide	Annual	0.03 ppm	None
	24-hour	0.14 ppm	0.04 ppm
	3-hour	0.50 ppm	None
	1-hour	None	0.25 ppm
PM-10	AGM	50 ug/m3	30 ug/m3
	24-hour	150 ug/m3	50 ug/m3
Lead	Calendar quarter	150 ug/m3	1.5 ug/m3
Visibility Reducing Particulates	8 hour (10 a.m. to 6 p.m., PST)	None	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent
Sulfates	24 hour	None	25 ug/m3
Hydrogen Sulfide	1 hour	None	0.03 ppm

AGM = Annual geometric mean
Ug/m3 = Micograms per cubic meter
Ppm =Parts per million

Sources: U.S. Congress, Clean Air Act Amendments of 1970 (Public Law 91-604, 109 and 110) and Table of Standards, Title 17, Section 70200, California Code of Regulations
Prepared by: Ricondo & Associates, Inc.

Particulate Matter Less than 10 microns in Diameter (PM-10)

Particulate matter consists of solid and liquid particles of dust, soot, aerosols, and other matter small enough to remain suspended in the air for a long period of time. PM-10 is particulate matter less than 10 microns in diameter, which is the portion of particulate matter thought to represent the greatest hazard to public health.

A portion of the particulate matter in the air comes from natural sources, such as windblown dust and pollen. Manmade sources include combustion, automobiles, field burning, factories, unpaved roads, and photochemical reactions in the atmosphere.

The effects of high concentrations of PM-10 on humans include the aggravation of chronic disease and heart/lung disease symptoms. Non-health effects include reduced visibility and soiling of surfaces.

Ozone

Ozone is produced by chemical reactions involving nitrogen oxides (NOx) and reactive organic gases (ROG) and/or volatile organic compounds (VOC) that are triggered by sunlight. NOx is created during combustion of fuels, while VOC/ROG are emitted during combustion and evaporation of organic solvents. As ozone is not directly emitted to the atmosphere but is formed as a result of photochemical reactions, it is considered a secondary pollutant. Ozone is a seasonal problem occurring primarily during the summer months as a result of abundant sunlight and warmer temperatures, two factors required for enhanced photochemical reactions in the atmosphere.

Ozone is a strong irritant that attacks the respiratory system, and leads to lung tissue damage. Asthma, bronchitis, and other respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to ozone. A healthy person exposed to high concentrations of ozone may become nauseated or dizzy, may develop a headache or cough, or may experience a burning sensation in the chest.

5.5.2 Environmental Consequences

Because the proposed federal action is located in a nonattainment area, approval of the proposed action or any of the alternatives is subject to an evaluation of the action's conformity with the air quality management plan for the Great Basin Unified Air District. Under the general conformity regulations (40 CFR 51, Subparts W; 40 CFR 93, Subpart B) issued by U.S. Environmental Protection Agency (EPA), if the total of direct and indirect emissions resulting from the project are less than the *de minimis* thresholds given in 40 CFR 51.853, then the action is presumed to conform and no further conformity review is required. Total direct and indirect emissions are the sum of the emissions increases and decreases from the proposed action, or the "net" change in emissions anticipated to occur as a result of the proposed project (40 CFR 93.152). The *de minimis* thresholds that apply to PM-10 nonattainment areas, including the Mammoth Lakes region, are 100 tons per year. The *de minimis* thresholds that apply to ozone transport regions are 50 tons per year of VOCs and 100 tons per year of nitrogen oxides (NO_x).

Potential emissions associated with the proposed action generally fall into the following two categories: construction related emissions and operational emissions. **Table V-6** summarizes emissions sources that fall into each category.

Table V-6

Emission Sources

Operational Emissions Sources	Construction Emissions Sources
Aircraft engines	Construction employee vehicles (gasoline)
Passenger and employee motor vehicles	Diesel and gasoline-powered trucks
Aircraft ground support equipment	Diesel and gasoline-powered construction equipment
Stationary sources/point sources	

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Based on available information, it is anticipated that construction of the improvements recommended in Alternatives 2, 3, 4, and 5 would occur in 2001 and that introduction of air carrier activity and the corresponding change in Airport operations levels and the aircraft fleet mix would not occur until 2002. Consequently, operational emissions and construction emissions are not expected to be cumulative. Regardless of this fact, neither the proposed action nor any of the alternatives is expected to result in direct or indirect emissions that exceed applicable *de minimis* thresholds. Operational emissions and construction emissions are discussed in further detail in the following sections.

5.5.2.1 Operational Emissions

This section documents the results of an emissions analysis conducted for Mammoth Yosemite Airport for the base year (1999) and future years (2002, 2007, and 2022). Emissions inventories were prepared for the proposed action (Alternative 2) and the no action alternative (Alternative 1). From an air quality standpoint, it was assumed that future year activity/operations levels at the Airport would be the same under all "build" alternatives. Therefore, emissions for Alternatives 2, 3, 4, and 5 are assumed to be the same and are not reported separately. Annual emissions inventories were developed using the FAA's Emissions and Dispersion Modeling System (EDMS) and other standard air quality modeling techniques. Pollutant emissions were calculated for all Airport-related sources of pollution including: aircraft, airport motor vehicle traffic (on roads and in parking areas), ground support equipment (GSE), and stationary sources (generators, fuel tanks, etc.). Emissions from these sources were then added together to determine total emissions for the proposed action and no action alternatives.

Aircraft landing takeoff cycles (LTOs) information and other data used to calculate aircraft emissions are summarized in **Tables V-7, V-8, and V-9**. Ground vehicle traffic volumes and vehicle miles traveled (VMT) for the proposed action and no action alternatives are summarized in **Table V-10**. For the ground vehicle emissions inventories it was assumed that all passenger vehicles originating at the Airport would travel a roundtrip distance of approximately 19 miles (i.e., to and from the Town of Mammoth Lakes). The number of vehicle trips modeled for the two alternatives included direct vehicle trips that would originate or terminate at the Airport, and in the case of the no action alternative, trips to the town of Mammoth Lakes by visitors who, if not accommodated by air carrier aircraft, would drive to Mammoth Lakes from Los Angeles and other locations. An average trip length of 19 miles was used to calculate emissions for these "indirect" vehicle trips;[1] however, it is expected that car trips "replaced" by aircraft service would travel significantly greater distances and would be responsible for significantly more emissions of criteria pollutants.

Default EDMS emissions factors were used to calculate emissions of CO, NO_x, VOC, and SO_x. PM-10 emissions factors for ground vehicles are based on information contained in the document *Air Quality Management Plan for the Town of Mammoth Lakes*. As discussed in the AQMP, cars and other on-road motor vehicles on average generate approximately 36 grams of resuspended road cinders per vehicle mile traveled. Motor vehicle exhaust and tire-wear also contribute to PM-10 pollution in the Mammoth Lakes region. Vehicle tail pipe and tire-wear emissions factors are summarized below.

- Light Duty Passenger 5.0×10^{-4} lbs/VMT
- Light Duty Trucks 4.9×10^{-4} lbs/VMT

[1] In the report, *Benefit Cost Analysis, Mammoth Lakes Airport Expansion Project* the average vehicular travel distance to the Mammoth Lakes area is estimated to be 201 miles.

- Medium Duty Trucks 5.8×10^{-4} lbs/VMT
- Heavy Duty Diesel 4.8×10^{-3} lbs/VMT

EDMS Version 3.11 is not capable of predicting PM-10 emissions for aircraft; however, the U.S. EPA has developed some guidance for calculating aircraft PM-10 emissions. Aircraft PM-10 emissions factors were derived from information contained in the U.S. EPA document, *AP-42, Compilation of Air Pollutant Emissions Factors, Volume II: Mobile Sources, Fourth Edition (September 1985)*. AP-42 contains detailed information regarding fuel flow rates and pollutant

Table V-7

1999 Aircraft Landing Takeoff Cycles – Mammoth Lakes Airport

INM Aircraft Type	EDMS Type	EDMS Engine	PM-10 Engine	Annual Operations	LTO Cycles
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	60	30
Lear 35	Lear 35/36	TFE 731-2-2B	SPEY MK511	270	135
Citation	Cessna Citation	JT15D-1	SPEY MK511	270	135
Twin Turboprop	KingAir 200	PT6A-41	TPE331-3	270	135
Twin Prop	Navajo	TIO-540-J2B2	TPE331-3	1130	565
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2000	1000
Small single engine prop	Cessna 150	0-200	TPE331-3	2000	1000
Total				6000	3000

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table V-8

Aircraft Landing Takeoff Cycles – No Action Alternative

INM Aircraft Type	EDMS Type	EDMS Engine	PM-10 Engine	Annual operations	LTO cycles
2002					
B-757-200	B-757-200	RB211-535e4	CF6-50C	0	0
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	0	0
BAE-146	BAE 146	LF507 Series	CF6-50C	0	0
Regional jet	Embraer	PT6A-27	CF6-50C	0	0
30 seat commuter	DHC-8	PW120	TPE331-3	0	0
19 seat commuter	DHC-6	PT6A-27	TPE331-3	0	0
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	70	35
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	300	150
Citation	Cessna Citation	JT15D-1	SPEY MK511	300	150
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	300	150
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1,240	620
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2,200	1,100
Small single engine prop	Cessna 150	0-200	TPE331-3	2,200	1,100
total				6,610	3,305
2007					
B-757-200	B-757-200	RB211-535e4	CF6-50C	0	0
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	0	0
BAE-146	BAE 146	LF507 Series	CF6-50C	0	0
Regional jet	Embraer	PT6A-27	CF6-50C	0	0
30 seat commuter	DHC-8	PW120	TPE331-3	0	0
19 seat commuter	DHC-6	PT6A-27	TPE331-3	0	0
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	80	40
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	340	170
Citation	Cessna Citation	JT15D-1	SPEY MK511	340	170
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	340	170
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1,430	715
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2,530	1,265
Small single engine prop	Cessna 150	0-200	TPE331-3	2,530	1,265
total				7,590	3,795
2022					
B-757-200	B-757-200	RB211-535e4	CF6-50C	0	0
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	0	0
BAE-146	BAE 146	LF507 Series	CF6-50C	0	0
Regional jet	Embraer	PT6A-27	CF6-50C	0	0
30 seat commuter	DHC-8	PW120	TPE331-3	0	0
19 seat commuter	DHC-6	PT6A-27	TPE331-3	0	0
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	120	60
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	540	270
Citation	Cessna Citation	JT15D-1	SPEY MK511	540	270
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	540	270
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	2,270	1,135
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	4,020	2,010
Small single engine prop	Cessna 150	0-200	TPE331-3	4,020	2,010
total				12,050	6,025

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table V-9

Aircraft Landing Takeoff Cycles – Proposed Action Alternative

INM Aircraft Type	EDMS Type	EDMS Engine	PM-10 Engine	Annual operations	LTO Cycles
2002					
B-757-200	B-757-200	RB211-535e4	CF6-50C	600	300
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	0	0
BAE-146	BAE 146	LF507 Series	CF6-50C	0	0
Regional jet	Embraer	PT6A-27	CF6-50C	0	0
30 seat commuter	DHC-8	PW120	TPE331-3	780	390
19 seat commuter	DHC-6	PT6A-27	TPE331-3	700	350
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	70	35
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	300	150
Citation	Cessna Citation	JT15D-1	SPEY MK511	300	150
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	300	150
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1240	620
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2200	1100
Small single engine prop	Cessna 150	0-200	TPE331-3	2200	1100
Total				8690	4345
2007					
B-757-200	B-757-200	RB211-535e4	CF6-50C	860	430
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	780	390
BAE-146	BAE 146	LF507 Series	CF6-50C	290	145
Regional jet	Embraer	PT6A-27	CF6-50C	490	245
30 seat commuter	DHC-8	PW120	TPE331-3	2040	1020
19 seat commuter	DHC-6	PT6A-27	TPE331-3	2040	1020
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	80	40
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	340	170
Citation	Cessna Citation	JT15D-1	SPEY MK511	340	170
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	340	170
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	1430	715
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	2530	1265
Small single engine prop	Cessna 150	0-200	TPE331-3	2530	1265
Total				14090	7045
2022					
B-757-200	B-757-200	RB211-535e4	CF6-50C	1800	900
B-737-800/A-319	B737-800	CFM56-3C-1	CF6-50C	1600	800
BAE-146	BAE 146	LF507 Series	CF6-50C	750	375
Regional jet	Embraer	PT6A-27	CF6-50C	850	425
30 seat commuter	DHC-8	PW120	TPE331-3	3300	1650
19 seat commuter	DHC-6	PT6A-27	TPE331-3	3300	1650
Gulfstream/Challenger	Gulfstream	RDA7	SPEY MK511	120	60
Lear 35	Lear35/36	TFE 731-2-2B	SPEY MK511	540	270
Citation	Cessna Citation	JT15D-1	SPEY MK511	540	270
Twin turboprop	KingAir 200	PT6A-41	TPE331-3	540	270
Twin prop	Navajo	TIO-540-J2B2	TPE331-3	2270	1135
Large single engine prop	Cherokee Six	TIO-540-J2B2	TPE331-3	4020	2010
Small single engine prop	Cessna 150	0-200	TPE331-3	4020	2010

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc

Table V-10

Ground Vehicle Trips – Mammoth Lakes Airport

	Total Vehicles by Alternative		Vehicle Miles Traveled	
	No Action	Proposed Action	No Action	Proposed Action
1999				
Buses	0	n.a.	n.a.	0
Shuttle vans	394	n.a.	n.a.	7,335
Rental cars	0	n.a.	n.a.	0
Cabs	3,154	n.a.	n.a.	58,721
Private vehicles, parking	7,886	n.a.	n.a.	146,822
Private vehicles, dropoff/pickup	2,110	n.a.	n.a.	39,284
total	13,545	n.a.	n.a.	252,181
2002				
Buses	0	1,505	0	28,018
Shuttle vans	421	623	7,842	11,594
Rental cars	0	3,736	0	69,563
Cabs	3,370	2,283	62,735	42,511
Private vehicles, parking	8,424	2,076	156,838	38,646
Private vehicles, dropoff/pickup	2,254	1,071	41,970	19,941
Indirect vehicle trips	12,333	0	229,622	0
total	26,802	11,294	499,007	210,273
2007				
Buses	0	4,565	0	84,984
Shuttle vans	483	1,889	8,992	35,166
Rental cars	0	11,333	0	210,995
Cabs	3,864	6,926	71,940	128,941
Private vehicles, parking	9,660	6,296	179,850	117,219
Private vehicles, dropoff/pickup	2,585	3,249	48,128	60,485
Indirect vehicle trips	53,300	0	992,339	0
total	69,892	34,257	1,301,250	637,790
2022				
Buses	0	9,177	0	170,865
Shuttle vans	766	3,798	14,260	70,703
Rental cars	0	22,785	0	424,215
Cabs	6,127	13,924	114,076	259,243
Private vehicles, parking	15,318	12,658	285,191	235,675
Private vehicles, dropoff/pickup	4,099	6,532	76,317	121,608
Indirect vehicle trips	89,867	0	1,673,138	0
total	116,177	68,875	2,162,981	1,282,309

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

emissions (CO, NO_x, SO_x, HC, and PM-10) for a variety of aircraft engines. However, AP-42 contains particulate emissions factors for only nine types of commercial aircraft engines. **Table V-II** lists the particulate emissions factors (expressed in kg/hr) for the nine different engine types. The emissions factors are broken down into the four modes that comprise a landing/take-off cycle (LTO).

Table V-11

Particulate (PM-10) Emissions Factors by Aircraft Engine Type and Mode

	Particulate Emissions Factors By Mode (kg/hr)			
Engine Type	Approach	Climbout	Takeoff	Taxi/Idle
CF6-50C	0.20	0.24	0.24	0.02
CF6-6D	0.20	0.24	0.24	0.02
F100-PW-100	0.50	3.90	0.00	0.05
JT3D-7 SERIES	3.60	3.90	3.70	0.20
JT8D-17	0.68	1.20	1.70	0.16
JT9D-7	1.00	1.80	1.70	1.00
JT9D-70A	1.00	1.80	1.70	1.00
SPEY MK511	0.68	4.50	7.30	0.08
T56-A-7	1.40	1.40	1.70	0.70
TPE331-3	0.27	0.27	0.36	0.14

Source: *AP-42, Compilation of Air Pollutant Emission Factors, Volume II: Mobile Sources, Fourth Edition*. September 1985
Prepared by: Ricondo & Associates, Inc.

The annual emissions inventories are presented in **Table V-12**. As shown in Table V-12, the primary source of particulate emissions at the Airport are ground access vehicles (including passenger vehicles, courtesy shuttles, taxis, etc.) on roadways and in parking areas. Emissions of ozone precursor pollutants (VOCs and NO_x) are predominantly generated by aircraft and ground support equipment. Motor vehicles are also significant sources of NO_x emissions.

Implementation of any of the build alternatives (Alternatives 2, 3, 4, and 5) would increase NO_x and VOC emissions in the region due to additional aircraft activity at the airport and the introduction of ground support equipment. Introduction of air carrier service at the Airport would also increase the number of ground motor vehicle trips originating at the Airport and hence could cause additional particulate emissions. However, while introducing air carrier service to Mammoth Yosemite Airport would increase aircraft-related pollution in the future, as demonstrated in Table V-12 it could significantly reduce "highway" related emissions in the region as more people access the region by air.

As presented in **Table V-13**, it is expected that the difference between operational emissions associated with the proposed action and no action alternatives would fall below established *de minimis* thresholds for ozone precursors and PM-10. The introduction of air carrier jet operations into Mammoth Yosemite Airport would increase aircraft NO_x emissions and VOC emissions, however the difference between project and no-project emissions is expected to be below *de minimis* thresholds. Introduction of air service is expected to significantly reduce VMT and hence PM-10 emissions in the region.

[The Mammoth region is currently in attainment of the federal and State NAAQS for CO and SO_x. CO and SO_x emissions are presented in Table V-12 for informational purposes only.]

Table V-12

Airport Emissions Inventories – 1999, 2002, 2007, and 2022

Year and Source	CO (tons/yr)	VOC (tons/yr)	NOx (tons/yr)	SOx (tons/yr)	PM-10 (tons/yr)
1999					
Aircraft	81.44	2.16	0.16	0.02	0.07
GSE (a)	6.09	0.13	0.32	0.01	0.01
Roadways and Parking (b)	3.20	0.82	0.69	0.03	10.07
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	94.08	3.42	1.18	0.06	10.15
2002 Proposed Action					
Aircraft	87.71	2.50	9.20	0.28	0.12
GSE (a)	13.94	0.31	0.85	0.03	0.03
Roadways and Parking (b)	4.55	0.63	0.53	0.03	8.40
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	106.20	3.74	10.58	0.34	8.55
2002 No Action					
Aircraft	89.55	2.38	0.19	0.02	0.08
GSE (a)	7.30	0.15	0.36	0.01	0.01
Roadways and Parking (b)	5.86	0.80	0.68	0.03	19.93
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	102.71	3.64	1.23	0.06	20.02
2007 Proposed Action					
Aircraft	121.66	6.69	20.29	0.84	0.24
GSE (a)	78.36	1.81	6.59	0.17	0.22
Roadways and Parking (b)	12.55	1.75	1.48	0.08	25.47
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	212.57	10.57	28.37	1.09	25.93
2007 No Action					
Aircraft	103.05	2.73	0.21	0.03	0.09
GSE (a)	8.28	0.17	0.40	0.02	0.01
Roadways and Parking (b)	6.08	0.85	0.72	0.03	51.96
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	117.41	4.05	1.33	0.08	52.06
2022 Proposed Action					
Aircraft	200.00	11.27	41.44	1.67	0.44
GSE (a)	138.44	3.21	11.55	0.30	0.38
Roadways and Parking (b)	20.68	2.72	2.86	0.16	51.21
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	359.12	17.52	55.85	2.13	52.03
2022 No Action					
Aircraft	163.65	4.33	0.34	0.04	0.14
GSE (a)	13.10	0.26	0.64	0.02	0.02
Roadways and Parking (b)	7.90	1.04	1.09	0.06	86.37
Stationary Sources	0.00	0.31	0.00	0.00	0.00
Total	184.65	5.94	2.07	0.12	86.53

(a) EDMS default GSE settings used for both alternatives.
(b) PM-10 emissions include exhaust, tire wear, break wear, and entrained road dust.

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Table V-13

Changes in Operational Emissions and De Minimis Criteria (Tons per year)

	PM-10	VOC	NOx
2002			
No Action	20.02	3.64	1.23
Proposed Action	8.55	3.74	10.58
Change in Emissions	(-11.47)	(+ 0.10)	(+ 9.35)
2007			
No Action	52.06	4.05	1.33
Proposed Action	25.93	10.57	28.37
Change in Emissions	(-26.13)	(+ 6.52)	(+ 27.04)
2022			
No Action	86.53	5.94	2.07
Proposed Action	52.03	17.52	55.85
Change in Emissions	(-34.50)	(+ 11.58)	(+ 53.78)
De minimis criteria	100	50	100

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

5.5.2.2 Construction Emissions

Under the General Conformity regulations, emissions associated with construction activities must be calculated, added to operational period emissions if appropriate, and the total compared to the annual *de minimis* standards/levels for criteria pollutants. As discussed earlier in this section, the Airport is located in a nonattainment area for PM-10 and an ozone transport region (OTR). Pollutants evaluated in the construction emissions analysis, therefore, included PM_{10} and ozone precursors: volatile organic compounds (VOCs) and oxides of nitrogen (NO_x).

Construction Schedule

Construction schedules for the proposed airfield and terminal facility improvements at Mammoth Yosemite Airport were developed by Ricondo & Associates, Inc. in association with Brandley Engineering and Mammoth Yosemite Airport staff. The construction schedules are estimates of the actual construction sequencing of the proposed project (due to the conceptual level of project design) and were used to determine annual estimates of pollutant emissions for 2001 (the proposed year of construction). For the construction emissions analysis, it was assumed that emissions would be identical for Alternatives 2 and 5. It was also assumed that emissions for Alternatives 3 and 4 would be identical.

The methodology used to determine annual construction-related emissions estimates is discussed below.

Methodology

Construction related emissions are a factor of: (1) the type and horsepower of the construction equipment, (2) the operating time of the equipment (expressed in annual hours or number of vehicle miles traveled), (3) equipment fuel type, (4) equipment age (newer construction equipment is assumed to be subject to stricter emissions standards) (5) equipment loading (load factor), and (6) local climatologic variables. Construction equipment types, model year, and equipment usage data were developed by Ricondo & Associates. This data is presented in Appendix E.

Emissions caused by non-road equipment (bulldozers, loaders, cranes, etc.), which can not travel on highways and local roadways and by on-road equipment (tractor trailers, light duty trucks, employee travel vehicles, etc.) were evaluated separately to account for national emissions standards that are in place for on-road vehicles. Emissions from these two broad types of construction equipment were then added together to determine total annual construction emissions.

Diesel and Gasoline Engine Non-road Equipment Emissions

Emissions factors for non-road diesel equipment were derived from the Tier 1 controlled emission standards regulated under *40 CFR, Part 89.112* (USEPA, September 1997) for equipment models built since 1996.

Emissions factors for non-road gasoline equipment were based on the following source:

- Gasoline emission factors in AP-42: Compilation of Air Pollutant Emission Factors, Mobile Sources (April, 1998)

Horsepower data for each equipment type were obtained either from the Caterpillar *Performance Handbook* or from the USEPA document *Non-road Engine and Vehicle Emission Study - Report* (USEPA, November 1991) and subsequent reports.

Vehicle emission factors, expressed in grams per hour per horsepower, for the three criteria pollutants of interest (VOC, NO_x, and PM_{10}) were multiplied by the estimated running time, load factor, and horsepower for each piece of construction equipment. In this manner, it was possible to calculate the total pollution (in grams) emitted from each piece of equipment for each year of the emissions analysis. Estimates of pollutant emissions were subsequently converted from grams to tons.
USEPA recommends the following technique for calculating hourly emissions from non-road engine sources :

$M_i = N \times HP \times LF \times EF_i$

where:

M_i	=	mass of emissions of i^{th} pollutants during inventory period;
N	=	source population (units);
HP	=	average rated horsepower;
LF	=	typical load factor;
EF_i	=	average emissions of i^{th} pollutant per unit of use (e.g., grams per mile).

A sample calculation of NO_x emissions from a grader (CAT 12G-1988 model) that is expected to be used during 12 months of construction is provided below:

Operational hours	=	1,040 hours (provided by the contractor)
Total Emissions	=	1,040 hours/year x 140 hp x 61% x 9.6 grams/hp-hr
	=	852,634 grams/year
	=	0.94 tons/12-month

The estimate of non-road equipment emissions for 2001 is presented in Appendix E and summarized in **Table V-14**.

Table V-14

2001 Construction Emissions and De Minimis Criteria (Tons per year)

	PM-10	VOC	NO_x
Alternative 1 (No Action)			
Non-road emissions	0	0	0
On-road emissions	0	0	0
Total	0	0	0
Alternative 2 (Proposed Action)			
Non-road emissions	2.02	1.51	21.83
On-road emissions	56.71	1.41	13.66
Total	58.73	2.92	35.49
Alternative 3			
Non-road emissions	2.51	1.85	27.10
On-road emissions	67.51	1.76	17.06
Total	70.02	3.61	44.16
Alternative 4			
Non-road emissions	2.51	1.85	27.10
On-road emissions	67.51	1.76	17.06
Total	70.02	3.61	44.16
Alternative 5			
Non-road emissions	2.02	1.51	21.83
On-road emissions	56.71	1.41	13.66
Total	58.73	2.92	35.49
De minimis criteria	100	50	100

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates Inc.

Diesel and Gasoline Engine On-Road Equipment Emissions

During construction, a variety of light duty trucks and tractor trailers will be used for moving construction materials and people on and off the project site. Emissions factors for these on-road motor vehicles were determined using the California Air Resources Board's EMFAC7G model. EMFAC, derived from the abbreviation for "**EM**ission **FAC**tor," was used to calculate calendar year specific vehicle emissions factors. The latest release of EMFAC, EMFAC7G, produces emissions factors whose magnitudes are a function of calendar years (1970 through 2020), seasons (summer & winter), processes (exhaust and evaporative), pollutants (Total Organic Gases, Reactive Organic Gases, Hydrocarbons, Volatile Organic Compounds, Carbon Monoxide, Oxides of Nitrogen, Carbon Dioxide, exhaust particulate matter, particulate matter-tire wear, and particulate matter-break wear), vehicle class/technologies, speeds, temperature, and soak times. Assumptions used in the on-road vehicle emissions analysis for the Town of Mammoth Lakes are described in detail in Appendix E.

Emissions factors calculated by EMFAC7G are supplied in the form of grams per mile traveled. For the construction emissions analysis, the number of vehicle miles traveled in a year by each piece of on-road construction equipment was multiplied by the EMFAC7G emissions factor to calculate the total pollutant emissions by equipment (in grams per year). This figure was then multiplied by a conversion factor to convert from grams to tons.

The following formula details the process of calculating pollutant emissions associated with on-road construction equipment.

$$M_i = N \times DY \times EF_i$$

where:

M_i	=	mass of emissions of i^{th} pollutants during inventory period;
N	=	source population (units);
DY	=	distance traveled per year;
EF_i	=	average emissions of i^{th} pollutant per unit of use (e.g., grams per horsepower-hour).

A sample calculation of NO_x emissions from two trucks that would be used during 12 months of construction is provided below:

Operational miles	=	1,040 miles (provided by the contractor)
Total Emissions	=	2 Trucks x 1,040 miles/year x 1.35 grams/mile
	=	2,808 grams/year
	=	6.19 tons/12-month

The estimate of on-road equipment emissions for 2001 is presented in Appendix E and summarized in Table V-14.

5.5.2.3 Project Related Emissions and De Minimis Threshold Criteria

Total project related emissions (construction and operational) for the action and no-action alternative are summarized in **Table V-15**. Based on the preceding analyses, it is expected that *de minimis* thresholds for criteria pollutants being analyzed in this EA will not be exceeded in any year if the proposed project is implemented.

As discussed in the air quality management plan for the Town of Mammoth Lakes, particulate emissions in the Mammoth Lakes region are predominantly caused by woodburning stoves and motor vehicle traffic. As shown in Table V-15, introduction of commercial air service to Mammoth Lakes Yosemite Airport is expected to reduce particulate emissions in the region when compared to the no action alternative. In summation the proposed action will have a beneficial impact to air quality in the region and will reduce visitor vehicle miles traveled (VMT) as more people are accommodated in higher occupancy vehicles. It is noted that reduction/control of VMT in and around the City of Mammoth Lakes is a stated goal in SIP.

As discussed above, the Great Basin Valleys Air Basin including Mono County is an ozone transport region. The proposed action will increase emissions of ozone precursor pollutants (NO_x and VOC), however the "net" increase in emissions will not exceed federal and State *de minimis* thresholds. As shown on Table V-15, airport related emissions of Ozone precursor pollutants associated with the proposed action would also be a fraction of the total pollutant emissions generated in the Great Basin Valleys Region and Mono County and hence would not be regionally significant (would not contribute 10 percent or more of the pollution). Therefore, it is anticipated that the proposed action would no cause any exceedances of State ambient air quality standards (AAQS).

It is also assumed that project-related emissions would not contribute to contribute to new violations of the ambient air quality standards for Ozone precursors or otherwise increase the frequency of such violations. Project related emissions of NOx and VOC are expected to be highest during winter months when visitor demand to the region is the highest. As discussed in the report *Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentration in California* prepared by the Air Resources Board, historical exceedance events/extreme concentrations measured at the Mammoth Lakes air monitoring site occurred in July and August. It

is also noted that the Air Resources Board determined that all violation days in Mono County and in the Great Basin Valleys Air Basin were overwhelmed by transport from the San Joaquin Valley. As stated in the report, "based on the time of day that the violations occurred, the characteristics of the violations, the predominantly westerly wind patterns, and the comparatively small emissions in the GBVAB, the staff considers these violations to be the result of overwhelming transport from the San Joaquin Valley. In light of these findings it is assumed that the proposed action will not contribute to new violations of the ambient air quality standard for Ozone precursors as the current violations are overwhelmingly the result of transport from the San Joaquin Valley by westerly winds. It is important to note that the Airport is located east of the Town of Mammoth Lakes and therefore airport related emission would not contribute concentration in the town during historical exceedance events.

Table V-15

Total Project Emissions and De Minimis Criteria (Tons per year)

	PM-10	VOC	NOx
2001 Construction Impacts			
Alternative 1 (No action)	0	0	0
Alternative 2 (Proposed Action)	58.73	2.92	35.49
Alternative 3	70.02	3.61	44.16
Alternative 4	70.02	3.61	44.16
Alternative 5	58.73	2.92	35.49
2002 Operational Impacts			
No Action	20.02	3.64	1.23
Proposed Action	8.55	3.74	10.58
Change in Emissions	(-11.47)	(+ 0.10)	(+ 9.35)
2007 Operational Impacts			
No Action	52.06	4.05	1.33
Proposed Action	25.93	10.57	28.37
Change in Emissions	(-26.13)	(+ 6.52)	(+ 27.04)
2022 Operational Impacts			
No Action	86.53	5.94	2.07
Proposed Action	52.03	17.52	55.85
Change in Emissions	(-34.50)	(+ 11.58)	(+ 53.78)
De minimis criteria	100	50	100
Total Annual Emissions Great Basin Valleys (a)	20,075	4,745 (b)	3,285
Total Annual Emissions Mono County (c)	9,950	2,256 (b)	843

(a) 1996 Estimated Value. Produced by the California Air Resources Board.
(b) Estimate is for Reactive Organic Compounds (ROG)
(c) 2000 Estimated Value. Produced by the California Air Resources Board

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

5.5.3 Mitigation Measures

Implementation of the proposed action or any of the alternatives is not expected to result in an increase of emissions that exceed the allowable levels (*de minimis*) as promulgated in the Clean Air Act and the California Clean Air Act. Implementation of the proposed action would potentially

reduce particulate emissions in the Mammoth Lakes region as a result of reducing motor vehicle traffic. The proposed action would increase emissions of NO_x and VOC but these emissions increases would be insignificant. To address these emissions increases the City of Mammoth Lakes is examining the feasibility of providing transit service to the Airport with vehicles powered by compressed natural gas or other alternative fuels instead of using existing diesel vehicles.[2] The Town of Mammoth will continue to work with the California Air Resources Board to identify feasible and cost effective mitigation measures to reduce any air quality impacts of te proposed action. Conversion of airport ground support equipment to compressed natural gas when and if feasible would also reduce project related emissions of NO_x and VOC. Conversion of the transit system and ground support equipment to alternative fuels would also reduce particulates emitted by diesel fuel engines. In 1998 the Air Resources Board identified diesel particulates as a toxic air contaminant[3].

5.5.4 Summary of Findings

The proposed action and alternatives are presumed to conform with air quality standards promulgated in the Clean Air Act and the California Clean Air Act. As the preceeding analysis demonstrates, the project will not result in emissions that would exceed the applicable de-minimis threshold rates, nor would the project be considered "regionally significant" with regard to air pollution emissions because project emissions would be a minute fraction of the total emissions in the region. A formal conformity determination, therefore, is not legally required for this project. EPA's rules and guidance are clear that where the net emissions increase resulting from the project do not exceed the applicable threshold rates, there are no further obligations with regard to the conformity rules. Thus, the proposed action is assumed to conform with the SIP.

It has been determined by the FAA that the proposed action or any of the alternatives does not meet the criteria of a major runway extension. Therefore a assurance letter from the State of California would not be required

[2] At this time the City of Mammoth Lakes has not made a final determination regarding the feasibility of alternative fueled vehicles.

[3] California Environmental Protection Agency Air Resources Board. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000.

5.6 Water Quality, Water Supply, and Stormwater Control

The *Federal Water Pollution Control Act of 1972* (also known as the Clean Water Act) [5-16] was instituted to protect the nation's water resources. A major component of the Clean Water Act involved the establishment of regulations designed to prohibit the discharge of pollutants to waters of the United States from any point source unless the discharge is in compliance with National Pollutant Discharge Elimination System (NPDES) standards. Initially, this legislation established a permitting program for industrial process and municipal sewage discharges. However, with the passage of the *Water Quality Act of 1987,* [5-17] The Clean Water Act was revised to include permit requirements for storm water discharges as well.

In the State of California, the permitting of surface water discharges is administered by the California Environmental Agency through Regional Water Quality Control Boards (RWQCB). The RWQCB has assumed the responsibility of implementing the Clean Waters Act in California including issuing discharge permits and setting water quality standards. Mammoth Yosemite Airport is in the RWQCB Lahontan region.

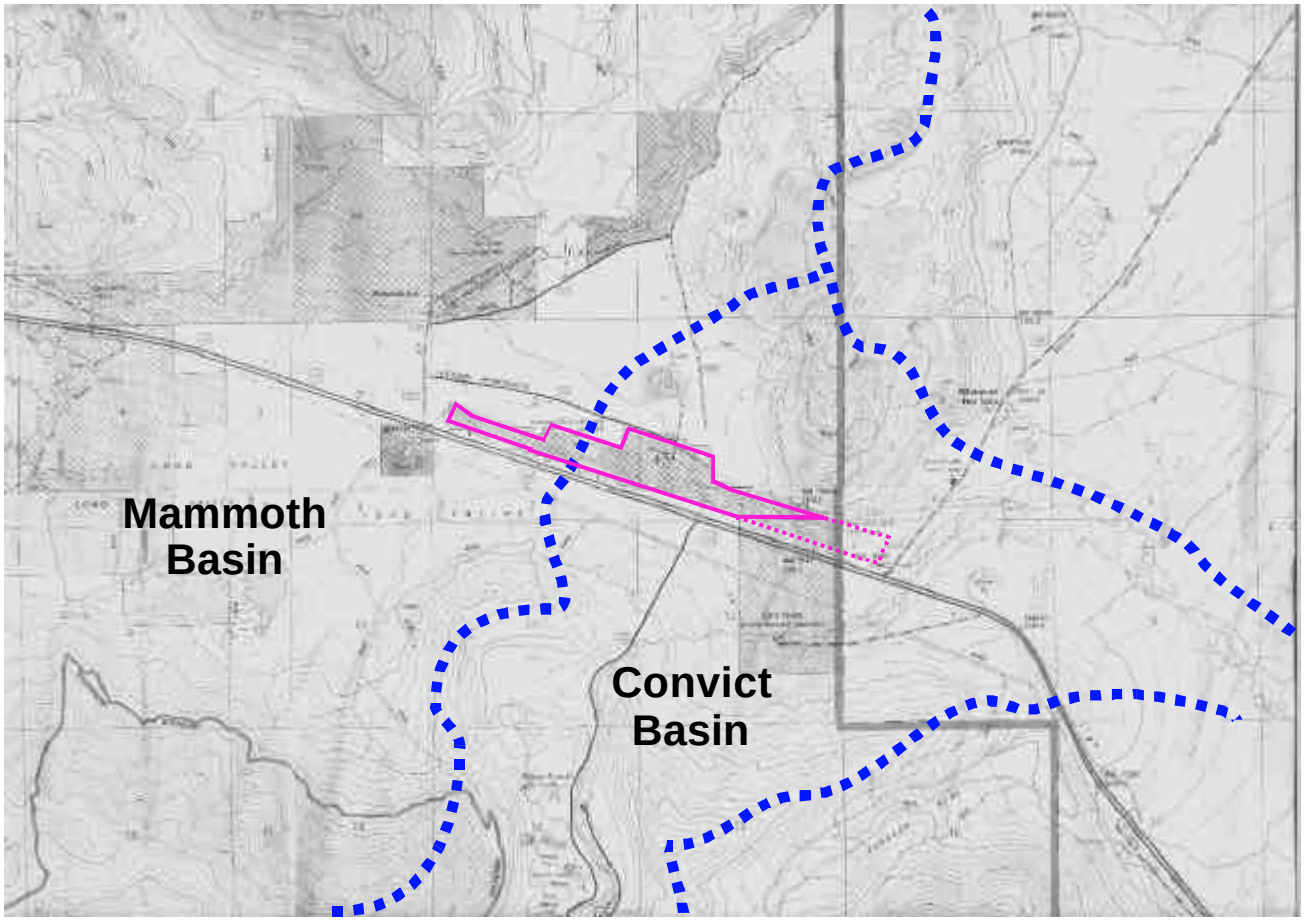
In 1975, the RWQCB prepared a comprehensive Water Quality Control Plan for the South Lahontan Basin Area, which includes the Airport. The plan outlines a coordinated program for water quality protection in accordance with the policy of non-degradation. This policy states that the existing level of quality in water resources shall be maintained unless potential beneficial uses are unreasonably affected.

5.6.1 Environmental Setting

There are no bodies of water on Airport property. There are, however, three surface drainage systems in the vicinity of the Airport. These drainage systems are depicted in **Exhibit V-14**. The area west of the Airport is within the western portion of the Mammoth Creek/Hot Creek watershed of the Mammoth Basin drainage system. The area south of the Airport is within the Convict Creek watershed. The drainage divide between the Mammoth Basin and Convict Creek watersheds passes through the westerly portion of the Airport. The third drainage divide lies east of Doe Ridge and flows into Crowley Lake.

The lower reaches of the Mammoth Basin drainage system are significantly affected by rising geothermal groundwaters, which include mixed hot-cold spring discharges at the Hot Creek Fish Hatchery and numerous hot springs within the Hot Creek Gorge. The Convict Creek drainage system appears to contain only cold groundwater elements. Studies conducted by the California State Department of Water Resources and U.S. Geological Service (USGS) indicate that geological formations located north of the Airport confine a relatively extensive cold groundwater basin.

The wells supplying water to the Airport can produce approximately 500 gallons per minute. Based on a pump test performed on the wells in 1999 and monitoring data of several wells in the area conducted by the USGS, it was observed that there was a minimal drawdown trend, suggesting a relatively large source of recharge available to the aquifer.



Legend

- Drainage Divide
- Existing Airport Property Line
- Proposed Airport Property Line

Source: MammothLakesAirport Expansion,Subsequent EIR andUpdatedEA,March, 1997.
Prepared by: Ricondo &Associates, Inc.

Exhibit V-14

north Scale 1" = 5,000'

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Mammoth Yosemite Airport Area Drainage System

The RWQCB Water Quality Control Plan generally encourages the consolidation of domestic and industrial wastewater treatment and disposal facilities. The entire basin in which Mammoth Yosemite Airport is located has been designated as an area in which septic tank and leaching fields cannot be used except with special approval of the RWQCB.

The Basin Plan emphasizes the need for control of sources of water pollution including, but not limited to, stormwater runoff. Rainfall is generally regarded as unpolluted relative to surface waters. It is contact with various surface materials that causes rainwater to become contaminated in its transition to runoff, which then discharges and can pollute surface waters.

The 1982 Airport Act requires that Airport Improvement Program (AIP) applications for projects involving a major runway extension shall not be approved unless the governor of the state in which the project is located certifies that there is "reasonable assurance" that the project will be located, designed, constructed, and operated in compliance with applicable water quality standards. The FAA has determined that the proposed action and the alternatives do not meet the criteria of a major runway extension and an assurance letter from the State of California would not be required. The RWQCB has found the proposed action would be located, designed, constructed, and operated in compliance with applicable State of California water quality standards and has issued an assurance letter which is found in Appendix D.

Rainfall exposure to raw materials, final products, byproducts, wastes, material handling equipment, and vehicles is the principal source of stormwater runoff contamination from activities conducted in the operation of an airport. Stormwater becomes enriched by the dissolution, solubilization, and erosion from materials from exposed surface and moves via overland flow to drainage ways and ultimately is discharged to a receiving body of water. Contaminates may typically include solids, oxygen-demanding substances, plant nutrients, metals, pesticides, herbicides, and various other chemical constituents. Fuels, lubricants, solvents, deicing agents, antifreezes, sanitary waste paints, and detergents are often used and/or handled outdoors at airports and have the potential to contaminate stormwater.

The existing drainage from the runways and taxiways begins with sheet flow from the pavement to the infield areas of the Airport and then infiltration into the ground. The drainage from the aircraft parking apron, access roads, and other paved areas begins as sheet flow to drainage inlet structures. The effluent is then piped to an infiltration trench located east of the current ground vehicle building where it infiltrates into the ground. No water has been observed flowing beyond the Airport boundary during heavy rain storms.

While it is not anticipated that a large quantity of deicing fluids will be used on aircraft, it will be necessary that facilities be available on site when needed. Commercial airline service will generally operate at the airport during Visual Flight Rules (VFR) conditions when the weather is good. These aircraft will stay on the ground for periods of approximately two to three hours and the aircraft skin will remain cold soaked, thereby making the accumulation of ice or frost difficult. Interviews with Airport management indicate that there have been only three times in the past three years when aircraft have required deicing services. Deicing, when required, would generally be accomplished by the use of glycol diluted to a 50 percent solution by water.

5.6.2 Environmental Consequences

The passenger terminal facility and supporting employees will increase the demand on subsurface water resources. Fire protection requirements are the dominant factor in the design of the proposed water supply and transmission facilities. A 1997 study of water and sewer requirements entitled *Mammoth Lakes Airport Water and Sewer Analysis* [5-18] was conducted by the engineering firm of TRIAD/HOLMES and Associates. The estimated maximum daily demand for water generated by the Airport terminal complex was 16,000 gallons. An average daily demand for the sewage treatment of 8,000 gallons was also estimated by this report. Airport flight operations generate wastes consisting of oils, grease, deicing fluid, and other complex hydrocarbon compounds. If these waste products are not properly disposed of, the operation of domestic wastewater treatment facilities could be disrupted.

The estimated maximum annual water demand for the Airport terminal complex has been calculated to be 17.92 acre-feet (1 acre-foot = 326,308 gallons). It was estimated in the 1986 EIR that 7,500 acre-feet/year recharges the unconfined aquifer in the Airport area. The 1986 airport pump test provided data from which transmissivity values were calculated. Transmissivity of 73.92 acre-feet per year per foot was calculated for the Airport well. This transmissivity figure, along with the recharge available to the aquifer, indicates a supply of water that far exceeds the water demand of the project.

Potential reduction in stream flow could have an adverse effect on the fishery resources of the Hot Creek Fish Hatchery. The lowering of natural groundwater levels, subsequent reduction in downstream spring flows, and changes in the character of the geothermal mixture of the waters could have impacts on the operations of the fishery. Wildermuth Environmental, Inc. conducted a study of the Mammoth Creek/Hot Creek Basin in 1996 [5-19]. The effects of several potential commercial development projects on the Hot Creek headsprings were assessed. The study showed that even under severe drought conditions, as had been experienced in the area during the recent past, groundwater extraction of up to 2,385 acre-feet per year did not impact flows in Hot Creek. In a study of increased consumption use, with water conservatively assumed to directly tributary to the headsprings, was extrapolated to estimate the impact of future development. Consumptive use of up to 2,700 acre-feet per day would not significantly impact the flows from the headsprings. Maximum annual water demand for the terminal building facility is projected to be less than 18 acre-feet per year.

The paved surfaces being proposed for the aircraft apron area and runway and taxiway extensions are impervious to water. Impervious surfaces increase the volume of stormwater runoff and can effect the relative quality of surface drainage. Runoff from impervious aeronautical surfaces may contain increased quantities of oils, grease, deicing fluid, and other complex hydrocarbon compounds. Construction of a new terminal building and automobile parking facilities would also result in an increase in runoff.

Alternatives 2, 3, and 4 would require the minimum addition of less water impervious pavement as development would utilize portions of the 3,400-foot paved overrun, as needed. The overrun is already constructed of water impervious material. Alternative 5, extending the runway to the east. however, would cause the most land disturbance and the greatest change in drainage characteristics, because the entire runway extension and supporting taxiway system would be on previously undeveloped land.

5.6.3 Mitigation Measures

The design and maintenance of all wastewater treatment and disposal facilities would be in accordance with the requirements and regulations of the RWQCB and Mono County Health Department. The proper permits for the discharge of waste would be obtained from these agencies prior to the installation of these facilities. No wastewater disposal system would be within 100 feet of a stream or in areas where groundwater is believed to be less than five feet below the surface of the ground. The discharge of either treated or untreated wastewater to streams would be prohibited. Wells to sample groundwater would be provided to monitor both performance of the subterranean wastewater disposal and to access adverse water quality impacts. Sewage effluent would have to be treated by a package plant that would provide secondary treatment with supplemental nitrate reduction.

Groundwater would be extracted from the Convict Creek drainage system, which is down gradient from the Mammoth Creek/Hot Creek Basin. There should be no significant impact to the Hot Creek Fish Hatchery if wells are not drilled any closer than 6,000 feet to the Hatchery and are located on the Convict Creek Watershed [5-20].

All existing pavement and the pavement for the future runway extension and taxiways would drain into the surrounding ground as they presently are allowed to do. All new pavements for the commercial aircraft parking apron, automobile parking lot, and terminal roadway will be designed such that all the drain water from these areas will be collected in inlets and pipe structures. These drain waters will be carried through an oil/water separator to separate any oils from the stormwater. The resulting stormwater will then be discharged into leaching trenches or leaching fields. The discharge from the oil/water separator will be tested on a routine basis to determine the continuing effectiveness of this type of treatment. Should the discharge show any deleterious contamination, additional treatment would be provided. To prevent accidental spills of fluids, such as aviation gasoline, the Town of Mammoth Lakes has adopted a Spill Prevention Plan for the Airport, which can be found in Appendix D.

All aircraft would be deiced at the same location on the commercial airline apron. The area on which the aircraft would park during the deicing operations would be graded such that all of the water from this area would be collected at one drop inlet. The pipes from this inlet would be constructed such that in normal operations, without any deicing fluid, the stormwater runoff is discharged into the oil/water separator. When deicing operations are being performed, the valves would be set such that all of the deicing fluids would be diverted to a holding tank. The runoff would be collected in the holding tank and removed from the site and suitably disposed.

Future development would allow stormwater to drain from the developed area to a stormwater system. This system would then transport the stormwater to areas within the Airport boundary where it would infiltrate into the ground and recharge the existing groundwater.

Mitigation of potential adverse water quality impacts during periods of project construction are discussed in Section 5.20.

5.6.4 Summary of Findings

- There exists adequate water supply for the project.

- Ground water extraction accomplished in the Convict Creek drainage area would not adversely effect the levels or geothermal mixture of waters serving the Hot Creek Fish Hatchery.
- Stormwater runoff treatment in the form of a oil/water separator would be provided for the new air carrier apron, automobile parking lot, and terminal roadway.
- Deicing operations would be restricted to that portion of the air carrier ramp where the deicing fluid runoff would be collected and transported off site for treatment and disposal.
- A package plant will be used for the disposal of sewage effluent. This plant would provide secondary treatment of the sewage effluent with supplemental nitrate reduction.
- Although it has been determined by the FAA that the proposed action and any of the alternatives does not meet the criteria of a major runway extension and an assurance letter from the State of California would not be required, the RWQCB has issued such a letter which can be found in Appendix D.

5.7 Department of Transportation Act, Section 4 (f)

Section 4(f) of the U.S. Department of Transportation (DOT) Act [5-21], recently recodified as 49 U.S.C. 303, applies to public parks; recreation areas; wildlife or waterfowl refuges of national, State, or local significance; and historic sites of national, State, or local significance as determined by officials having jurisdiction. 49 U.S.C. 303 provides that the Secretary of Transportation shall not approve any program or project that requires the use of any publicly owned land unless there is no feasible and prudent alternative to the use of such land and such a project or program includes all possible planning to minimize any adverse effects resulting from the use of the land. If there is no physical taking of such public land, but there is the possibility of adverse impacts such as increased noise or air pollution, the FAA would determine if the increase in activity associated with the project is compatible with normal activity associated with the land.

Section 4(f) lands can generally be affected by airport development in the following ways: (1) acquisition or use of all or a portion of a publicly owned park, (2) increased noise or air quality impacts, or (3) increased surface traffic patterns.

5.7.1 Environmental Setting

The closest facility in the Airport environs that fall into the category of Section 4(f) lands is the Devils Postpile National Monument although it is not in the immediate Airport environs but is in the region.

Although the Airport is surrounded by United States Forest Service (USFS) land, these lands in the immediate vicinity of the Airport are not categorized as Section 4(f) lands.

5.7.2 Environmental Impacts

The Devils Postpile National Monument, a National Park Service site, is located approximately 11 miles west of Mammoth Yosemite Airport on the opposite side of Mammoth Mountain. As shown on Exhibits V-11 and V-12, air carrier aircraft turn away from this area due to the high terrain at Mammoth Mountain. Therefore, this area would not be subject to overflights by air carrier aircraft.

5.7.3 Summary of Findings

The proposed project would have no significant impacts on the Section 4(f) properties.

5.8 Historic, Architectural, Archaeological, and Cultural Resources

A cultural resource record search and studies have been conducted for the proposed undertaking. The results of the record search and cultural resource studies are reported in *Mammoth Lakes Airport Improvement Project, July 2000* [5-22].

The cultural resource record search was conducted by the Eastern Information Center located at the University of California in Riverside, CA. The results of the cultural resource record search can be found in Appendix D.

5.8.1 Area of Potential Effect

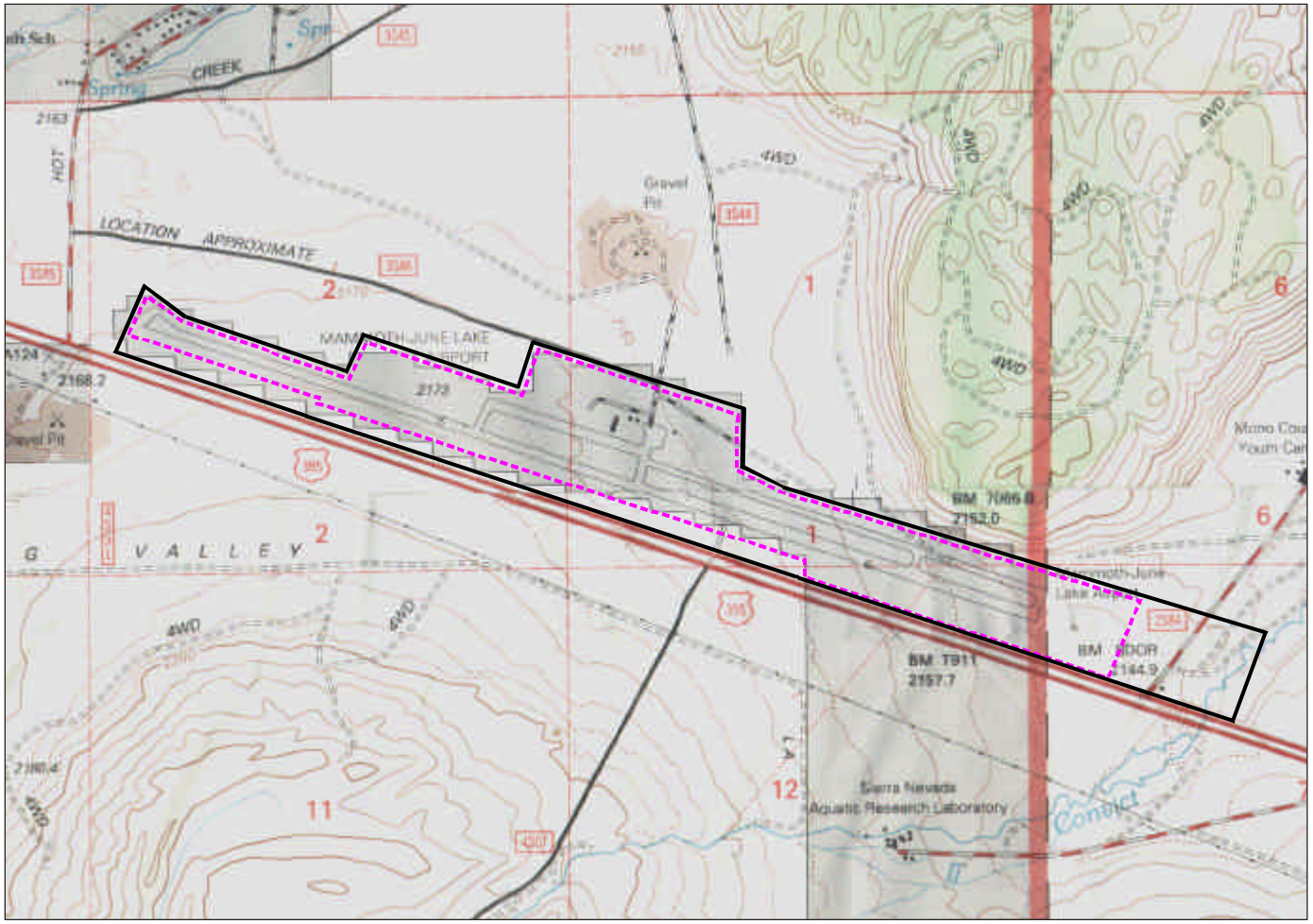
The area of potential effect (APE) of the proposed action and alternatives is depicted in **Exhibit V-15**. This APE was determined by the FAA and agreed upon by the California State Historic Preservation Officer (SHPO). Documentation from the California SHPO, dated December 11, 2000, of this agreement can be found in Appendix D. The Far Western Anthropological Research Group, Inc. surveyed most of the APE in July 1995 as part of a much larger Airport development proposal. It was only necessary to survey approximately 300 acres at its eastern end of the APE. Archeologists from Jones & Stokes completed this field survey work on June 20, 2000. No prehistoric or historic resources were recorded as a result of the field survey. However, the record search indicted that two prehistoric sites, CA-Mno-703/H and CA-Mno-3025, were previously identified and recorded in the vicinity of the Airport. CA-Mno-703/H is located north area of potential effect and CA-Mno-3025 is located east of the area of potential effect.

CA-Mno-703/H is a prehistoric site containing several rockshelters and concentrations of lithic materials as well as a historic component consisting of seasonal camping debris. CA-Mno-3025 is a very small lithic scatter with no other features. CA-Mno-703/H and CA-Mno-3025 are not located in the area of potential effect so the proposed undertaking or any alternative would not have any significant impact on these sites.

5.8.2 Environmental Consequences

The structure that formerly housed High Sierra Community Church is located east of the Airport and is known locally as the “Green Church.” The structure was built in 1954 by local Presbyterians and was used for religious purposes until the mid-1980s. By the mid-1980’s, the population of the area had shifted and was concentrated eight miles to the west, within the boundaries of the Town of Mammoth Lakes and the Presbyterian congregation relocated there. The current use of the structure is described in Section 5.3.1. The implementation of the proposed action and any build alternative would adversely impact the “Green Church” as described in Section 5.2.2. Mitigation of the adverse impact is described in Section 5.3.3.

The “Green Church” was not listed in the National Register of Historic Places (NHRP), California Historic Landmarks, California Points of Historical Interest, California Inventory of Historic Resources or the State Historic Properties Directory. Coordination with pastors of area churches, county and local historical societies, the Mammoth Lakes Chamber of Commerce and the Sierra Nevada Aquatic Research Laboratory was undertaken to ascertain whether the structure could be considered a historic property under NHRP criteria. The results of the coordination indicate that the



Legend

- Proposed Airport Property Line
- Area of Potential Effect

Source: U.S. Geological Survey Revised: U.S. Forest Service
Prepared by: Ricondo &Associates, Inc.

Exhibit V-15

north

Scale 1" = 2,000'

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Area of Potential Effect

structure has no known historical value to the local community. The structure does not meet the criteria for an evaluation for listing in the NHRP.

The Town of Mammoth Lakes would have a qualified archeologist to monitor land excavation. Should any additional cultural remains be uncovered during construction, construction in the vicinity of those remains would be halted. The FAA and the State Historic Preservation Officer (SHPO) would be notified for evaluation of the situation by a qualified professional.

Based upon the cultural records search and surveys in the field the FAA has determined that there are no properties listed or eligible for listing in the NHRP in the APE. The proposed undertaking or any of the alternatives would not effect any properties listed or eligible for listing in the NHRP.

The Owens Valley Paiute Indians were some of the early inhabitants of the Owens Valley. Because of this fact coordination with local Native American organizations representing the Paiute was undertaken. This coordination is documented in Appendix D. A Public Hearing was also held and no comments from local Native American organizations were received.

The California SHPO has communicated to the FAA that the FAA took reasonable measures to identify historical properties in the APE. These efforts conform to applicable standards and the documentation presented to the SHPO by the FAA is sufficient for a finding of "no historical properties affected". The California SHPO concluded that the FAA's responsibilities under Section 106 of the National Historic Preservation Act have been fulfilled. A letter detailing the California SHPO's conclusions can be found in Appendix D.

5.9 Biotic Communities

5.9.1 Environmental Setting

Biotic communities are defined as both flora and fauna in FAA Order 5050.4A. As a basis for analyzing the biotic communities, a report entitled *Biological Study for the Mammoth Lakes Airport Expansion Project*, September 2000, was prepared by the office of Jones and Stokes Associates, Sacramento, California [5-23]. The report is included in Appendix G. On the basis of that report, it was determined that biotic communities within the area for the proposed extension of Runway 9-27 do not include any areas that qualify as waters of the United States or State of California, including wetlands.

The biotic communities identified in the study area were evaluated in relation to their suitability to support feeding, nesting, and breeding habitats for various threatened and/or endangered species.

The project site is dominated by mostly-disturbed big sagebrush scrub with an inclusion of non-jurisdictional dry meadow located between the east end of the Airport runway and Benton Crossing Road. These biological communities are described below and depicted in Appendix G.

Big sagebrush scrub is the predominant plant community in the project study area. Much of this community has been disturbed by construction, use and maintenance of the Airport facilities, access road, and highway facilities.

The big sagebrush scrub community is underlain by a well-drained, sandy-gravelly loam substrate. Volcanic rock outcrops extrude from the surface. This community is dominated by big sagebrush (*Artemisia tridentata*), antelope *bitterbrush (Purshia tridentata*), and rabbitbrush (*Chrysothamnus nauseous*). Other associated shrubs include desert peach (*Prunus andersonii*), spiny hopsage (*Grayia spinosa*), and horsebush (*Tetradymia sp.*). Prevalent herbaceous grasses and forbs, such as needle-and-thread (*Hesperostipa comata ssp. Comata*), Indian ricegrass (*Acnatherum hymenoides*), squirreltail (*Elymus elymoides*). Commonly encountered native herbs include sulphur buckwheat (*Eriogonum umbellatum ssp. Subaridum*), buckwheat (*E. elatum var. elatum*), spurred lupine (*Lupinus argenteus*), Eriastrum (*Eriastrum sparsiflorum*), Nuttall's tiquilia (*Tiquilia nutallii*), mentzelia (*Mentzelia sp.*), cryptantha (*Cryptantha circumcissa*), prickly phlox (*Leptodactylon pungens*), Stansbury's phlox (*Phlox stansburyi*), groundsmoke (*Gayophytum diffusum*), nama (*Nama sp.*), and others. Ruderal non-native species include goosefoot (*Chenopodium sp.*), amaranth (*Amaranthus sp.*), and woolly mullein (*Verbascum thapsus*).

The following wildlife species were observed in big sagebrush scrub habitat: gopher snake (*Pituophis melanoleucus*), sage thrasher (*Oreoscoptes montanus*), green-tailed towhee (*Pipilo chlorurus*), common raven (*Corvus corax*), black-billed magpie (*Pica pica*), rock wren (*Salpinctes obsoletus*), Nuttall's cottontail (*Sylvilagus nuttallii*), and California ground squirrel (*Spermophilus beecheyi*). Wildlife that prefer big sagebrush scrub habitat include sagebrush lizard (*Sceloporus graciosus*), Brewer's sparrow (*Spizella breweri*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

Mule deer is considered species of concern, because they are an important harvest species in California. Deer that inhabit the project area and surrounding vicinity are primarily from the Round Valley herd (Kucera 1988 [5-24], Taylor 1988 [5-25], U.S. Forest Service 1990 [5-26]).

The Round Valley herd has recently experienced a dramatic decline in population numbers. The number of deer counted on the Round Valley winter range declined from 5,877 deer in 1985 to 939 deer in 1991. In 1993, the number of deer in winter range counts increased to 1,334 (California Department of Fish and Game (DFG), Unpublished data) and deer numbers since 1993 have increased to approximately 2,350 (Bleich pers. comm.). The 1985 to 1991 decline in the Round Valley deer herd has been attributed to poor forage conditions on the winter range as a result of drought-induced changes in habitat quality. Additionally, intensive livestock grazing, plant succession, predation, road kills, and residential development on the winter range and in the migration corridor have reduced deer numbers (Thomas 1985) [5-27].

Field pellet group counts confirmed past survey investigations that deer frequent the project site during spring, summer, and fall. Calculation revealed that the study area supports an estimated 1,025 deer-use days during the spring migration period (early April to early June). Further analysis of pellet-group data revealed that 95 percent of all pellet-groups were counted on plots located in the western half of the project area.

Variation in pellet group density between the eastern and western portions of the study area was related to differences in habitat quality. The western half of the study area was characterized by dense patches of antelope bitterbrush and most deer use was associated with these areas. Greater bitterbrush cover provides increased foraging opportunities and greater visual concealment for deer. Foraging opportunities for mule deer in the eastern half of the study area were greatly reduced due to lower amounts of antelope bitterbrush and higher levels of habitat disturbance from roads, airport facilities, and livestock grazing. Other factors, such as noise, night lighting, and human activity associated with the Mammoth Yosemite Airport, likely account for the disproportionate levels of deer use between eastern and western portions of the study area.

Mortality studies conducted by Becky Pierce, Dr. Vern Bleich, and Dr. Terry Bower between 1991-1998 indicate that 11% of the radio collared deer were killed due to vehicle collisions on Hwy 395 and Hwy 205. Within the study area (Benton Crossing P.M. 20.36 and Hot Creek Hatchery Road P.M.22.73) 16 deer mortalities from vehicle collisions have been recorded by Caltrans during a ten year period, from May 1990 to November 2000 (no data was available for 1997). During the same time period as above 218 deer mortalities were recorded from Post Mile 0.0 to 40.0.

Non-wetland dry meadow is associated with the eastern portion of the project area between the east end of the runway and Benton Crossing Road. This community supports hydrophytic vegetation and exhibits low chroma (10YR 2/1), which is a hydric soil indicator. The site lacks primary or secondary indicators of hydrology and, therefore, does not meet the definition of a jurisdictional wetland. Water appears to enter the site in the form of seasonal snowmelt and overland runoff from adjacent highway and runway surfaces. A small, artificially excavated drainage feature drains surface runoff toward the site from the north margin of U.S. Highway 395. Although the site does not qualify as a jurisdictional wetland, it does perform limited wetland functions such as stormwater sediment and pollution retention and wildlife forage.

The dry meadow is dominated by mostly native hydrophytic rhizomatous grass and grasslike species including Baltic rush (*Juncus balticus*) (OBL), straight-leaved rush (*Juncus orthophyllus*) (FACW), clustered field sedge (*Carex Praegracilis*) (FACW-), Nebraska sedge (Carex nebrascensis) (OBL), and Kentucky bluegrass (*Poa pratensis*) (FACU). Common herbaceous forbs include long-stalked clover (*Trifolium longipes*) (FACW), long-stalked starwort (*Stellaria longipes var. longipes*) 9OBL),

Missouri iris (*Iris missouriensis*) (OBL), and dandelion (*Taraxacum officinale*) (FACU). Also present are a few scattered interior rose (*Rosa woodsii*) (FAC-) and several small willow shrubs (*Salix sp.*) (>FAC).

Species using dry meadow habitat include killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), and sage grouse. Most of the wildlife species found in the adjacent big sagebrush scrub habitat (described above) would also forage in the dry meadow habitat. The sage grouse is a California Department of Fish and Game (DFG) species of special concern, a U.S. Forest Service (USFS) management indicator species, and a harvest species. Locally, sage grouse are known to exist in Long Valley and the surrounding region.

The sage grouse is a DFG species of special concern, a U.S. Forest Service management indicator species, and a harvest species. This grouse is the largest species of grouse in North America and exists scattered throughout the sagebrush-dominated rangelands in the western United States. Locally, sage grouse are known to exist in Long Valley and in the surrounding region.

Sage grouse were once abundant throughout their range; however, overhunting, drought, and competing land uses, such as livestock grazing, have greatly reduced their numbers (U.S. Forest Service 1990) [5-28]. No sage grouse were observed at the site during June 2000 surveys; however, sage grouse signs (fecal droppings) were noted on the western boundary of the study area near Hot Creek Hatchery Road during June 2000 surveys. One of Long Valley's largest Sage Grouse lekking sites is located approximately 3 miles east of the Airport along the flight path to Runway 27. This site is identified as BLM Lek #2.

Information provided by the BLM indicates that barbed wire fences and power lines have a negative effect on sage grouse. Thirty seven sage grouse mortalities were recorded along cattle fence located north of lek #2 between April 1997 and February 1999 (Russi pers. comm.). Sage grouse abandoned a known lek site after construction of a five strand wire fence in the Bodie hill adjacent to a lek site in 1995. Grouse returned to the historic lek site in fewer numbers after relocation of the fence and continued to use other areas as strutting grounds (Russi pers. comm.).

5.9.2 Environmental Consequences

No special-status plants were identified in the proposed project area or any of the alternatives therefore, there are no impacts identified for these resources.

The Northern Harrier, Golden Eagle, Loggerhead Shrike, Spotted Bat, and Townsend's Western Big-Eared Bat are special-status wildlife that have not been reported previously to occur at the project site but may occasionally forage or roost at the site. The minor loss in extent of sagebrush scrub habitat associated with the proposed action or any of the alternatives does not represent a significant loss of foraging habitat for these bird and mammal species based on the regional abundance of this habitat.

The Osprey, Sharp-Shinned Hawk, Cooper's Hawk, and California Gull may occasionally fly over the project site. However, the minor loss in extent of sagebrush scrub habitat associated with the proposed action or any of the alternatives does not represent a significant loss of foraging habitat for these bird species.

The site of the proposed action and all alternatives provides marginally suitable habitat for white-tailed hare and pygmy rabbit. The lack of suitable habitat, local and regional and regional scarcity of

suitable habitat, and lack of past sightings in the vicinity of the study area indicate there is no potential for significant adverse impacts on the species at the project site.

The construction of a 6 to 8 foot high security fence, which would occur in the proposed action and all alternatives, could cause mortality to low flying adult Sage Grouse. It is anticipated that the fencing of the airport runway has the potential to increase mortality of adult birds however mitigation has been identified that will reduce the potential for bird mortality.

The dry meadow east of the approach end of Runway 27 is depicted in Appendix G Figure 2. This area is suitable habitat for a Sage Grouse winter use and summer foraging. It could not be determined at the present time if Sage Grouse are using this area as a lek site. A small potion of the dry meadow could possibly be removed or disturbed by construction activities in Alternatives 1 through 4. This small area of the dry meadow would also be disturbed by the construction of security fencing under the proposed action and all alternatives.
Alternative 5, the extension of the runway to the east, would eliminate important wintering area between the approach end of Runway 27 and Benton Crossing road. The extension of the Runway to the east would also move aircraft noise closer to the large lek (lek #2) within the final approach course to Runway 27. Aircraft noise associated with existing and projected future landing operations at the Airport has the potential to disturb Sage Grouse at the lekking site during the spring months.

The construction of a 6 to 8 foot high security fence around the airfield, which would occur in the proposed action and all alternatives, would eliminate high quality big sagebrush scrub from use by the Mule Deer. The location of the fencing and the affected deer habitat for the proposed action and all alternatives is depicted in **Exhibit V-16**. **Table V-16** summarizes the loss of high quality deer habitat caused by the security fencing. The deer proof fencing would also cause deer to circumnavigate the Airport. This may result in increased deer mortality through encounters with vehicular traffic on U.S. Highway 395. It is anticipated that the rate of mortality of deer caused by vehicular traffic would not significantly adversely effect the Mule Deer population. *FAA Advisory Circular 150/5200-33 Hazardous Wildlife Attractants on or Near Airports* [5-29] considers deer as hazardous wildlife because they have been associated with wildlife-aircraft strikes. Deer were responsible for 11% of the reported damaging strikes to civilian aircraft in the United States between 1993 and 1995. The fencing would reduce wildlife incursions on the runway and taxiway system thereby increasing aircraft safety.

Table V-16

Eliminated High Quality Deer Habitat Loss (acres)

Alternative	Eliminated habitat loss (acres)
1 – No Action	9.5
2 – Extend Runway 8,200 feet to the west	10.5
3 – Extend Runway 9,000 feet to the west	21.9
4 – Extend Runway beyond 9,000 feet to the west	41.9
5 - Extend Runway to the east	0.0

Source: Jones & Stokes, Inc., September 2000.
Prepared by: Ricondo & Associates, Inc.

5.9.3 Mitigation Measures

The fence around the runway will be constructed of chain link which should be more visible to grouse than single strand barbed wire rangeland fences. There will be no barbed wire located at the top of the fence. Fence posts will have rounded or pointed caps to discourage use by raptors and ravens as perch sites. The portion of the fence located along the north side of the runway east and west of existing buildings will be constructed using methods developed in consultation with the USFS and DFG so that the fence will be more visible to grouse. The portion of the fence located along the south side of the runway (adjacent to Hwy 395) will not include any additional fencing material to make it more visible to grouse.

Monitoring of BLM Lek #2, located three miles east of the Airport, would be required if Alternative 5, the extension of the runway to the east, were selected and constructed. The lek site would be monitored over a period of two years to determine to ascertain bird abundance. A minimum of three visits per year would be required to obtain an estimate of bird use of the lek site. The data gathered during these monitoring visits would be compared with existing data to determine if any negative effects on the Sage Grouse would have been realized by the increased disturbance from the airport. Study results would be presented to DFG for review and determination of course of appropriate actions. With Alternative 5, the source of funding for the lek monitoring study would be determined before the commencement of Airport expansion work.

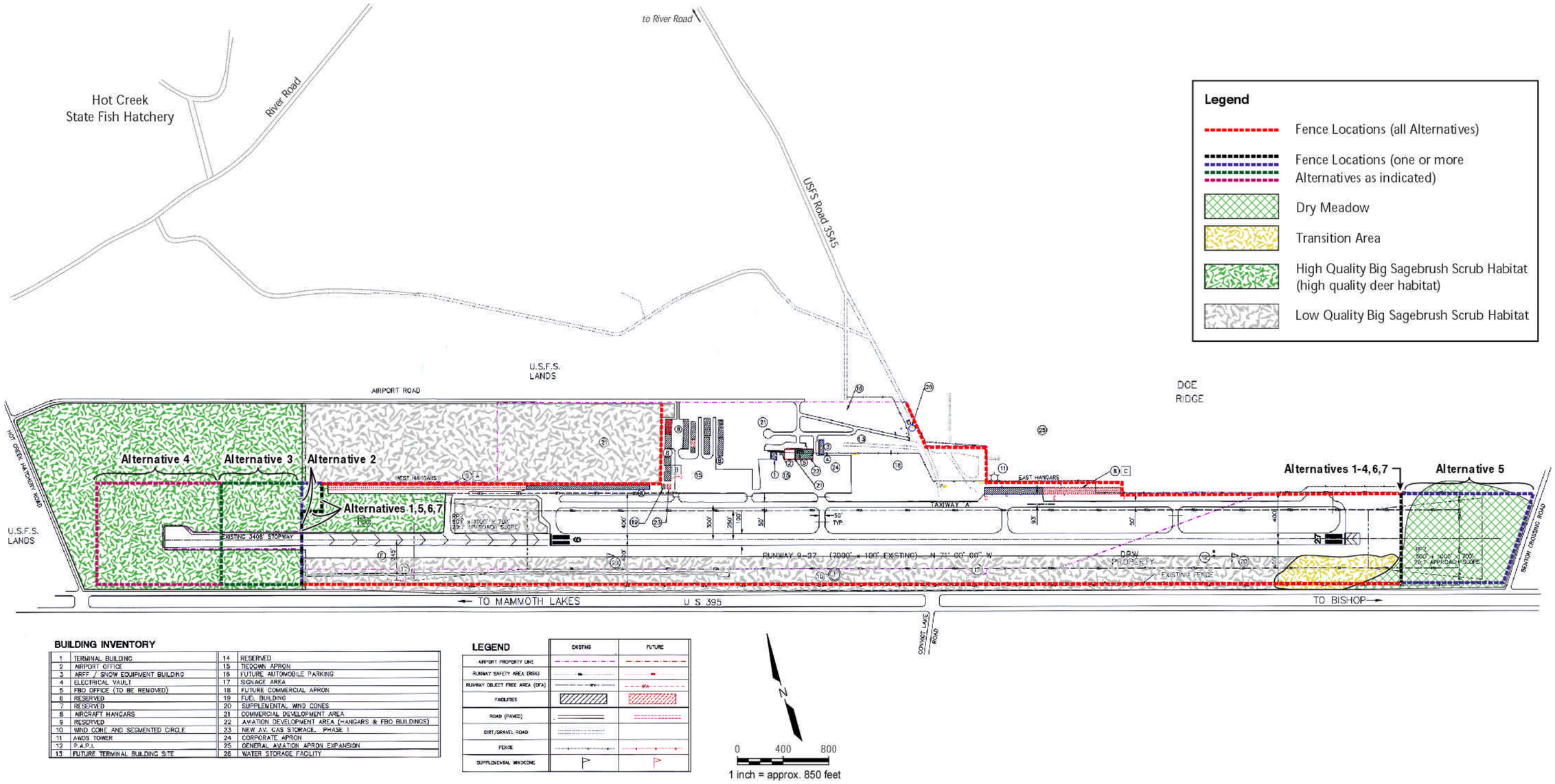
To reduce the potential for deer mortality to the construction of the deer proof fence around runway, a deer biologist woul assist with the placement of the east and west portions of the chain link fence so that the fence is located in areas that minimize the potential for funneling deer into areas that have the potential to increase deer vehicle collisions.

Based upon consultation with USFS and DFG the acreage of potential high quality Mule Deer habitat for the proposed action and Alternatives 1, 3, and 4 would be replaced by restoration of the habitat at or near the Airport area. Compensation for the impacts would occur at a ratio of one acre for every one acre of degraded deer habitat.

The Town of Mammoth Lakes in conjunction with DFG and USFS has identified 4 possible sites for restoration of deer habitat. These sites are:

- Runway 09-27 stopway outside of the proposed fence area (for Alternatives 1 and 2 only)
- Portions of USFS Road 3S45 north of the airfield
- The USFS gravel pit north of the Airport
- The Mule Deer holding site southwest of the Airport near the Town of Mammoth Lakes
- The area southwest of the Airport that experienced the 1987 Laurel fire

Under Alternative 1, no action, and Alternative 2, the proposed action, there would be at least 4.5 acres of the Runway 09-27 stopway available for restoration through the removal of the existing pavement and reseeding/replanting the area with appropriate species of vegetation. This stopway area is located near the area of the highest identified proportion of deer use. In addition to restoration of the stopway, approximately 6 acres of additional offsite enhancement would have to be located for the proposed action and Alternative 1. Potential restoration sites listed above have area sufficient to satisfy the additional 6 acres of offsite habitat enhancement. The restoration site would be managed in perpetuity for the benefit of Mule Deer and Sage Grouse.



Source: Jones & Stokes, Inc.
Prepared by: Ricondo & Associates, Inc

Exhibit V-16

Security Fencing and Deer Habitat Locations

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Alternatives 3 and 4, extensions of the runway to the west of 9,000 feet and greater than 9,000 feet respectively, would not have the stopway area available for restoration. Mitigation for these alternatives would be on the offsite restoration sites indicated above. The only currently identified offsite areas of sufficient size to satisfy the compensation requirements for Alternatives 3 and 4 would be either the Mule Deer holding site southwest of the Airport near the Town of Mammoth Lakes or the site southwest of the Airport that experienced the 1987 Laurel fire. These areas would be restored by reseeding/replanting the area with appropriate species of vegetation.

The USFS gravel pit located north of the Airport is the primary area being considered for restoration activity for Alternative 1, no action, and Alternative 2, the proposed action. This site currently has little vegetation and restoration activities including reseeding and planting of bitterbrush and big sagebrush would provide additional forage opportunities for mule deer and sage grouse. A temporary fence would be installed around the restoration site to allow for the establishment of vegetation. The temporary fence that would exclude cattle would be designed in coordination with the USFS and DFG to minimize the potential for sage grouse mortality.

5.9.4 Summary of Findings

- The dry meadow area east of the Airport is a potential Sage Grouse lek site and should be monitored in the spring for use prior to the use of heavy construction equipment in the vicinity.

- The lek site two miles east of the Airport could be adversely effected by aircraft under Alternative 5 a would have to be monitored for two years to ascertain the magnitude of the disturbance.

- Degraded high quality dear habitat would be replaced at a ratio of one restored acre for every one degraded acre.

5.10 Endangered and Threatened Species of Flora and Fauna

A special-status species was prepared by the office of Jones & Stokes Associates, Sacramento, California. The report is included as Appendix G, and is entitled *Biological Study for the Mammoth Lakes Airport Expansion Project* September 2000. [5-23]

5.10. 1 Environmental Setting

The project site is located within the East Sierra Nevada Region of the Great Basin Floristic Province at approximately 7,080 to 7,130 feet above sea level. Much of the project survey area lies close to Mammoth Yosemite Airport, U.S. Highway 395, and Airport Road and has been disturbed by these developments.

The vicinity around the Airport is dominated by mostly-disturbed big sagebrush scrub, with an inclusion of non-jurisdictional dry meadow located between the east end of the Airport runway and Benton Crossing Road.

Botany field surveys were conducted on June 16, 2000. The field surveys determined the potential presence of special-status species and identified and characterized potentially important natural communities. Meandering transects were used to cover the study area, with survey intensity varying by habitat type. All plant species were identified to the level necessary to determine their legal status.

Wildlife field surveys were conducted on June 1-3, 2000. The field surveys identified and characterized suitable habitat for endangered and threatened species. The survey was conducted by walking the project site using straight-line transects. Evaluation of some endangered and threatened species was based on literature reviews, discussions with agency personnel, and knowledge of habitat conditions in the survey area.

The prefield investigation identified three endangered plant species that could exist in the vicinity of the Airport. They were Long Valley milkvetch (*Astragalus johannis-howellii*), Mono milkvetch (*Astragalus monoensis var. monoensis*) and MonoLake lupine (*Lupinus duranii*).

The National Diversity Data Base 2000 (NDDB) search of the quadrangles identified no records of endangered or threatened wildlife species at the study area. Based on existing information, distribution data, and communication with agency personnel, three endangered and threatened species were identified as having the potential to occur in the study area. They are American peregrine falcon, wolverine and bald eagle. Results of field surveys for special-status species are presented below.

American peregrine falcon is an endangered species that has not been previously reported to occur at the project site but that may occasionally forage or roost at the project site.

The project site provides marginally suitable habitat for wolverine. Wolverine is a threatened species and a rare mustelid generally associated with higher-elevation mixed conifer and lodgepole forest areas in the Sierra Nevada.

Bald eagle as an endangered species has been reported previously in the study area. A pair of bald eagles has been observed by Department of Fish and Game (DFG) personnel to roost on sagebrush in the study area at the Hot Creek Fish Hatchery. The birds do not nest on the site but occasionally

roost onsite during their activities, which center on foraging for fish along Hot Creek and the Upper Owens River and the fish hatchery.

5.10.2 Environmental Consequences

Alternatives addressing various runway extensions have been identified. No special-status plants were identified in the study area; therefore, there are no impacts identified for these resources.

American Peregrine Falcon has not been reported previously to occur at the Airport site but may occasionally forage or roost at the site. The minor loss in extent of sagebrush scrub habitat associated with the proposed project or any alternative does not represent a significant loss of foraging habitat for this species based on the regional abundance of this habitat.

The proposed project and alternatives provide marginally suitable habitat for wolverine. The lack of suitable habitat, local and regional scarcity of suitable habitat, and lack of past sightings in the vicinity of the study area indicate there is no potential for significant adverse impacts on the species at the project site.

Although the proposed project and alternatives would remove big sagebrush habitat, which may eliminate bald eagles roosting habitat and disrupt roosting in the vicinity of the study area, the local abundance of the same habitat type indicates the loss of roosting habitat would have a negligible effect on the bald eagles.

Jones and Stokes (J&S) has evaluated the project's potential impacts on federally listed species within the Biological Study prepared for the project and with additional analysis prepared in the response to comments on the Draft EA. J&S determined that the project would not impact federally listed species. A copy of the Draft EA was provided to the United States Fish and Wildlife Service (USFWS) on October 9, 2000. No comments were received from USFWS at that time. Additionally, on November 30, 2000 J&S biologist Steve Avery contacted George Walker, biologist with the USFWS Barstow Field Office to discuss species issues. Mr. Walker expressed interest in reviewing J&S's evaluation of species issues. A copy of the revised EA including the response to comments has been sent to Mr. Walker. Further review of the project will be completed by the USFS as owners of the land onto which the airport expansion is to be located, including the preparation of a Biological Assessment (BA). At that time written concurrence from the USFWS will be requested and received.

5.10.3 Mitigation Measures

The proposed project or alternative have no significant impact on the endangered or threatened species. Therefore, no mitigation is required.

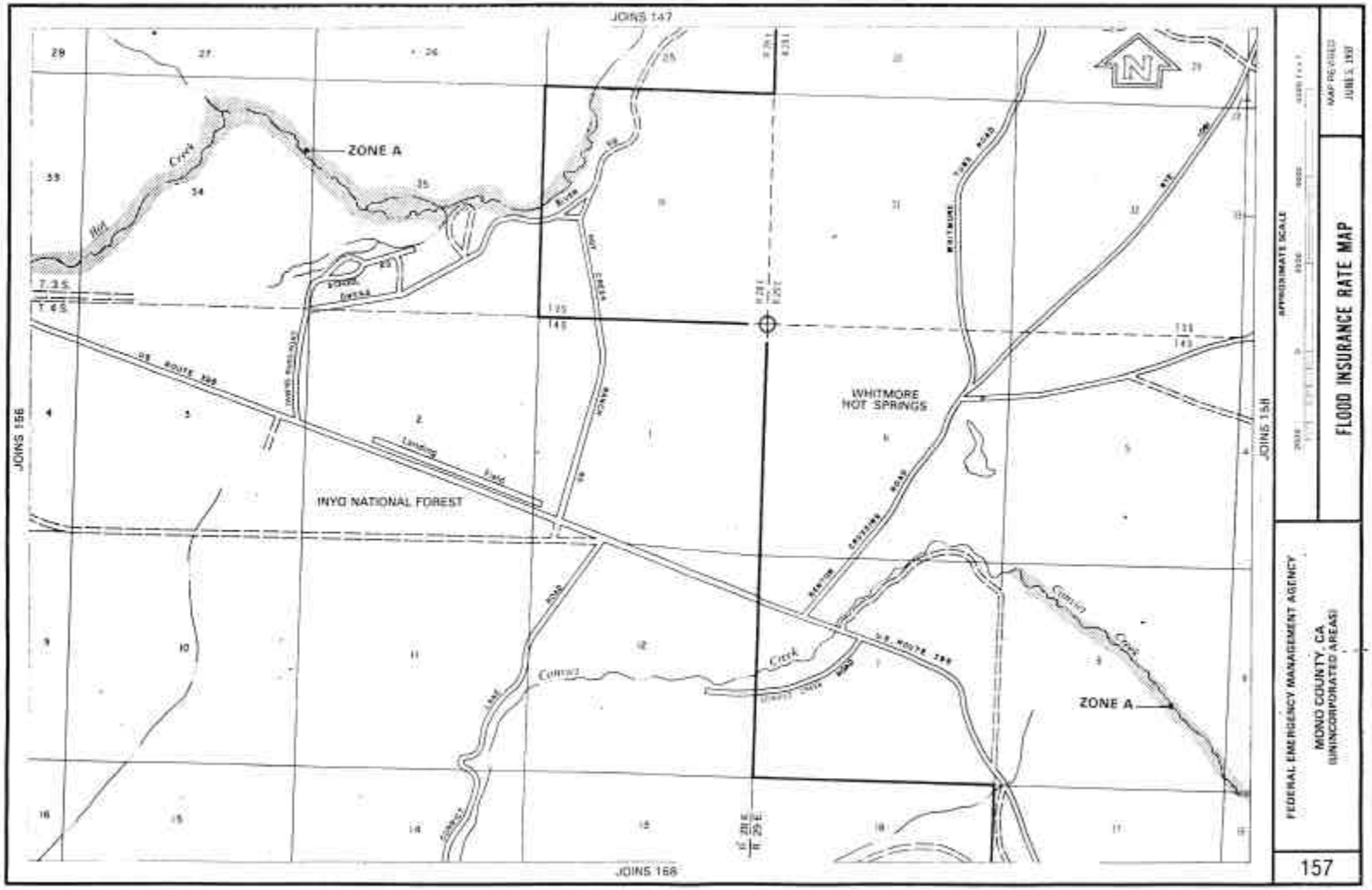
5.11 Wetlands

Due to the increased awareness of the value of wetlands and pursuant to Executive Order 11990, wetlands are included in the environmental review process. Wetlands are those areas that are inundated by surface or groundwater with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, rivers, and natural ponds. Moreover, wetlands provide a valuable source of nutrition and habitat for a wide variety of plant and animal life.

A wetlands analysis and delineation was prepared by the office of Jones and Stokes Associates, Sacramento, California along with a special-status species survey. The report prepared for this study is included as Appendix G, and is entitled *Biological Study for the Mammoth Yosemite Airport Expansion Project,* September 2000 [5-23]. The results of these studies show that there are no waters of the United States, including wetlands, located on the project site for the proposed Runway 9-27 extension and the Airport development area. A Jones and Stokes Associates biologist conducted a botany field survey of the project site on June 16, 2000. One of the intents of the field survey was to determine the presence or absence of "Waters of the United States" on the project site including wetlands. Review of the site was conducted in accordance with the Corps' Wetlands Delineation Manual (Environmental Laboratory 1987). The field survey determined that the site did not contain any jurisdictional wetlands. While the survey did identify a nonwetland dry meadow habitat it was determined that the site "lacks primary or secondary indicators of hydrology and therefore does not meet the definition of a jurisdictional wetland" [5-23]. If a field survey, by a qualified biologist, determines that there are no wetlands present, verification from the Corps is not required. Therefore, no written concurrence has been requested or received.

5.12 Floodplains

The nearest body of water to the Airport is Convict Creek, located approximately 0.4 miles east of the Airport's eastern boundary. **Exhibit V-17** shows the *Flood Insurance Rate Map,* published by the Federal Emergency Management Agency (FEMA). As depicted in Exhibit V-17, no part of the Airport or project site, in both the proposed plan and the alternatives, is located in a floodplain. As measured from the Airport's eastern boundary, the Airport is approximately 1.2 miles from a 100-year floodplain (Zone A) associated with Convict Creek.



Source: Federal Emergency Management Agency, Flood Insurance Rate Map, Community Number 060194 C, Panel 157.
Prepared by: Ricondo & Associates, Inc.

Exhibit V-17

Mammoth Yosemite Airport Area Floodplains Map

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5.13 Coastal Zone Management Program

In 1972, the U.S. Congress enacted the Coastal Zone Management Act to "preserve, protect, develop and where possible restore or enhance the coast resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs as well as fish and wildlife using those habitats." The California Coastal Act of 1976 grants authority to the California Coastal Commission to regulate development and related resource depleting activities in the defined coastal zone boundary. This boundary extends 1,000 feet from the mean high tide line in developed areas. Mammoth Yosemite Airport is located well outside of the coastal zone. Therefore, the proposed action and other alternatives would not create any impacts to a coastal zone.

5.14 Coastal Barriers

The Coastal Barriers Resources Act of 1982 [5-31] prohibits, with some exceptions, federal financial assistance for development within the Coastal Barrier Resources System, which consists of undeveloped coastal barriers along the Atlantic and Gulf coasts. Mammoth Yosemite Airport is not within the Coastal Barriers Resource System. Therefore, this act would not apply.

5.15 Wild and Scenic Rivers

The Wild and Scenic Rivers Act [5-32] describes those river areas eligible to be included in a system that is protected under the Act as free flowing and possessing "outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values."

The Department of the Interior maintains a National Inventory of river segments that appear to qualify for inclusion in the National Wild and Scenic River System. No wild or scenic rivers exist within the area to be affected by the proposed action or the alternatives. A 1.5 miles segment of Hot Creek on Bureau of Land Management lands is eligible to be considered for the National Wild and Scenic Rivers system as a Recreational Segment. As shown in Exhibit V-11, the CNEL 65 noise exposure area remains in the immediate vicinity of the runway at the Airport. The proposed flight tracks to be used by commercial aircraft are located approximately two to three miles at the nearest point from the specific segment of Hot Creek. Further, aircraft on departure using Runway 27 would be at an altitude of approximately 10,000 feet above ground level or more at where it passes north east of the river segment. Consequently, the proposed action and the no action alternative would not introduce any visual, audible, or other sensory intrusions which are out of character with the river segment or alter its setting. Therefore, no further consultation with the U.S. Department of the Interior is necessary.

5.16 Farmland

The Farmland Protection Policy Act of 1981 [5-33] authorizes the U.S. Department of Agriculture to develop criteria for identifying the effects of federal programs on the conversion of farmland to nonagricultural uses. The prime and unique farmlands regulations require that the U.S. Department of Agriculture determine whether land affected by any proposed action is prime and unique farmland.

As required, the U.S. Department of Agriculture was contacted to determine if the proposed site is prime or unique farmland. Correspondence from the district conservationist indicates that the area surrounding the Airport is entirely composed of urban built-up area. **Exhibit V-18** is a soil composition diagram of the proposed project site. A list of prime farmlands in the surrounding area is included in **Table V-17**, indicating none of the area depicted in Exhibit V-18 is considered as prime farmland. Therefore, the project site is are not prime or unique farmland, no mitigation measures are required.

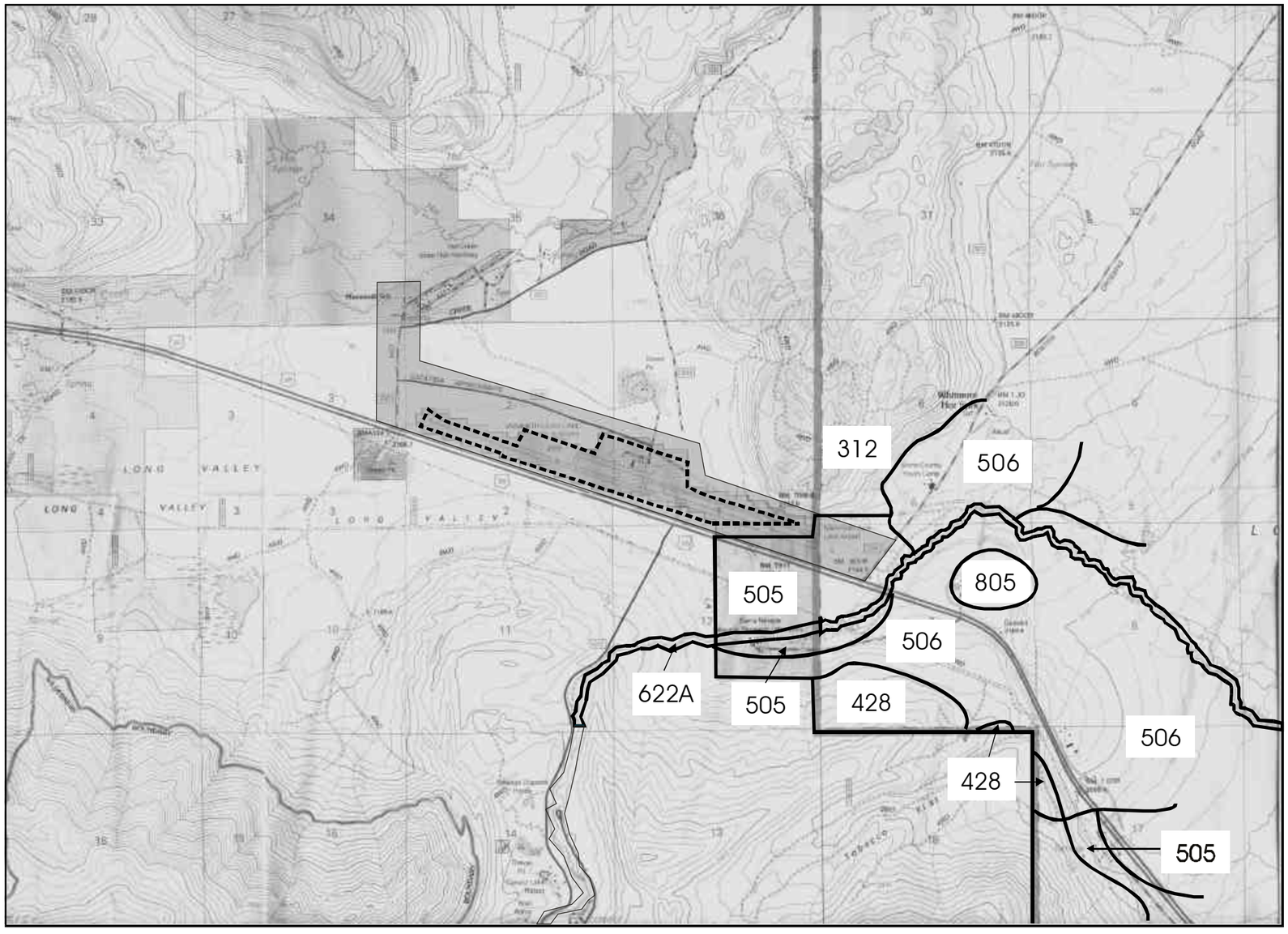
Table V-17

Prime Farmland Designators

Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name.

Map Symbol	Soil Name
416	Seaman sandy loam, 0 to 2 percent slopes (where irrigated)
421	Seaman-Yellowrock complex, 2 to 5 percent slopes (where irrigated)
421A	Seaman-Yellowrock complex, moist, 2 to 5 percent slopes (where irrigated)
451	Roundval-Dehy-Mountom complex, 0 to 2 percent slopes (where irrigated)
480	Cartago gravelly loamy sand, 0 to 2 percent slopes (where irrigated)
526	Lucerne gravelly loamy sand, 2 to 5 percent slopes (where irrigated)
527	Lucerne loamy fine sand, 0 to 2 percent slopes (where irrigated)
528	Shabbell, wet-Winnedumah, non-Saline complex, 0 to 2percent slopes (where irrigated)
629	Artray family sandy loam, 0 to 9 percent slopes (where irrigated and drained)
680	Barasco loamy fine sand, 0 to 2 percent slopes (where irrigated)
691	Cartago-Goodale complex, 0 to 2 percent slopes (where irrigated)
692	Hesperia loamy sand, 0 to 2 percent slopes (where irrigated)
695	Cartago-Hesperia complex, 0 to 2 percent slopes (where irrigated)
698	Hesperia-Cartago complex, 0 to 5 percent slopes (where irrigated)
726	Muranch family sandy loam, 2 to 5 percent slopes (where irrigated)
750	Dechambeau gravelly sandy loam, 2 to 5 percent slopes (where irrigated)
752	Dechambeau gravelly sandy loam, dry, 0 to 2 percent slopes (where irrigated)

Source: National Resources Conservation Service
Prepared by: Ricondo & Associates, Inc.



Legend

ADD	Airport Development District
505	Watterson sandy loam, 0 to 5 percent slopes
312	Plutos family-Cashbaugh, very stony-rock outcrop association, 0 to 30 percent slopes
506	Watterson gravelly loamy sand, 0 to 5 percent slopes
622A	Aquic Torriorthents-Aquic Torripsamments complex, 0 to 2 percent slopes
428	Bairs-Kilburn family complex, 9 to 30 percent slopes
805	Pits-dumps complex, 0 to 50 percent slopes
------	Existing Property Line

Source: U.S. Geological Survey Revised: Natural Resources Conservation Service
Prepared by: Ricondo &Associates, Inc.

Exhibit V-18

north

Scale 1” = 3,700’

Farmlands

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5.17 Energy Supply and Natural Resources

The effects of Airport development on energy and natural resources are generally related to the amount of energy required for stationary systems such as terminal building heating and cooling facilities, airfield lighting systems, and the movement of aircraft and ground vehicles. The effects on natural resources typically relate to basic materials required for construction such as gravel and fill dirt. For most airport actions, changes in energy or other natural resources consumption would not result in significant impacts unless the analysis indicates that demand exceeds supply.

5.17.1 Environmental Setting

The proposed project and alternatives, with the exception of Alternative 1 (No Action), have common energy consuming airfield infrastructure developments. A 20,000 to 25,000 square foot terminal building would require heating, cooling, and electricity. The runway extension and supporting taxiway extensions would have electrical requirements for additional airfield lighting. Depending on the handling arrangements made by the air carrier, additional ground service equipment may be required to service air carrier aircraft.

5.17.2 Environmental Consequences

It is anticipated that the amount of additional energy to support stationary facilities would be supplied without difficulty. Coordination was undertaken with local energy supplier Turner Propane Southern and California Edison as a means of assessing the adequacy of the available energy supply in terms of the demands of the airfield terminal and other stationary support facilities. These consultations are documented in Appendix D.

The proposed terminal and airfield improvements are expected to require the use of basic materials and natural resources such as gravel and fill dirt. The conceptual design indicates that the proposed development and alternatives, with the exception of Alternative 1 (No Action), is based on the use of commonly available construction materials. These include concrete, brick, and glass, all of which appear to be available. The design intent does not suggest that the project would cause shortages of these materials.

Fuel consumption by aircraft would increase under the proposed project and alternatives, with the exception of Alternative 1 (No Action), due the additional taxi distance created by the runway extension and the introduction of air carrier aircraft. This increased fuel consumption would not produce measurable shortages in gasoline or jet fuel supplies. While some additional ground service vehicles may be required to service air carrier aircraft, their operation for the limited schedule would not adversely effect energy supplies.

5.17.3 Mitigation Measures

There are no mitigation measures required, as there are no adverse impacts to energy supply or natural resources due to the Airport Expansion Project.

5.17.4 Summary of Findings

Based upon consultation with energy suppliers, additional energy to the project would be supplied without difficulty. Construction of the project would be done with commonly available construction materials, of which adequate supplies would be available. Additional movement of ground service vehicles and taxiing aircraft would not be of the magnitude to create shortages in fuel supplies.

5.18 Light Emissions

The major sources of light emissions at the Airport are the terminal building, runway lights, and the parking lot. Light emissions could increase somewhat under the proposed action and the alternatives as a result of the increased number of runway lights over the length of the proposed runway extension, airfield apron lighting and parking lot lights.

However, the existing ramp lights would be replaced with the new state of art shielded lights and the new lights would be shielded as well. These additional light emissions would be insignificant and would not affect any nearby uses.

This mitigation measure also conforms with the Town of Mammoth Lakes' design review requirements for lighting, which are:

- Lighting needs to direct downward so that there is no direct light shining up to the sky.
- All lights need to be shielded so that no source of the light is visible from offsite.

5.19 Solid Waste/Hazardous Waste

The addition of certain facilities at an airport can result in the generation of additional amounts of solid waste. Airfield improvements, however, do not normally have a direct effect on solid waste collection or disposal, other than that, which is associated with the construction itself.

In addition to the collection of solid waste, various observations support the conclusion that waste disposal sites are artificial attractants to birds. Accordingly, disposal sites in the vicinity of an airport are incompatible with safe flight operations due to the potential for bird strikes. As outlined in FAA Order 5200.5A, this analysis ensures that there are no waste disposal sites located within:

- 5,000 feet of any runway end used only by piston powered aircraft;
- 10,000 feet of any runway end used or planned to be used by turbine powered (i.e., jet) aircraft; and
- a five mile radius of a runway end that attracts or sustains hazardous bird movement from feeding, water, or roosting areas into or across the runways and/or approach and departure pattern of aircraft.

5.19.1 Environmental Setting

Solid Waste Disposal. The Mono County Department of Public Works is responsible for solid waste management in Mono County and for daily operation of the Benton Crossing Landfill, which is the destination for all municipal solid waste generated in the Mammoth Lakes area. Solid waste is transported to the Benton Crossing Landfill approximately five miles northeast of the Airport.

Hazardous Materials. No on-Airport structures that may contain hazardous materials exist in the areas where the development Alternatives would be located, nor is there any indication that such materials lie beneath the ground surface where construction would occur. Hazardous materials in the form of aviation gasoline and jet fuel (flammable petroleum products) were noted at the Airport site. However, the petroleum products were maintained in accordance with regulatory requirements and pose only a minimal future risk of contamination to the subject site. A detailed site assessment was prepared by Batchelor Environmental Services, Inc. The report is included as Appendix H, and is entitled, *Level I Environmental Site Assessment of the Hot Creek Hangar Development* dated May 17, 1999.

5.19.2 Environmental Consequences

Solid Waste Disposal. Given the projected estimate in the *Forecast of Aviation Demand* prepared by Ricondo & Associates, Inc. on July 17, 2000, the average daily enplanements would increase from 330 in 2002 to 910 in 2022, as indicated in **Table V-18**. Mono County Department of Public Works indicated in a letter dated June 6, 2000 (Appendix D), that a typical waste generation rate for commercial aircraft is one pound per passenger per trip. As a result, by 2022, 910 pounds of waste per day may ultimately be generated by the increased air traffic. Further, based on the projection of Mono County Department of Public Works, depending upon the type of services provided in an expanded terminal, the waste generation rate would at least double, bringing the total waste generation at the facility to an estimated 1,820 pounds per day by 2022.

Table V-18

Projected Average Daily Base Case Enplanements– Mammoth Yosemite Airport

	2002*	2007	2012	2017	2022
Winter Enplanements	37,000	111,900	145,600	172,500	200,300
Summer Enplanements	0	48,000	97,100	115,000	133,500
Totals	37,700	159,900	242,700	287,500	333,800
Average Daily Enplanements	330	440	660	790	910

*there would only be winter service (16 weeks) in 2002.

Source: Ricondo & Associates, Inc., Kent Myers, and committed service information from American Airlines
Prepared by: Ricondo & Associates, Inc., July 2000

According to information provided by the Department of Public Works in Mono County dated June 6, 2000 (Appendix D), the existing permitted landfill capacity will be able to accommodate an increase in the solid waste of 10 tons per day. Accordingly, the quantity of waste that may potentially be generated at an expanded Mammoth Yosemite Airport would not have a significant impact on County Landfills.

There are no solid waste disposal facilities located within 5,000 feet of all the alternatives.

Hazardous Material. No significant adverse hazardous waste impacts would be associated with the proposed action. Prior to excavation, any additional sampling deemed necessary should be conducted.

5.19.3 Mitigation Measures

No hazardous materials are foreseen to be encountered during construction. However, if unknown or potentially dangerous materials surface during initial construction excavations, construction activity would cease until appropriate authorities from the State of California Protection Agency are contacted. Any hazardous materials discovered during construction would be handled and disposed of using the best-known containment methods.

5.19.4 Summary of Findings

The forecast number of operations is anticipated to grow, but is not expected to have a significant impact on the useful life of existing landfills. Therefore, no mitigation measures are required.

No hazardous materials are foreseen to be encountered during construction of the proposed action. Therefore, no mitigation measures are required.

5.20 Construction Impacts

5.20.1 Environmental Setting

The proposed project and alternatives involve construction activities that may result in temporary environmental impacts, primarily from excavation and subsurface preparation.

5.20.2 Environmental Consequences

Fugitive dust, which may be emitted during construction as well as a result of wind erosion over exposed earth surfaces, has the greatest nuisance potential. Dust generation is highly variable. The amount of dust generated on a given day depends on the types and amount of construction activity and on meteorological and soil conditions. Although construction activities may have a discernable impact within a short distance from the project site, the potential for nuisance is limited and the impact is temporary, because the impact would cease when construction activity ceases. The most likely impact of construction would be increased dustfall immediately downwind of the area of active construction. Potential air quality impacts associated with construction related activities are discussed in Section 5.5.

Noise would be generated during construction by on-site equipment and heavy vehicles entering and leaving the construction site. Runway-related construction usually results in large quantities of subsoil and paving material that would be excavated, removed, or replaced at the Airport for the runway extension, terminal building, and ground access/parking.

The preliminary design for this runway extension and supporting taxiways keep a relatively even cut and fill. Consequently significant amounts of cut and fill material would not be required to be transported on or off the project site. The preliminary design for the runway extension and taxiways keeps a relatively even cut and fill so significant amounts of cut and fill material would not be required to be transported on or off the project site. Any discarded materials would be disposed of at an area landfill site and are not expected to significantly reduce the useful life of the landfill.

Sensitive biological resources lie in areas adjacent to the construction corridor. These biological resources include but are not limited to the dry meadow east of the airport and the migratory deer foraging habitat to the west. .

The widening and moving of the centerline of Runway 09-27 would also require the closure of the runway for some periods of time.

5.20.3 Mitigation Measures

Some of the measures that could be used to reduce additional noise and traffic generated by construction vehicles and prevent particulate matter from becoming airborne, as recommended in FAA Advisory Circular 150/5370-10A, are discussed below.

Air quality impacts resulting from construction activities can be significantly reduced through the application of appropriate mitigation measures, as discussed in Section 5.5, and the application of the recommendations set forth in FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction at Airports* [5-34]. These procedures would restrict the emission of dust (particulate

matter) and provide a series of measures that can be taken to prevent particulate matter from becoming airborne.

In addition to these dust control measures, the Town of Mammoth Lakes would require any contractor working on the Airport to coordinate with the Mono County Sheriffs' Department Dispatch Center and Long Valley Fire Department as to the time of activities that could generate clouds of dirt or dust. This coordination would help prevent false alarm responses.

Large excavation equipment may be required to move the subsoil and demolish pavement. All grading and earthwork activities would be conducted in accordance with an approved grading plan and grading permit issued by the Town of Mammoth Lakes and Lahontan RWQCB. The grading permit must include provisions for the following:

- All earthwork activity must be conducted in accordance with a detailed project schedule.
- Existing drainage patterns would not be significantly modified and drainage concentrations shall be avoided.
- All loose piles of earthwork material shall be protected to avoid discharges of silt-laden runoff.
- Limits of construction work would be clearly delineated, and disturbances of adjacent soil and vegetation would be strictly avoided.
- Dust control measures, such as watering trucks and/or pumped systems, would be continuously implemented throughout the construction period.
- All exposed soil areas would be stabilized and re-seeded in accordance with an approved landscape/re-vegetation plan as soon as feasible. All stockpiles of unsuitable soil materials would be removed and disposed of at approved sites designated by the Town of Mammoth Lakes.
- Bond or other security would be required to guarantee completion of site stabilization and re-vegetation measures within the time periods delineated in the project schedule.

The biological resource adjacent to the construction area would be protected by placing orange construction barrier fencing or stakes and flags. The location of these sensitive biological resources would be clearly identified on all construction drawings and additionally adequately marked in the field. All fencing or stakes and flags should remain in place until all construction and restoration that involves heavy equipment is complete.

Operators of the construction equipment and other construction workers typically experience high levels of noise from various types of construction equipment. Appropriate measure would be taken to protect these operators and workers from excessive noise exposure such as providing workers with hearing protection equipment. There are no residential areas in the immediate vicinity of the proposed construction site. Therefore, no residents would be affected by equipment noise and no mitigation would be required.

The extension of underground electrical conduits for airfield lighting within the construction area is an important part of the construction staging. The contractor would be required to work closely with the Airport staff and local power companies to ensure continued operation of airfield lighting when

necessary during construction. Relocation, removal, or support of electrical conduits would be planned as part of the design process for the project.

All construction and grading will comply with the appropriate Town of Mammoth Lakes regulations governing these activities.

5.20.4 Summary of Findings

Potential impacts from construction activity are not expected to be significant provided that all activities are carried out in accordance with known and accepted "best management practices." Construction impacts are not generally considered to be significant because of the following:

- The impacts result solely from construction operations.
- The impacts are limited to specific construction periods.

5.21 Visual Impacts

While not specifically required by FAA Order 5050.4a, the environmental impact category of Visual Impacts was included as a result of scooping and local concern about the proposed runway extension's effect on U.S. Highway 395, as a State scenic highway.

5.21.1 Environmental setting

In the summer of 2000, The California Department of Transportation (CALTRANS) designated the portion of U.S. Highway 395 south of the Airport as a State Scenic Highway. The State of California's Scenic Highway program preserves and protects scenic highway corridors from development that would diminish the aesthetic value of the natural landscape and scenic quality of that landscape.

The local agency responsible for protecting this corridor is Mono County. In 1981, Mono County adopted a Scenic Highways Element for the countywide general plan. The portion of U.S. Highway 395 south of the Airport has been considered a scenic highway since 1981. The Scenic Highway Element establishes policies and requirements for all development located within 1,000 feet of the designated scenic highways.

5.21.2 Environmental Consequences

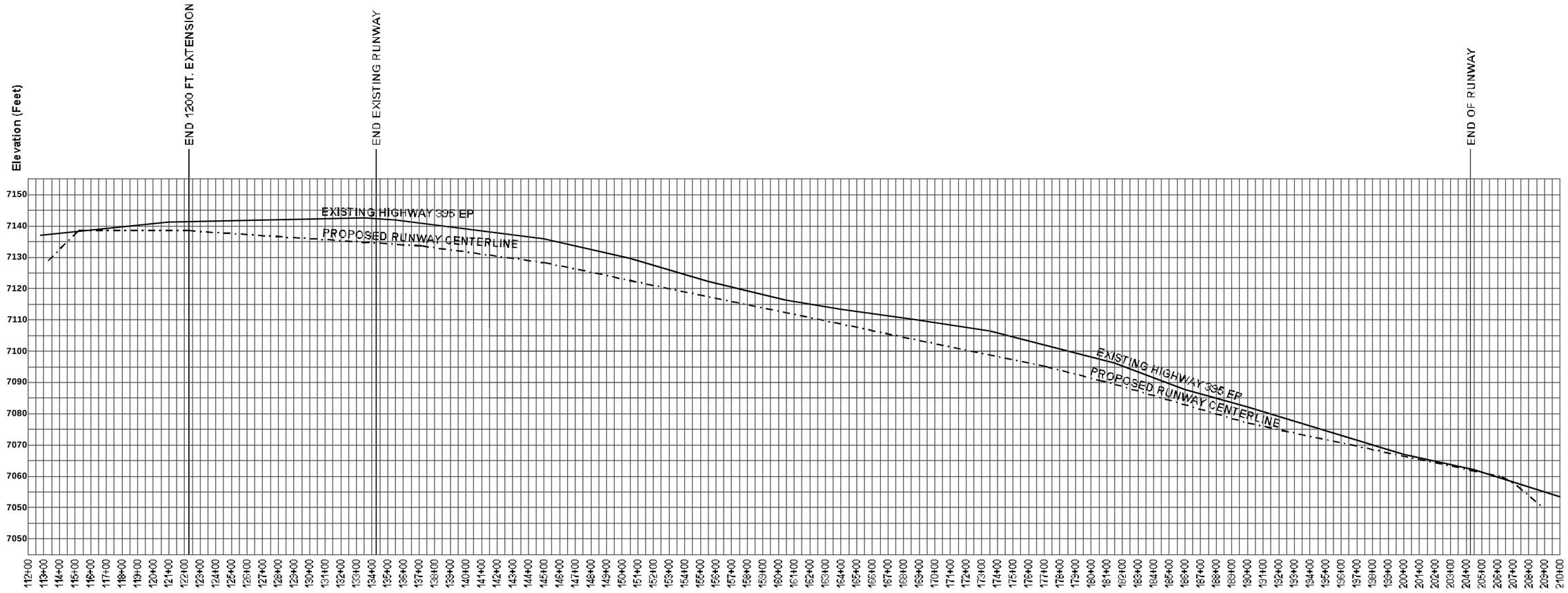
Virtually all of the proposed project and the alternatives are within the scenic viewshed of State Highway 395. Most of the land uses designated in the Airport reflect existing developments that have been a part of the viewshed for many years. these existing uses are not considered visually offensive nor do they have a significant impact on the scenic views of the area.

Development of the Airport terminal could have adverse visual impacts from viewpoints on Highway 395. Although the existing Airport facilities have been a part of the viewshed for many years, additional building structures and development could result in the deterioration of visual quality. Inadequate consideration of building separations, external colors and appearance, or excessive building and tower heights could adversely affect the viewshed of the surrounding natural landscape.

As shown in **Exhibit V-19**, the elevation of the runway would not be higher than in relation to the elevation of the roadway, and any difference between the elevations would not be significant over any extended distance. Therefore, the runway would not significantly obstruct scenic views of the area.

There would be periods of time when large air carrier aircraft would be parked on the Airport ramp. These aircraft would only be there for the period of time it requires to unload disembarking passengers and load embarking passengers, fuel and provisions. The short duration of air carrier aircraft at the Airport should not significantly impact the scenic mountain vistas seen from U.S. Highway 395.

Night time air carrier operations are not anticipated. Therefore, light emissions associated with terminal would be minimized.



Legend

——— **Existing Highway 395 edge of pavement profile**

– · – · – **Proposed runway centerline profile**

Source: Reinard H.Brandley, Consulting Engineer.
Prepared by: Ricondo &Associates, Inc.

Exhibit V-19

Elevation Profiles of Proposed Runway and Highway 395

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As requested by FAA regulations, a security fence around the airfield is required along the southern boarder of the Airport. This fence could be either a six-foot chain link fence topped with three stands of barbed wire or an eight-foot chain link fence without barbed wire.

5.21.3 Mitigation Measures

Potential impacts on visual/aesthetic resources associated with the proposed project were analyzed. The visual impacts of the currently proposed development would be reduced to acceptable levels by imposition of the mitigation measures stated below:

- Siting of new structures and structural design shall be sensitive to the climate, topography, and lighting of the surrounding environment. The design, color, and building materials used for structures would be compatible with the surrounding environment.
- Indigenous plant species would be used on disturbed sites, where appropriate.
- To minimize any institution look to the facility, the eight-foot chain link fence without the barbed wire is recommended. The chain link security fence can be seen through, and therefore, minimizes obstruction of the view. The use of neutral colored fencing material would aid in making the fence more aesthetically pleasing, and it is recommended that this be incorporated into the specifications. **Exhibit V-20** and **Exhibit V-21** are photographs with digital representations of neutral colored fencing material superimposed. These digital representations have been reviewed with the U.S. Forest Service, whose land the fence would lie on, and are acceptable to that Agency. A copy of that coordination appears in Appendix D.

5.21.4 Summary of Findings

The visual impacts of the currently proposed development could be reduced to acceptable levels by imposition of the mitigation measures.

5.22 Cumulative Impacts

In evaluating the environmental impact of a proposed federal action, it is necessary to consider the overall cumulative impact of the proposed action and the consequences of the subsequent related actions. **Exhibit V-22** shows the other projects currently proposed in the region. There are two actions currently under consideration in the vicinity of the Airport that need to be considered part of the cumulative. These two actions are discussed in this section.

5.22.1 Environmental Setting

5.22.1.1 Mammoth Lakes Airport Commercial Development Plan

The commercial development area proposed at Mammoth Lakes Airport will encompass 25.6 acres of land within the Airport boundary. The development is proposed to take place in four phases.

Phase I airfield development would consist of the construction of both Airport infrastructure improvements and 30 commercial aircraft hangars, a gas storage building consisting of aboveground storage tanks and associated structures, and a general aviation terminal consisting of building improvements normally associated with the operations of a fixed base operator.

Proposed Phase I commercial development will consist of a minimum of 60 units of time-share, hotel, condominium, or commercial lodging facilities for transient guests. Construction of a retail building, signage directing to or advertising the development, and remodeling of existing terminal buildings is also proposed.

Under the agreement with the Town of Mammoth Lakes, the developer has the right, but not the obligation, to develop Phase II, Phase III, and Phase IV. Possible additional commercial development that may occur in Phase II could be the construction of a 300-seat restaurant complex, additional lodging units similar to those constructed in Phase I, and a recreational vehicle park with a capacity of up to 100 vehicles. Phase II airfield development could consist of two additional community hangars for maintenance and aircraft storage and additional individual aircraft hangars. Phase 3 and Phase 4 could include additional lodging units and additional individual hangars.

The developer has retained the right to construct an additional access road from Benton Crossing Road to the Airport. Portions of this access road could be constructed on lands owned and/or administered by the City of Los Angeles, the Bureau of Land Management and the U. S. Forest Service. Rights of way, easements, or grants would have to be obtained from these entities.

The Airport Commercial Development plan was environmentally reviewed in 1997 pursuant to the California Environmental Quality Act Guidelines Section 15162. This Environmental Impact Report was certified as adequate in 1997.

5.22.1.2 Sierra Business Park

The proposed Morgan Park Industrial site is located on a 36-acre site along U. S. Highway 395. The site was originally established as the Sierra Quarry, which was a surface mining site for the extraction and processing of raw material for the production of sand and aggregate product. Resource extraction and manufacturing operations ceased in 1984. The present owner purchased the property in 1994 for the construction of a concrete batch plant and industrial park subdivision.

Source:Mammoth MountainSkiArea
Preparedby: Ricondo & Associates,Inc.

Exhibit V-20

Fence Alternative 1- Tan Color

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Source:Mammoth MountainSkiArea
Preparedby: Ricondo & Associates,Inc.

Exhibit V-21

Fence Alternative 2- Green Color

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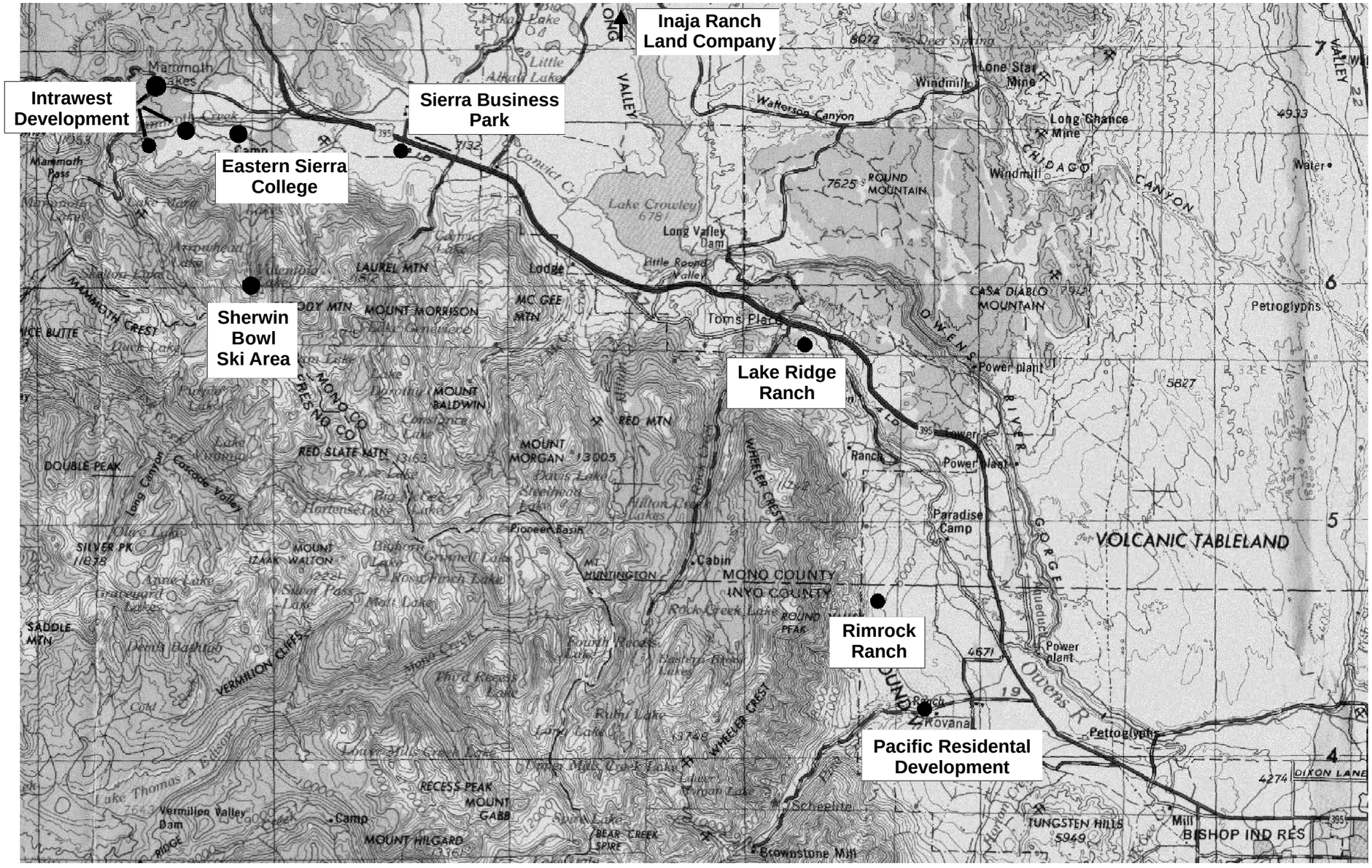

Source: M ammoth Mountain
Prepared by: Ricondo &Associates, Inc.

Exhibit V-22

north

Not to Scale

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Other Projects

The proposed plan calls for the property to be subdivided into 37 parcels to be used for industrial use. The project will be constructed in two phases. Phase I will consist of the construction of 24 lots, utilities, and an access road on the property. Construction of Phase I is currently scheduled to begin in the summer or fall of 2000. Phase II, the construction of the remaining 12 lots, will begin at a unspecified future date.

The uses of the sub divided lots will be pursuant to the needs of the individual lot purchasers as allowed under the Mono County Code, Section 19.17.020 and 19.17.030, as applicable. The current owner would not develop the individual lots. Each purchaser, in accordance with applicable laws and regulations, would develop their respective lots.

The Sierra Business Park is currently being environmentally reviewed under CEQA regulations.

5.22.3 Environmental Consequences

5.22.3.1 Aircraft Noise

The proposed action will not have an adverse effect on aircraft noise. The growth in operations as a result of the Airport Commercial Development Plan was included in the noise analysis of Section 5.1. The Sierra Business Park is not anticipated to have aviation related activities and consequently would not have any impacts on aircraft noise. Therefore, no cumulative impacts are anticipated.

5.22.3.2 Compatible Land Use

The proposed action and all other actions are consistent with the Mammoth Lakes Airport Land Use Plan and Mono County and Town of Mammoth Lakes zoning ordinances. The actions, in combination with each other, would not adversely impact land use compatibility in the vicinity of the Airport.

5.22.3.3 Social Impacts and Environmental Justice

The proposed action would result in the relocation of the Sierra Nevada Aquatic Research Laboratory (SNARL) classroom and lecture hall facilities located in the “Green Church.” The Airport Commercial Development Plan and Sierra Business Park could provide a location for the replacement facilities for the "Green Church". The social cumulative impacts of the proposed project and the other projects are not expected to produce a significant impact. Rather the cumulative effect would be positive should the SNARL facilities be relocated to facilities built by the other actions.

The proposed action would have no impacts on any specific demographic group. The other actions are expected to be consistent with the purposes of the Executive Order on Environmental Justice.

5.22.3.4 Induced Socioeconomic Impacts

The proposed action will have no socioeconomic effects. Rather, it may have a net positive effect on the local economy. Cumulative effects of the proposed action and other actions on vehicular traffic are discussed in Section 5.4. No other proposed action is anticipated to have adverse socioeconomic effects.

5.22.3.5 Air Quality

The cumulative environmental impacts of the proposed action and the Airport Commercial Development Plan were reviewed in the 1997 *Mammoth Lakes Airport Expansion Subsequent*

Environmental Impact Report and Updated Environmental Assessment [5-20]. The airfield improvements analyzed for air quality in the 1997 EIR were more extensive than the current proposed action. The airfield improvements analyzed for air quality impacts in the 1997 EIR included a new crosswind runway and supporting taxiway structure as opposed to just a runway extension sought under the proposed action. The air quality impacts in the 1997 EIR for both the airfield improvements and the Airport Commercial Development Plan were found not to be significant providing "best management" practices were followed during the construction of the actions and followed the guidelines of the Great Basin Unified Air Pollution Control District (GBAUPCD)

The Sierra Business Park is undergoing environmental review under CEQA guidelines. Initial air quality findings from that review are that construction exhaust emissions are anticipated to be well below significant thresholds. Dust emissions from grading activities are anticipated to be less than significant provided that best available control measures are used for dust control. Long term traffic related emissions are anticipated to be well below relevant thresholds of significance. **Table V-19** summarizes the long-term emissions of the Proposed Action with the anticipated emissions generated by the Sierra Business Park. As shown in Table V-15 the emissions associated with the two projects together does not result in annual emissions above the established de minimis thresholds.

Table V-19

Cumulative Operational Emissions and De Minimis Criteria (Tons per year)

Project/Year	PM-10	VOC	NOx
Airport Development 2022	24.04	12.92	47.40
Sierra Business Park	7.85	9.13	20.44
Emissions Sub Total	31.89	22.05	67.84
De minimis criteria	100	50	100

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

The proposed action and other actions are not anticipated to have adverse impacts to air quality and would follow the GBAUPCD air quality regulations therefore no cumulative impacts are anticipated.

5.22.3.6 Water Quality

The proposed action is not anticipated to have an adverse impact on water quality. Individually, the other actions are not expected to cause significant adverse impacts to water quality either.

The forecast quantity of sewage effluent from the proposed action and the Airport's Commercial Development Plan is 50,000 gallons per day. Sewage effluent from the Morgan Park Industrial site may vary considerably depending on the proposed industrial uses of the lots. However, the sewage quantity is not expected to exceed the maximum disposal quantity of 500 gallons per acre per day allowed by the Lahontan RWQCB. Maximum sewage output of the three projects, at their full build out, could approach 68,000 gallons per day.

The Lahontan RWQCB would require all of the projects to use a package plant that would supply secondary treatment with supplemental nitrate reduction. No adverse cumulative impacts on the area's water quality would result.

5.22.3.7 U.S. Department of Transportation Section 303/4(f) Lands

The proposed action will require renegotiations of the Airport's current land use agreement with the U.S. Forest Service for the use of Forest Service land for the runway safety area. The Commercial Development Plan's proposed access road to Benton Crossing Road would be built on U.S. Forest Service land and would, therefore, require some type of use permit and possible mitigation measures. The Sierra Business Park would be located on private lands and is not anticipated to have an adverse impact on Section 303/4(f) lands. No cumulative impacts are anticipated.

5.22.3.8 Biotic Communities

The proposed action would not significantly adversely effect biotic communities should the proposed mitigation measures to account for the loss of high quality deer habitat be undertaken. The Airport Commercial Development Plan was found in 1997 not to have any significant effects on biotic communities. The Sierra Business Park due to previous resource extraction activities was not considered high quality deer habitat. Therefore not significant adverse cumulative impacts are expected.

5.22.3.9 Endangered and Threatened Species of Flora and Fauna

The proposed action and Airport Commercial Development Area project does not contain a significant endangered or threatened species habitat due to disturbances associated with the operations on U.S. Highway 395 and the existing runway and airport facilities. The Sierra Business Park does not contain a significant endangered or threatened species habitat due to disturbances associated with resource extraction and the operation of the concrete batch plant. No cumulative impacts are anticipated.

5.22.3.10 Energy Supply and Natural Resources

No adverse cumulative impacts are anticipated, as regional energy supplies are adequate.

5.22.3.11 Light Emissions

All of the action's lighting would be appropriately shielded and as indirect as possible consistent with security and public safety requirements. No adverse cumulative impacts are anticipated.

5.22.3.12 Solid Waste and Hazardous Waste Impacts

No adverse cumulative impacts are anticipated, as regional disposal facilities are adequate. The finding of hazardous materials are not anticipated during construction of the proposed action, Airport Commercial Development Area, or Sierra Business Park

5.22.3.13 Construction Impacts

All actions would require the use of "best management practices" to mitigate potential short-term impact, therefore, no adverse cumulative impacts are expected

5.22.3.14 Visual Impacts

The proposed action, Airport Commercial Development Area, and Sierra Business Park will require appropriate shielding of lighting for structures and parking lots. No adverse cumulative impacts are expected

5.23 Environmental Consequences – Other Considerations

There are no known conflicts between the proposed action and the objectives of federal, State, regional, or local land use plans, policies, or controls for the area concerned. As stated in Section 5.2, the Mono County Airport Land Use Commission (ALUC) was established to promote the orderly development of the Airport and the area around the Airport. The ALUC created the *Airport Land Use Policy Plan for the Mammoth/June Lake Airport* in 1986, which designated Airport Development District (ADD) as described in Section 4.3.3. The proposed action does not extend beyond the boundaries of the ADD.

There are no known inconsistencies of the proposed action with any approved State or local plan and laws. The sponsor has coordinated with effected federal, State, or local agencies. The sponsor has not received any written or oral comments identifying any such inconsistencies with any approved federal, State, or local plan and laws.

There are no known additional adverse environmental impacts. All adverse environmental impacts and mitigation measures can be found in their respective environmental categories.

Although the Town received many written and verbal comments on the EA and the proposed action, most were favorable in nature and it does not appear that there is sufficient justification to warrant an Environmental Impact Statement (EIS) be prepared due to any significant degree of controversy on environmental grounds.

VI. Cited References

2-1. U.S. Congress. *The National Environmental Policy Act.* Public Law 91-190, effective January 1, 1970; as last amended by Public Law 94-83, approved 9 August 1975.

2-2. U.S. Department of Transportation. Federal Aviation Administration. *Airport Environmental Handbook.* Order 5050.4A. Washington, D.C.: GPO 8 October 1985.

3-1. Ricondo & Associates, Inc. *Expansion Project Benefit Cost Analysis (BCA) for Mammoth Lakes Airport* March 2000.

3-2. Wadell Engineering Corporation. *Mammoth Lakes/June Lake Airport, Site Selection and Master Plan.* 1978.

3-3. Wadell Engineering Corporation. *Final Environmental Impact Report, Mammoth Lakes Area Airport, Site Selection and Master Plan*. 1975.

5-1. U.S. Department of Transportation. Federal Aviation Administration. *Airport Environmental Handbook.* Order 5050.4A. Washington, D.C.: GPO 8 October 1985.

5-2. State of California Airport Noise Regulation (CCR Title 21, Subchapter 6).

5-3. Congress FAR Part 150 Noise Compatibility Programs.

5-4. California Department of Transportation, Division of Aeronautics.

5-5. Mono County Noise Element.

5-6. Town of Mammoth Lakes Noise Element.

5-7. The Mono County Airport Land Use Commission. *Airport Land Use Policy Plan for the Mammoth/June Lake Airport.* 1986.

5-8. The California Department of Transportation (CALTRANS). CALTRANS Highway Design Manual.

5-9. Executive Order No. 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. February 1994.

5-10. Ricondo & Associates, Inc. *Forecast of Aviation Demand*. July 17, 2000.

5-11. Traffic Safety Engineers. *Traffic Impact Study for Sierra Business Park Specific Plan.* May 2000.

5-12. U.S. Congress. *Clean Air Act of 1970.* Public Law 91-604, 31 December 1970.

5-13. U.S. Congress. *Clean Air Act Amendments of 1990.* Public Law 101-49, 15 November 1990.

5-14. U.S. Environmental Protection Agency. *General Conformity Final Rule*. 40 CFR Parts 6, 51, and 93, 30 November 1993.

5-15. The Great Basin Unified Air Pollution Control District and the Town of Mammoth Lakes. *Air Quality Management Plan for the Town of Mammoth Lakes.* November 30, 1990.

5-16. U.S. Congress. *Federal Water Pollution Control Act of 1972 (Clean Water Act).* 33 U.S.C. §1251 et seq., 1972.

5-17. U.S. Congress. *Federal Water Pollution Control Act of 1987.*

5-18. TRIAD/HOLMES and Associates. *Mammoth Lakes Airport Water and Sewer Analysis.* 1997.

5-19. Mark Wildermuth. *A Study of the Mammoth Creek/Hot Creek Basin.* 1996 as cited in Town of Mammoth Lakes, *Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment, 1997*

5-20. Town of Mammoth Lakes. *Mammoth Lakes Airport Expansion Subsequent Environmental Impact Report and Updated Environmental Assessment. 1997*

5-21. U.S. Department of Transportation. Section 4(f), 49 U.S.C. §303, 1994.

5-22. Jones & Stokes, Associates, Sacramento, CA, *Mammoth Lakes Airport Improvement Project,* July 2000.

5-23. Jones & Stokes Associates. *Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-24. Kucera 1988. *Ecology and Population Dynamics of Mule Deer in the Easter Sierra Nevada,* California. Ph.D. dissertation. University of California as cited in Jones & Stokes Associates. *Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-25. Taylor, T.J. 1988. Migration and seasonal habitats of the Casa Diablo deer herd. California Department of Fish and Game. Bishop, CA. as cited in Jones & Stokes Associates. *Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-26. U.S. Forest Service. *Final environmental impact statement for the Doe Ridge Golf Course.* Bishop, CA. 1990 as cited in Jones & Stokes Associates. *Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-27. Thomas, R. 1985. *Management Plan for the Sherwin Grade Deer Herd*. Unpublished report. California Department of Fish and Game. Bishop, CA as cited in Jones & Stokes Associates.

Biological Study for the Mammoth Lakes Airport Expansion Project. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-28. U.S. Forest Service. *Final environmental impact statement for the Doe Ridge Golf Course.* Bishop, CA. 1990 as cited in Jones & Stokes Associates. *Biological Study for the Mammoth Lakes Airport Expansion Project*. September 2000. Sacramento, CA. Prepared for Consulting Airport Engineer, Loomis, CA.

5-29. U.S. Department of Transportation. Federal Aviation Administration *FAA Advisory Circular 150/5200-33 Hazardous Wildlife Attractants on or Near Airports*, May 1,1997.

5-30. California Coastal Commission. *California Coastal Resource Guide.* 1987.

5-31. U.S. Congress. *Coastal Barriers Resources Act.* Public law 97-348, 96 statute 1653, 18 October 1982.

5-32. U.S. Congress. *Wild and Scenic Rivers Act.* Public law 90-542, statute 906. 2 October 1988, as amended.

5-33. U.S. Congress. *Farmland Protection Policy Act of 1981.* Public law, 97-98.

5-34. U.S. Department of Transportation, Federal Aviation Administration. Advisory Circular 150/5370-10A: *Standards for Specifying Construction at Airports.* February 1989, as amended.

VII. List of Preparers

Overall preparation of the Environmental Assessment was by the following:

7.1 Ricondo & Associates, Inc.

Ronald L. Tulis, Sr. Vice President
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Responsibilities – Overall quality control, CEQA / NEPA guidance.

Thomas L. Cornell, Jr., Vice President
Qualifications – Fifteen years airport and environmental planning experience.
Responsibilities – Overall quality control, direction, and public and agency outreach.

Thomas Burkman, Managing Consultant
Qualifications – Nine years airport and environmental planning experience, Fifteen years air traffic control, airline operations and aircraft performance experience.
Responsibilities – Compatible land use; Social impacts and environmental justice; Water quality, water supply, and stormwater control; Floodplain management; Coastal zone management; Coastal barriers; Wild and scenic rivers; Energy supply and natural resources; Construction impacts; Cumulative impacts; Other considerations; other analysis.

Xin Wang, Senior Consultant
Qualifications – Three years airport and environmental planning experience
Responsibilities – Induced socioeconomic impacts; U.S. Department of Transportation, Section 4(f) lands; Historic, architectural, archaeological and cultural resources; Biotic communities; Endangered and threatened species of flora and fauna; Wetlands; Farmlands; Light emissions; Solid waste/ hazardous waste impacts; Visual impacts; other analysis.

Adrian Jones, Managing Consultant
Qualifications – Six years airport and environmental planning experience.
Responsibilities – Air quality analysis.

Tim Kieff, Consultant
Qualifications – Two years airport and environmental planning experience.
Responsibilities – Air quality analysis.

Leslie Bullock, Technical Editor
Qualifications – One year experience editing airport and environmental planning documents.
Responsibilities – Technical editing.

7.2 Consulting Airport Engineers

Reinard Brandley
Qualifications – Forty eight years airport and environmental planning experience
Responsibilities – Air quality analysis, Water quality, water supply and stormwater control.

7.3 Jones & Stokes, Sacramento, California

Steven Avery, Wildlife Biologist
Qualifications – Ten years biological and wildlife planning experience
Responsibilities – Biological study.

Jay Pawlek
Qualifications – Six years planning and impact assessment experience
Responsibilities – Project management, land use planning and analysis, and impact assessment

Leslie Fryman
Qualifications – 20 years of experience in archaeology, history, and preservation planning.
Responsibilities – Historic record search.

7.4 Brown & Buntin

Robert Brown, President
Qualifications – Twenty years acoustical analysis experience.
Responsibilities – Aircraft noise analysis.

7.5 Wildermuth Environmental, Inc.

Mark Wildermuth, President
Qualifications – Fifteen years water engineering experience
Responsibilities – Water quality, water supply and stormwater control.

7.6 LSA Associates, Inc.

Leslie E. Card
Qualifications – Twenty seven years traffic analysis experience
Responsibilities – Traffic analyses.

APPENDIX A - Contacts

At the onset of the preparation of the Environmental Assessment, a variety of public agencies and other interested parties were notified of the proposed action and alternatives and comments were requested by the Town of Mammoth Lakes. This appendix includes a copy of the scooping notice and a list of parties contacted. Written comments received responding to the scooping notice are included in Appendix I.

A list of parties who received a copy of the Draft Environmental Assessment is also provided. Written comments received on the Draft Environmental Assessment are included in Appendix J.

April 19, 2000

Ms. Diane Noda
U.S. Fish and Wildlife Service
2493 Portola Road Suite B
Ventura, CA 93003

Re: Notice of Intent to Prepare an Environmental Assessment (EA) for Proposed Improvements at Mammoth Lakes Airport, California

Dear Ms. Noda:

The Town of Mammoth Lakes is proposing to construct a series of improvements at Mammoth Lakes Airport, primarily for the purpose of enabling commercial jet air carriers service to operate at the Airport. Prior to making many of these improvements, the Town must prepare an Environmental Assessment (EA) consistent with the National Environmental Policy Act of 1969 and Federal Aviation Administration (FAA) Order 5050 4A, *Airport Environmental Handbook*, in order to (1) obtain the necessary federal, State, and local approvals to construct such improvements, and (2) be eligible to apply for Airport Improvement Program (AIP) grants from the FAA or Passenger Facility Charges (PFCs) to assist in the financing of the proposed construction. The purpose of this letter is to inform you of the project and to solicit any specific concerns or issues you would like to see addressed in the EA that could be of importance to your agency. This scoping process will assist the Town of Mammoth Lakes in identifying: (1) significant environmental issues to be covered; (2) insignificant or non-relevant issues to avoid unnecessary discussion in the EA and to assist in narrowing down the environmental categories that would require in-depth analysis; (3) potential boundaries of the proposed project's impact; (4) range of feasible and prudent alternatives to be discussed; and (5) potential mitigation measures.

PURPOSE AND NEED

Mammoth Lakes, California, is a resort town located in the Eastern Sierra Nevada Mountain Range approximately 170 miles south-southeast of Reno, Nevada. The region has year-round recreational attractions consisting of skiing in the winter and numerous outdoor recreational activities in the spring, summer, and autumn. Winter skiing at Mammoth Mountain attracted nearly 1.0 million skiers in the 1998/99-winter season. During the spring, summer, and autumn major attractions include Mono Lake, June Lake, Devils Postpile National Monument, and Yosemite National Park, among many other natural attractions. Based on statistics provided by the California Department of Transportation (CalTrans), approximately 1.5 million summer tourists visit the Mammoth

Lakes region annually. Nearly 6.0 million tourists visited nearby Yosemite, Kings Canyon, and Death Valley national parks in 1998.

Currently, the nearest commercial service airport to the Mammoth Lakes area is in Reno. The next closest commercial service airports are in Fresno, California (190 miles), Sacramento, California (230 miles), the three San Francisco, California Bay-Area airports (San Francisco/Oakland/San Jose, about 250 miles), Las Vegas, Nevada (310 miles), and Los Angeles, California (320 miles). With the exception of the drive from Los Angeles and Reno via U.S. 395, the drive from each of these airports is via winding mountainous roads through the Sierra Nevada Mountain range. Most travelers outside of the California and Nevada areas fly to either Reno or Los Angeles and drive to the Mammoth Lakes area. For tourists living west of the Sierra Nevada in Central and Northern California, the shortest route to Mammoth Lakes is via the Tioga Pass through Yosemite National Park. However, heavy snows usually cause closure of this highway between November and May nearly every year.

Commercial airline service to the Mammoth Lakes Airport is scheduled to begin during the winter season in 2001/2002, to include air carrier service to and from Dallas/Fort Worth International Airport and other destinations using turbojet aircraft such as the Boeing 757 (B-757-200). Commuter and regional jet aircraft service is also anticipated to other regional markets.

The current Airport facilities, shown on **Exhibit 1**, include a 7,000-foot long by 100 feet wide runway, a parallel taxiway system, general aviation hangars, tie-downs, and support facilities, and limited landside passenger processing facilities. It has been determined that modifications would be required to the Airport facilities to comply with Airport Design Standards for current operations and to accommodate the projected air service.

PROPOSED AIRPORT IMPROVEMENTS

The following is a list of the proposed improvements to facilities at Mammoth Lakes Airport to accommodate air carrier service:

- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft
- Widen the runway from 100 feet to 150 feet on the south side of the runway, resulting in a shift of the runway centerline 25 feet to the south
- Widen the parallel taxiway from 50 feet to 75 feet—20 feet on the south side and 5 feet on the north side
- Extend the runway 1,200 feet to the west to provide the necessary runway length for air carrier aircraft operations, i.e., the B-757-200
- Extend the parallel taxiway to be consistent with the length of the runway extension
- Add an air carrier apron for three to six air carrier aircraft
- Add a 75-foot wide connecting taxiway to access the air carrier apron area
- Add turn buttons at the runway ends to permit back-taxiing on the runway during the initial phase of development

- Expand the Runway Safety Area (RSA) from 500 feet to 1,000 feet to the east of the runway (required to comply with FAA airport design standards for current operations)
- Improve the security fencing from the existing 6 feet to 8 feet in height to meet FAA standards
- Develop passenger terminal building facilities
- Construct Airport access road improvements
- Expand the automobile parking lot
- Acquire in fee simple and/or lease of lands owned by the Los Angeles Department of Public Works (LADPW) that currently occupy the future extension of the Runway Safety Area (required to comply with FAA airport design standards for current operations)

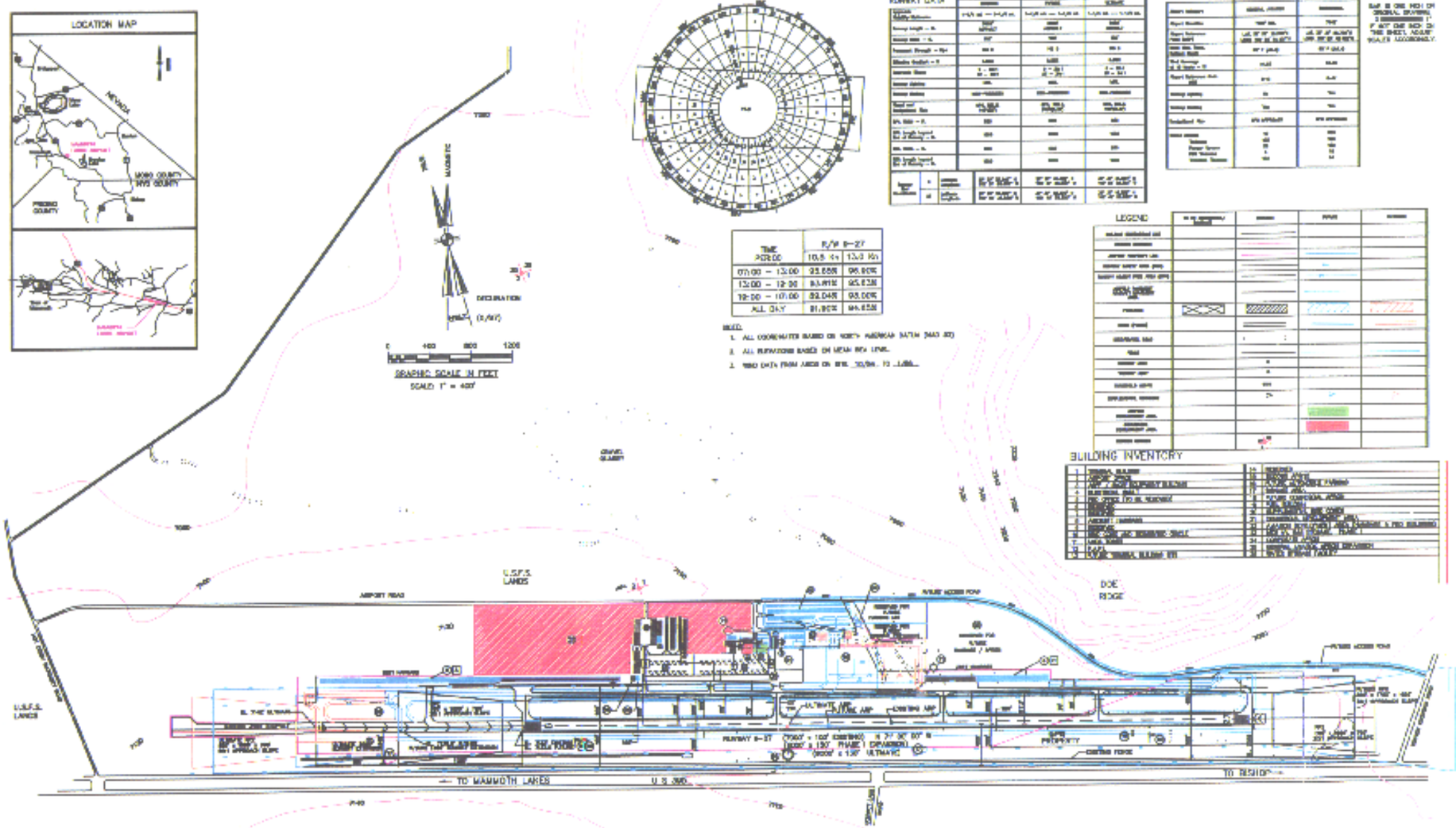
The proposed Airport improvements would facilitate air carrier service to targeted markets. In the first phase of development, one of the exit taxiways would be widened to 75 feet to provide access to the air carrier apron area. The widening of the runway and taxiway system is required by the airlines to accommodate such air carrier operations.

The initial air carrier apron area would be designed to accommodate three B-757-200 aircraft for pushback operations or two B-757-200 aircraft for power-out operations. Longer-range plans reserve a sufficient area to accommodate up to six B-757-200 aircraft on the air carrier aircraft apron.

Because the parallel taxiway is not planned to be widened in the initial phase of construction, arriving and departing B-757 aircraft would be required to back-taxi on the runway. Taxiway turnarounds or "turn buttons" would be provided at the end of the runway to facilitate aircraft turnarounds on the runway. Most aircraft with wingspans less than 115 feet (e.g., B-737, regional jets, commuter aircraft, etc.) would be able to use the full taxiway system.

Phase 2, scheduled to be completed in three to five years, would widen and strengthen the remaining taxiways from 50 feet to 75 feet. The parallel taxiway would be widened to provide the FAA required runway to taxiway separation and taxiway to fixed or movable object separation. The proposed 317.5-foot runway to taxiway separation protects for both the Runway Safety Area and Taxiway Safety Area and provides an additional 5 feet for the airfield drainage system.

The current FAA Airport Reference Code (ARC) for Mammoth Lakes Airport is C-III, indicating that the Airport can accommodate aircraft with wingspans of up to 118 feet. At the completion of Phase 1, the Airport would be classified as a C-IV airport, capable of accommodating the B-757-200 (wingspan of 125 feet) on the runway, but with a restriction on the parallel taxiway to only those aircraft with a wingspan of 115 feet or less. At the completion of Phase 2, the Airport would still be classified as a C-IV airport with a restriction on the parallel taxiway to only those aircraft with a wingspan of 125 feet or more.



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1

0 1200

north

Airport Layout Plan

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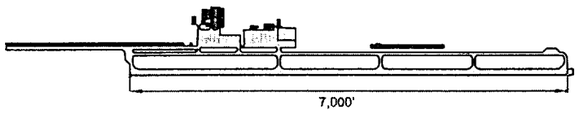
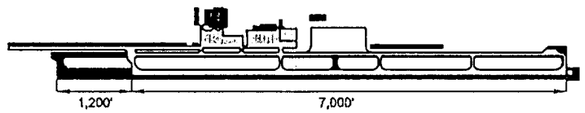
Mammoth Lakes Airport Expansion
Environmental Assessment Scoping Notice

May 2000

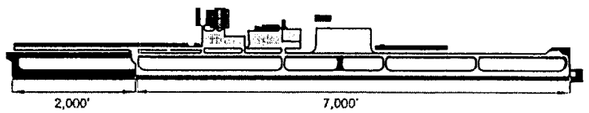
Alternative 1 - No Action



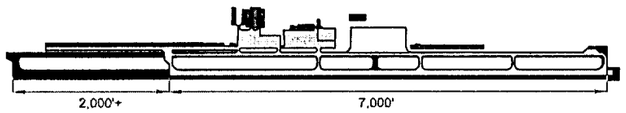
Alternative 2 - Proposed Action, 8,200 ft. Runway



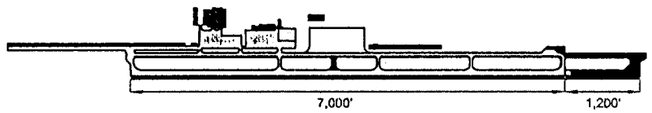
Alternative 3 - 9,000 ft. Runway



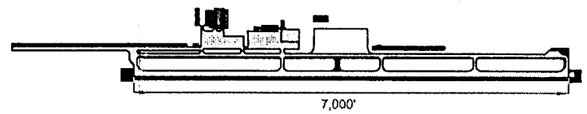
Alternative 4 - Extend Runway Beyond 9,000 ft.



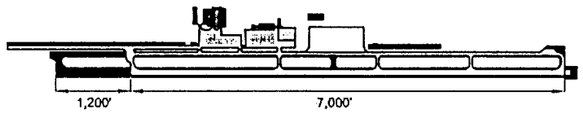
Alternative 5 - Extend Runway to the East



Alternative 6 - Widen 7,000 ft. Runway



Alternative 7 - Widen Runway
Without Shifting the Runway 25 ft. South



Prepared by: Ricondo & Associates, Inc.

0 2,500 ft.

north

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Legend

Existing Airfield

Potential Airport Improvement

Exhibit 2

Preliminary Illustrative Alternatives

January 2000

PRELIMINARY ILLUSTRATIVE ALTERNATIVES

As listed below, nine preliminary alternatives have been identified and would be assumed in the EA if they are initially determined to warrant further consideration. These alternatives primarily address various runway extension alternatives. The build alternatives are shown on **Exhibit 2.**

1 – No Action
Retain Runway 9-27 at its existing length of 7,000 feet and do not make any further improvements to the Airport, except for maintenance or those required by the FAA for safety reasons.

2 – Proposed Action—8,200-foot runway
Extend Runway 9-27 to the west to a length of 8,200 feet and widen the runway to 150 feet, resulting in a shift of the runway centerline 25 feet to the south.

3 – Extend runway to 9,000-feet
Extend Runway 9-27 to the west to a length of 9,000 feet and widen the runway to 150 feet, resulting in a shift of the runway centerline 25 feet to the south.

4 – Extend runway beyond 9,000 feet
Extend Runway 9-27 to the west to a length greater than 9,000 feet and widen the runway to 150 feet, resulting in a shift of the runway centerline 25 feet to the south.

5 – Extend runway to the east
Extend Runway 9-27 to the east to achieve a length of 8,200, 9,000, or greater than 9,000 feet.

6 – Widen runway, but retain the existing length of 7,000 feet
Retain Runway 9-27 at its existing length of 7,000 feet, but widen the runway to 150 feet, resulting in a shift of the runway centerline 25 feet to the south.

7 – Widen the runway without shifting the runway 25-feet to the south
Equally widen Runway 9-27 on the north and south sides, retaining the existing centerline location.

8 – Develop another airport in the region
Develop air carrier facilities at an airport other than Mammoth Lakes Airport.

9 – Use alternate modes of transportation
Continue to assume major access to the Mammoth Lakes Region would be via private vehicle, bus, or a new rail system.

COMMENTS AND ISSUES

As noted earlier, the purpose of this letter is to inform you of the proposed project and alternatives. If there are any specific issues that affect your agency or if there are additional alternatives you believe should be reviewed, please inform the Town of Mammoth Lakes, in writing, no later than March 17, 2000. Please address any comments to:

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Thank you for your consideration.

Sincerely,

Bill Manning
Airport Manager

Mr. Bill Manning
Airport Manager
Town of Mammoth Lakes
Route 1 Box 209
Highway 395 North Airport Road
Mammoth Lakes, CA 93546

Mr. Bill Taylor
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Mr. Rick Wood
Mayor
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Town Manager
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Mammoth Lakes, CA 93546

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Accounting Manager
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Fire Department
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Mammoth Lakes, CA 93546

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Mammoth Lakes, CA 93546

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Ms. Lauretta Cochran
Auditor's Office
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Mr. Rich Boardman
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Chief Executive Officer
LA County Metropolitan Transportation Authority
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Los Angeles, CA 90011

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Deputy Air Pollution Control Officer
Great Basin Unified APCD
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Bishop, CA 93514

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Sacramento, CA 95814

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Reclamation Board
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Ms. Debbie Treadway
Native American Heritage Commission
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Lt. Dennis Brunette
California Highway Patrol
Office of Special Projects
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Sacramento, CA 95818

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Southern California Association of
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Great Basin Unified Air Pollution Control District
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California State Water Resources Control Board
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Diane Brambila, Chief- Multifamily Branch
William F. Bolton, Senior Community Builder
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Chief of Staff
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Oakland, CA 94612

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Terry Roberts, Senior Planner
Governor's Office
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Associate Engineering Geologist
California Regional Water Quality Control Board- Lahontan Region
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Tom Cavanaugh, Regulatory Specialist
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Rare Plant Coordinator
California Native Plant Society
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Sacramento, CA 95814

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Long Valley Fire Protection District
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Crowley Lake, CA 93546

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Hot Creek Hatchery Road
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Manager
FAA Sacramento Flight Standards District Office
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Sacramento, CA 95822

Mr. John Pfeifer, Manager
Elisha Novak, PHD, Airport Planner
FAA Airport District Office
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Burlingame, CA 84010

Mr. Rick Murray, Lands Officer
Sandy Hogan, Special Project Coordinator
US Department of Agriculture- Forest Service
Inyo National Forest- Mammoth Ranger Station
Highway 120, E
Leevining, CA 93541

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Soil Scientist
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Mr. Jay Pawlek/Ms. Leslie Fryman
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Mr. Gene Coufal
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Mr. Rob Preston
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Sacramento, CA 95818-1914

In addition to the coordination of agencies listed in the scoping notice, following additional agencies are contacted in coordinated to the preparation of the EA.

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Eastern Information Center
Department of Anthropology
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Riverside, CA 92521

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President
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415 North El Camino Road, Suite A
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Mr. Terry Ballas
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Mr. Mark Davis
Natural Resources Conservation Service
District Conservationist
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Mr. Rob Preston
Jones & Stokes Associates, Inc.
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Ms. Sandra Bauer
Bauer Planning and Environmental
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Traffic Engineer
Traffic Safety Engineers
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Orange, CA 92867

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Bureau of Land Management
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Bishop, CA 93514

Mr. Rienard Brandley
Consulting Airport Engineer
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Loomis, CA 95650-8004

Draft Environmental Assessment
Distribution List

September 25, 2000

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Appendix B – Airfield Requirements Analysis

B.1 Airfield Requirements and Runway Length Analysis

The airport development alternatives are based on the design aircraft that is expected to operate at the Airport and the origin and destination (O&D) markets to be served. The alternative airfield designs for Mammoth Lakes Airport were evaluated using airport design criteria set forth in FAA Advisory Circular (AC) 150/5300-13, *Airport Design*. The runway length required to support the O&D markets was assessed by analyzing the aircraft performance capabilities for several of the typical aircraft anticipated to operate at Mammoth Lakes.

B.2 Existing Airfield Conditions

The existing airfield geometry is depicted in **Exhibit B-1**. Mammoth Lakes Airport is classified by FAA standards as an Airport Reference Code (ARC) C-III airport. The C designator of the ARC specifies the Aircraft Approach Category (AAC) that the Airport can accommodate. AAC C is designated for aircraft with approach speeds ranging from 121 knots to 140 knots. The ARC III designation specifies that the Airport can accommodate of Aircraft Design Group (ADG) III, aircraft with a wingspan up to 118 feet. The ARC indicates general capability of an airport to accommodate a specific size and performance of an aircraft. Airfield component separation standards are based on the ADG to be served. **Table B-1** summarizes the critical design dimensions for the existing airfield facilities.

The existing runway is designated as Runway 09-27 and has dimensions of 7000 feet by 100 feet. Additionally there is a 3,400-foot paved overrun extending west from the runway. Runway 09-27 is served by a full-length parallel taxiway located to the north.

Local and itinerant general aviation facilities are located north of the runway/taxiway complex. The airfield is served by a Common Traffic Advisory Frequency (CTAF) used for aircraft separation. A Global Positioning System (GPS) approach to Runway 27 is available with provisions for arriving aircraft to circle to land Runway 09.

B.3 Airfield Requirements

Based on the Airport elevation, type of passenger service anticipated, and current airline scheduling plans, the design aircraft selected for Mammoth Lakes Airport is the Boeing 757-200. This is consistent with the March 1997 *Subsequent Environmental Impact Report and Updated Environmental Assessment, Mammoth Lakes Airport Expansion*. The FAA designates the Boeing 757-200 as an ARC C-IV aircraft. ADG IV specifies that the Airport can accommodate aircraft with a wingspan up to 170 feet. The wingspan of the B-757-200 is approximately 125 feet. Therefore, the existing airfield at Mammoth Lakes Airport does not currently meet all of the FAA airfield design parameters for the operation of a B-757 aircraft as the ADG III designation specifies the ability to accommodate aircraft with wingspans up to, but no more than, 118 feet.

An initial review was conducted to determine the feasibility of designing the airfield to C-IV standards. It was determined that extensive modifications would be required to the airfield, landside and/or off-airport roadways for this to be accomplished.

Table B-1

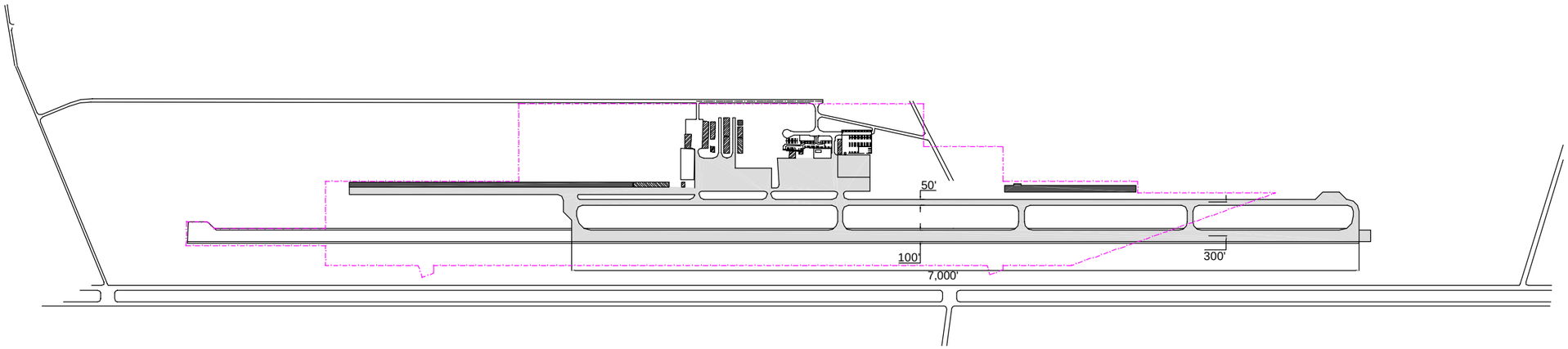
Existing Airfield Conditions

Airfield Component	Existing Conditions
Runway Length	7,000 feet
Runway Width	100 feet
Runway Shoulder Width	15 feet
Runway Blast Pad Width	100 feet
Runway Blast Pad Length	100 feet
Runway Safety Area (length beyond runway end)	500/1,000 feet
Runway Safety Area Width	500 feet
Obstacle Free Zone Width	400 feet
Runway Object Free Area Width	800 feet
Runway Object Free Area Length (beyond runway end)	500/1,000 feet
Runway Pavement Strength - Kips	120 D, 180 DT
Clearway width	500 feet
Clearway length (beyond runway end)	500/1,000 feet
Stopway width	100 feet
Stopway length (beyond runway end)	100/3,000 feet
Taxiway Width	50 feet
Taxiway Edge Safety Margin	15 feet
Taxiway Shoulder Width	0
Taxiway Safety Area Width	125 feet
Taxiway Object Free Area Width	181 feet
Taxiway Wingtip Clearance	32 feet
Runway Centerline to Taxiway Centerline	300 feet
Taxiway Centerline to Fixed or Movable Object	90.5 feet
Taxiway Edge Markings	None

Sources: Airport Layout Plan, 1988, Airport records, field observations, Advisory Circular 150/5300-13; *Airport Design, and* 14 CFR Part 139 1998 edition
Prepared by: Ricondo & Associates, Inc. and Reinard W. Brandley, Consulting Airport Engineer, November 1999

Based on a review of FAA AC 150/5300-13, *Airport Design* and discussions with Airport staff, FAA staff, and other Airport stakeholders, an alternative was developed that would design the airfield components to B-757 specific standards.

This reduces many of the airfield separation requirements based on the 170-foot maximum wingspan of an ADG IV aircraft by specifically designing the airfield to accommodate aircraft with a wingspan up to the B-757, 125 feet. The aircraft specific design parameters are established in *Airport Design*, Appendix 8, "Runway Design Rationale," and Appendix 9, "Taxiway and Taxilane Design Rationale." The airline stakeholders proposing service to Mammoth Lakes required a runway of dimensions at least 8,000 feet in length and 150 feet in width. The need for a specific runway width is a requirement of FAA design standards found in FAA AC 150/5300-13. Both the B-737 and B-757 are approach category C aircraft. A B-737 is an Airplane Design Group (ADG) III and a B-757 is an ADG IV thereby requiring a runway width of 150 feet. **Table B-2** compares and contrasts the existing airfield facilities with design requirements for the B-757. Runway strenghthening,



Source: Reinard W. Brandley, Engineer.
Prepared by: Ricondo & Associates, Inc.

Exhibit B-1

0 1,500 ft.

north

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Legend

Existing Airfield

Existing Property Boundary

Existing Airport Development

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widening, and lengthening would be required for the majority of air carrier narrow body jet aircraft fleet such as the B-737, A320, or MD-80.

Table B-2

Summary of Airfield Requirements

Airfield Component	Existing Conditions	B-757 Specific Requirements
Runway Width	100 feet	150 feet
Runway Shoulder Width	15 feet	25 feet
Runway Blast Pad Width	100 feet	200 feet
Runway Blast Pad Length	100 feet	200 feet
Runway Safety Area (length beyond runway end)	500/1,000 feet	1,000 feet
Runway Safety Area Width	500 feet	500 feet
Obstacle Free Zone Width	400 feet*	400 feet*
Runway Object Free Area Width	800 feet	800 feet
Runway Object Free Area Length (beyond runway end)	500/1,000 feet	1,000 feet
Runway Pavement Strength – Kips	120 D, 180 DT	240 DT
Clearway width	500 feet	500 feet
Clearway length (beyond runway end)	500/1,000 feet	up to 1,000 feet
Stopway width	100 feet	150 feet
Stopway length (beyond runway end)	100/3,000 feet	up to 1,000 feet
Taxiway Width	50 feet	75 feet
Taxiway Edge Safety Margin	15 feet	15 feet
Taxiway Shoulder Width	0	25 feet
Taxiway Safety Area Width	125 feet	125 feet
Taxiway Object Free Area Width	181 feet	195 feet
Taxiway Wingtip Clearance	32 feet	35 feet
Runway Centerline to Taxiway Centerline	300 feet	312.5 feet
Taxiway Centerline to Fixed or Movable Object	90.5 feet	97.5 feet
Taxiway Edge Markings	None	Required

* Fence along highway is located 350 feet south of proposed runway centerline

Sources: Airport Layout Plan, 1988, Airport records, field observations, Advisory Circular 150/5300-13; *Airport Design, and* 14 CFR Part 139 1998 edition

Prepared by: Ricondo & Associates, Inc. and Reinard W. Brandley, Consulting Airport Engineer, November 1999

All of the runway widening would be conducted on the south side of the runway, thereby shifting the runway centerline 25 feet south. The parallel taxiway and several connecting taxiways would also be widened from 50 feet to 75 feet and strengthen to allow use by aircraft of weights up to a B-757 aircraft. The parallel taxiway would be widened 20 feet on the south side and 5 feet on the north side, shifting the taxiway centerline 7.5 feet to the south. This provides a runway to taxiway separation of 317.5 feet and a taxiway centerline to a fixed or movable object (east hangers) of 97.5 feet. The 317.5-foot runway to taxiway separation protects for both the Runway Safety Area and Taxiway Safety Area and provides an additional 5 feet for the airfield drainage system. The air carrier apron area would be designed to accommodate up to three narrow body aircraft for pushback operations or two narrow body aircraft for power out operations.

General aviation hanger facilities have been developed along the east and west ends of the parallel taxiway. The west hangers are setback approximately 140 feet from the widened and relocated parallel taxiway, providing sufficient separation for an aircraft with a wingspan up to 125 feet (the wingspan of a B-757) to taxi unobstructed, as long as other aircraft and objects remain within 42 feet of the front the hangers.

The east hangers would be setback 97.5 feet from the widened and relocated parallel taxiway. This would permit aircraft with a wingspan up to 125 feet to use the taxiway as long as there are no aircraft or other objects located beyond the face of the east hangers. Operational measures would be required to ensure that the taxiway and object free areas are clear during air carrier aircraft operations using this taxiway.

At the completion of the Airport improvements, the Airport would be classified as a C-IV airport with a restriction on the parallel taxiway to only those aircraft with a wingspan of 125 feet or less.

Runway Length Analysis

A runway length analysis was conducted to determine the potential for providing air service to various markets from Mammoth Lakes Airport. Because of the distinct aviation demand patterns, as well as weather conditions, the analysis was conducted for both the winter ski season and the summer recreation season. The need for additional runway length was determined through the use Boeing 757, Boeing 737, and Embraer 145 aircraft performance and flight planning manuals. Once the Allowable Take Off Gross Weight (ATOGW) was calculated using the aircraft performance data the range of the aircraft was calculated using the aircraft flight planning manuals. Due to the rising terrain in the vicinity of the airport, airport elevation and possible airline specific procedures it was determined that, AC 150/5325-4A - Runway Length Requirements For Airport Design, would not be appropriate for the calculation of required runway length.

Runway Length Analysis Assumptions

A winter takeoff temperature of 49°, based on an estimated 95th percentile hottest temperature in the winter season, was assumed for aircraft performance calculations. Since Mammoth Lakes is not listed in the Boeing Aircraft Corporation's *Airport Temperatures* book, the mean temperature was derived from NOAA data from 1995 to 1998 and adjusted to the 95% reliability temperature using the same standard deviation supplied by Boeing for Bishop, CA. Similarly a summer takeoff temperature of 77° was computed using the same methodology.

Higher temperatures are used in runway length analyses, because transport category aircraft are adversely affected by such conditions. Generally, in hot weather, aircraft departures require a longer takeoff roll than operations in cooler weather. High temperature conditions also affect an aircraft's ability to climb after departure. Airport field elevation also negatively effects aircraft performance because of lower air density effecting an airfoil's lift capability. Mammoth Lake's field elevation of 7,128 feet, combined with warm temperatures, will require much longer take-off rolls and degraded climb performance after departure.

Air routings to and from Mammoth Lakes Airport were computed using either great circle routing or actual airline routing plus 2% for Air Traffic Control handling. Historical headwinds having an 85% probability of not being exceeded were used in fuel burn computations for these routes. The Boeing

Aircraft Corporation also supplied this headwind data. These computed route distances are shown in **Table B-3**.

Table B-3

Route Distances To/From Mammoth Lakes

City	Airport Code	Route distance from Mammoth Lakes (nautical miles)
Sacramento	SAC	160
San Francisco	SFO	170
Las Vegas	LAS	200
Los Angeles	LAX	230
Salt Lake City	SLC	380
Phoenix	PHX	430
Portland	PDX	520
Denver	DEN	670
Dallas/Fort Worth	DFW	1,120
Houston	IAH	1,280
St. Louis	STL	1,370
Chicago	ORD	1,470
Washington D.C.	IAD	1,970
New York	JFK	2,120

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc., December 1999

Average passenger and baggage weight was assumed to be 210 pounds in the summer and 230 pounds in the winter. The higher winter weight represents the additional weight of ski equipment. Full passenger and baggage loads were assumed with no additional cargo.

Runway length calculations assumed that the runway would operate under uncontaminated conditions with less than 0.125 inches of slush, 0.25 inches of wet snow, or 1 inch of dry snow.

Obstacles in the takeoff flight path were taken from the National Ocean Service Obstruction Chart 6841 (2nd Ed., published October 1991) and U.S. Geological Survey 7.5-minute Quadrangle maps. An obstacle off the southeast end of Runway 27, at an elevation of 7,079 feet mean sea level (MSL), was identified from the obstruction chart as a potential aircraft performance-limiting obstacle. For the purposes of aircraft performance calculations, this obstacle will assumed to have been removed and replaced with underground wiring.

Three airframe/powerplant combinations were considered in this analysis: the B-757-200, B-737-800, and EMB-145LR regional jet. These aircraft were considered to be representative of the type of aircraft that would operate at the Airport. The aircraft weight characteristics for these aircraft are shown in **Table B-4**.

Table B-4

Aircraft Runway Length Parameters

Aircraft Weight Characteristics *(a)*	Aircraft Type		
	B-757-200	B-737-800	EMB-145
Maximum certificated takeoff weight (pounds)	240.0	174.2	48.5
Operating empty weight	132.6	95.8	26.7
Landing Fuel	8.3	7.8	3.0
Number of seats	188	156	50
Full payload - winter (230 pounds per passenger)	43.2	35.9	11.5
Full payload - summer (210 pounds per passenger)	39.5	32.8	10.5

(a) All weights are in thousands of pounds.

Source: Ricondo & Associates, Inc. and Flight Engineering, Inc., November 1999
Prepared by: Ricondo & Associates, Inc., December 1999

Only runway extensions to the west were considered in this analysis since the Airport does not own the land east of the Airport. A conservative planning approach was used in determining the departure capabilities described in this section, and the results should be judged on a comparative basis. Some airline-specific operating procedures, such as the use of clearways and stopways, runway length calculations, airspace obstructions, and obstruction avoidance procedures, may affect the payload carrying capabilities of an aircraft in a specific market.

5.5 Runway Length Analysis Preliminary Findings

The service ranges of typical aircraft types using the runway extension alternatives are shown in **Table B-5** and **Table B-5**. Each aircraft type and runway extension alternative calculated the approximate distance in nautical miles that the aircraft could travel, assuming a full load of passengers and baggage.

Table B-5

Estimated Departure Capabilities Under High Temperature Conditions

	Aircraft Type					
	B-757-200 (188 seats)		B-737-800 (156 seats)		EMB-145 (50 seats)	
Runway Length	Range	ATOGW	Range	ATOGW	Range	ATOGW
Winter ski season						
7,000 feet (existing)	1,520	209.0	@	134.9	490	43.2
8,000 feet	1,820	214.2	210	143.1	640	44.5
8,200 feet	1,860	214.9	290	144.7	720	44.9
9,000 feet	2,070	218.4	660	149.3	n.a.	n.a.
Summer season						
7,000 feet (existing)	1,010	196.7	@	130.6	100	40.8
8,000 feet	1,350	202.1	80	137.9	390	42.0
8,200 feet	1,400	202.9	150	138.9	480	42.4
9,000 feet	1,640	206.7	430	143.2	n.a.	n.a.

@/ Weight Restricted

ATOGW = Allowable takeoff gross weight in thousands of pounds.
Range refers to nonstop travel distance, in nautical miles, with adequate fuel reserves, assuming a full load of passengers and baggage and no additional cargo (210 pounds per passenger including baggage in the summer, 230 pounds per passenger including baggage and ski equipment in the winter).

Winter ski season runs from the Wednesday prior to Thanksgiving through the first week of April. The summer season is all dates outside of the winter ski season.

Source: Ricondo & Associates, Inc. and Flight Engineering, Inc., November 1999
Prepared by: Ricondo & Associates, Inc., December 1999

Actual allowable takeoff gross weights (ATOGW) for each aircraft and runway length alternative are also shown in Table B-5. Actual ATOGWs will vary depending on airline and pilot procedures and airframe/powerplant configurations. Calculated ATOGWs provided by specific airlines and manufacturers may differ from the estimates presented here. The ATOGWs for various types of airframes/powerplant from an airport can be limited by many factors, the two most common factors being the length of the runway and the ability of the aircraft to climb at an acceptable rate after lifting off from the runway.

The useable runway length may be shorter than the actual runway length due to obstacles in the aircraft's departure flight path. Acceptable climb rates are established for all airframe/powerplant combinations during their certification process in order to provide the required margins of safety for departures. The maximum weight at which an aircraft can achieve an acceptable rate of climb is referred to as the climb-limited weight.

In the c,ase of full passenger and cargo loads, the aircraft weight can approach the ATOGW. If, after adding the passenger, cargo, and fuel loads, the overall takeoff weight of the aircraft would be greater than ATOGW, then the weight of the aircraft would have to be reduced. Common strategies of reducing take-off weights are removing passengers and/or cargo (i.e., weight penalties) or by reducing the fuel load (i.e., reduced aircraft range).

Taking into account the potential for weight penalties to serve specific markets from Mammoth Lakes, **Tables B-6, B-7** and **B-8,** presents the achievable load factors (percentage of seats filled) for hot weather conditions to various markets for the B-757-200, B-737-800 and Embraer 145 LR, respectively.

The 94% summer load factor for the Boeing 757 was calculated using Payload for Long Range Cruise Charts found in the Boeing 757 Airplane Characteristics for Airport Planning from the Boeing Aircraft Corporation. As shown in Table B-5 the ATOGW of the Boeing 757 under these conditions is 202,900 lbs. The total fuel load derived from the Payload Range chart is approximately 33,000 lbs. Subtracting this fuel load from the ATOGW leaves 169,500 lbs. for the operational empty weight of the aircraft and payload. The operation empty weight of the Boeing 757 is 132,900 as shown in Table B-4. Subtracting this weight from 169,900 allows a total payload of 37,000 lbs. Dividing the payload by the weight of an average summer passenger (210 lbs.) also found in Table B-4 shows that at this ATOGW the aircraft could hold 176 passengers. The seating configuration of the Boeing 757 found in Table B-4 188 seats. Dividing the 176 by the seating capacity of 188 produces a load factor of 94%.

Performance calculations for contaminated runway were also performed. The contaminated conditions of greater than 0.125 inches of slush, 0.25 inches of wet snow, or 1 inch of dry snow would reduce the payload and range capability of air carrier aircraft operating at Mammoth Lakes Airport. The extent of these payload/range reductions was such that it was assumed that air carriers would not operate until the runway was cleared of snow or otherwise runway conditions had improved.

Table B-6

B-757-200 Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	77%	74%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	86%	85%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	88%	85%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	94%	92%

Summer													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	100%	100%	100%	100%	100%	100%	100%	93%	87%	85%	78%	62%	59%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	99%	96%	93%	74%	71%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	99%	96%	94%	76%	72%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	82%	80%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

Table B-7

B-737-800 Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	84%	84%	84%	77%	77%	74%	69%	52%	49%	47%	42%	28%	26%
8,000 feet	100%	100%	100%	98%	98%	95%	88%	74%	69%	66%	63%	48%	45%
8,200 feet	100%	100%	100%	100%	100%	99%	94%	80%	74%	72%	66%	52%	49%
9,000 feet	100%	100%	100%	100%	100%	100%	100%	89%	83%	81%	77%	63%	59%

Summer													
Destination	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD	IAD	JFK
Distance (nm)	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470	1,972	2,124
Runway Length													
7,000 feet	82%	82%	82%	74%	74%	71%	60%	49%	43%	40%	37%	22%	19%
8,000 feet	100%	100%	100%	94%	91%	91%	85%	68%	62%	59%	56%	40%	37%
8,200 feet	100%	100%	100%	97%	97%	92%	86%	71%	65%	62%	57%	42%	39%
9,000 feet	100%	100%	100%	100%	100%	100%	98%	83%	75%	72%	69%	53%	51%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

Table B-8

EMB 145 LR Estimated Departure Capability Load Factors to Specific Markets Under High Temperature Conditions

Winter												
Destination	RNO	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD
Distance (nm)	123	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470
Runway Length												
7,000 feet	100%	100%	100%	100%	100%	99%	97%	88%	66%	58%	54%	49%
8,000 feet	100%	100%	100%	100%	100%	100%	100%	100%	78%	70%	65%	60%
8,200 feet	100%	100%	100%	100%	100%	100%	100%	100%	81%	73%	69%	63%

Summer												
Destination	RNO	SFO	LAS	LAX	SLC	PHX	PDX	DEN	DFW	IAH	STL	ORD
Distance (nm)	123	171	204	226	378	426	517	689	1,124	1,279	1,366	1,470
Runway Length												
7,000 feet	100%	100%	99%	98%	89%	86%	84%	74%	50%	41%	36%	30%
8,000 feet	100%	100%	100%	100%	100%	97%	95%	85%	61%	52%	48%	42%
8,200 feet	100%	100%	100%	100%	100%	100%	99%	89%	65%	56%	51%	46%

Source: Ricondo & Associates, Inc., November 1999.

Prepared By: Ricondo & Associates, Inc., December 1999

FAA Order 8400.9 *National Safety and Operational Criteria for Runway Use Programs* establishes the operational and safety criteria for runway use programs. The airport will be served by the current GPS approach with air carrier circling minimums. Additionally air carrier specific approach procedures are currently under development. Both these procedures would allow arrival aircraft to land on the runway most aligned into the wind. Air carrier departure procedures are also under development that will also allow departures from both Runway 09 and Runway 27. Tailwind departures are not anticipated allowing the runway to be operated in accordance with FAA Order 8400.9.

Exhibits B-2, **B-3** and **B-4** show the potential markets that could be served nonstop from the Airport with minimal or no weight penalties, using the 8,200 foot runway with Boeing 757, Boeing 737 and Embraer 145 aircraft, respectively. The range capabilities, both during the winter and summer seasons, are shown. Because it is not known whether airlines would, in fact, serve some of these destinations from Mammoth Lakes, this data regarding potential markets are provided for information purposes only.

Source: Flight Engineering, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit B-2

north

B757-200 Range Capability With Full Payload, Length 8,200 ft.

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Source: Flight Engineering, Inc.
Prepared By: Ricondo & Associates, Inc.

Exhibit B-3

north

B737-800 Range Capability With Full Payload, Length 8,200 ft.

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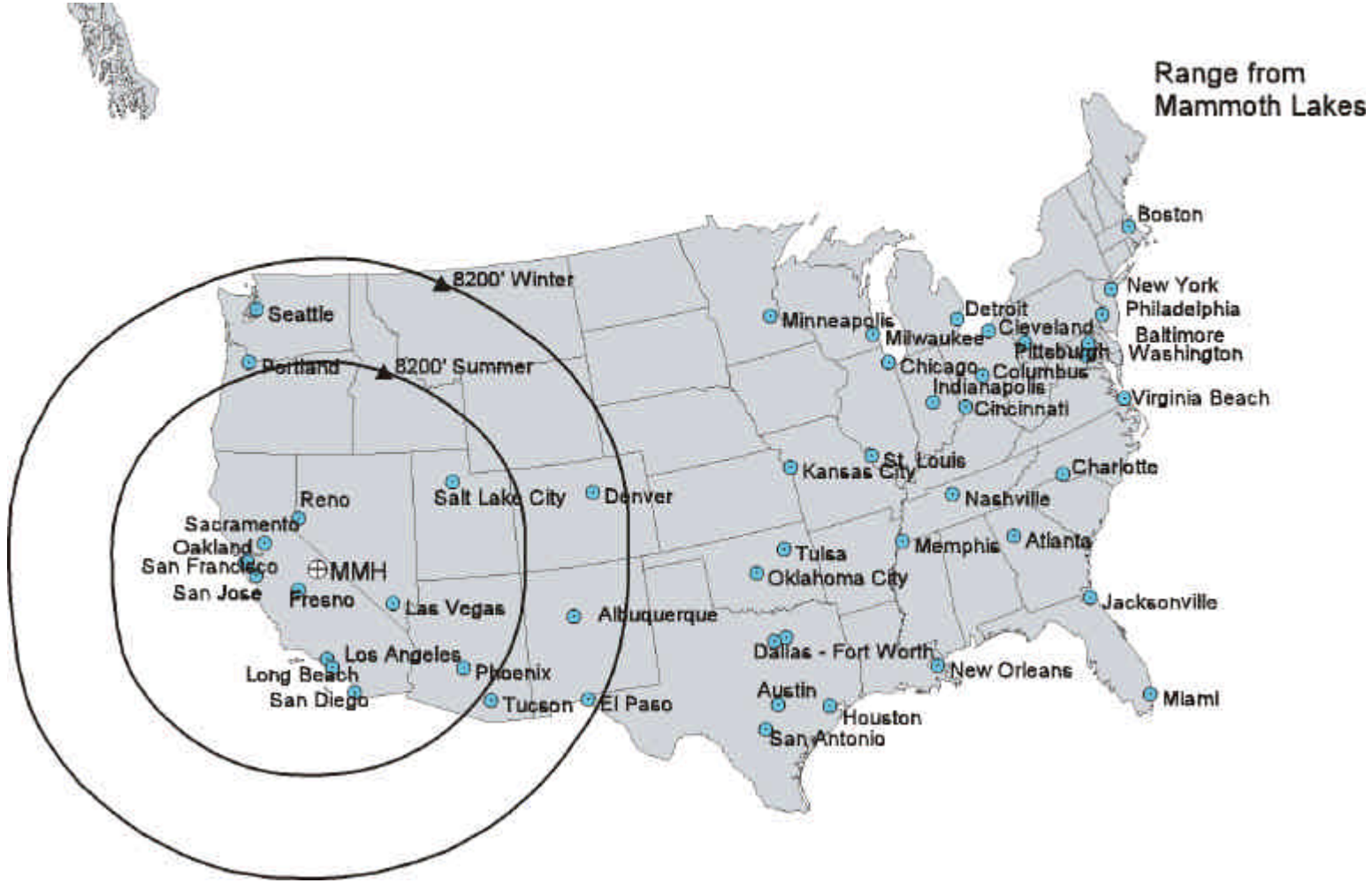

Source: Flight Engineering, Inc.
Prepared By: Ricondo & Associates, Inc.

Exhibit B-4

north

EMB-145LR Range Capability With Full Payload, Length 8,200 ft.

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Appendix C - Aircraft Noise Analysis

C.1 General Characteristics of Aircraft Noise

Aircraft noise originates from both the engines and the airframe of an aircraft, but the engines are by far the more significant source of noise. Loudness, measured in decibels (dB), is the most commonly used characteristic to describe noise. The A-weighted decibel (dBA) is used in aircraft noise studies because it employs a frequency-dependent rating scale that more closely associates sounds and sound frequencies with the sensitivity of the human ear. Some common sounds on the dBA scale, relative to ordinary conversation, are listed in **Table C-1**. As shown in the table, the relative perceived loudness of a sound doubles for each increase of 10 dBA, although a 10-dBA change corresponds to a factor of 10 in relative sound energy. Generally, sounds with differences of 2 dBA or less are not perceived to be noticeably different by most listeners. A noise event produced by a jet aircraft flyover is usually characterized by a buildup to a peak noise level as the aircraft approaches and then a decrease in the noise level, through a series of lesser peaks or pulses, after the aircraft passes and the noise recedes.

Exhibit C-1 illustrates the range of sound produced by, and the average sound level of, several aircraft types that operate at Mammoth Lakes Airport compared with other sounds such as sirens, motorcycles, and garbage disposals.

Table C-1

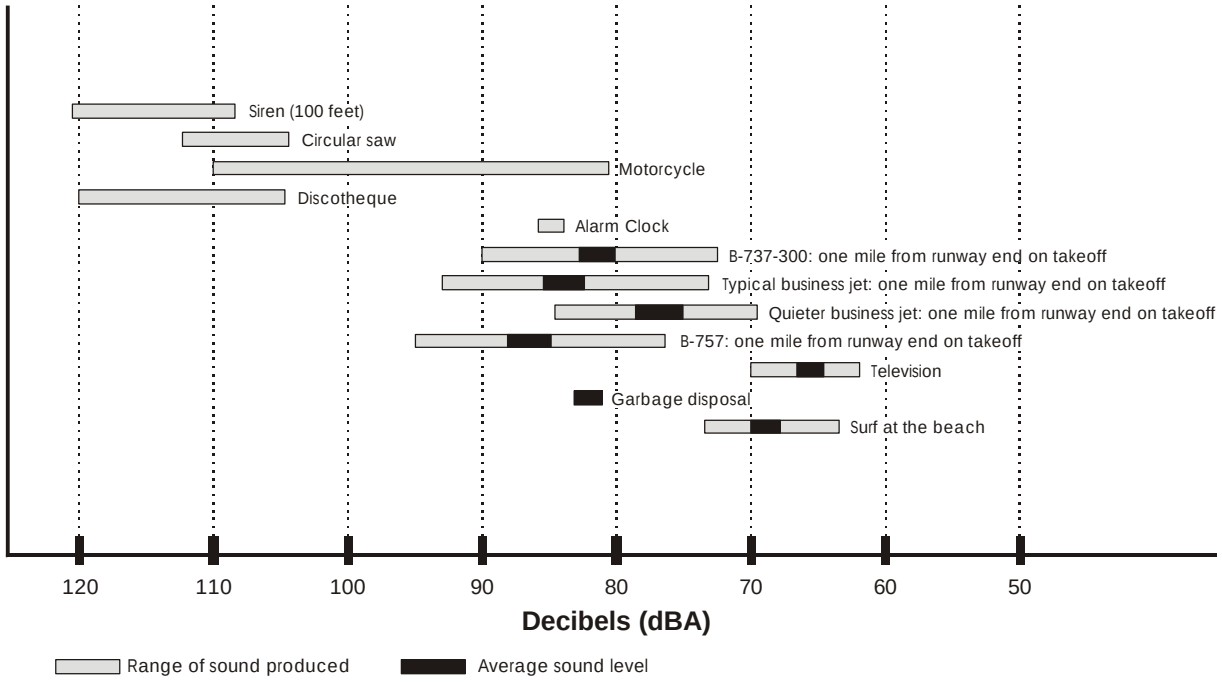
Common Sounds On The A-Weighted Decibel Scale

Sound	Sound level (dBA)	Relative loudness (approximate)	Relative sound energy
Rock music, with amplifier	120	64	1,000,000
Thunder, snowmobile (operator)	110	32	100,000
Boiler shop, power mower	100	16	10,000
Orchestral crescendo at 25 feet, noisy kitchen	90	8	1,000
Busy street	80	4	100
Interior of department store	70	2	10
Ordinary conversation, 3 feet away	60	1	1
Quiet automobiles at low speed	50	½	.1
Average office	40	¼	.01
City residence	30	1/8	.001
Quiet country residence	20	1/16	.0001
Rustle of leaves	10	1/32	.00001
Threshold of hearing	0	1/64	.000001

Source: U.S. Department of Housing and Urban Development, Aircraft Noise Impact—Planning Guidelines for Local Agencies, 1972.
Prepared by: Ricondo & Associates, Inc.

Exhibit C-1

Typical Sound Levels



Source:
Prepared by: Ricondo & Associates, Inc.

C.2 Noise Analysis Methodology

The methodology used for this aircraft noise analysis involved (1) the use of noise descriptors developed for airport noise analyses, (2) the application of a computer model that provides estimates of aircraft noise levels, and (3) the development of basic data and assumptions as input to the computer model.

C.3 Noise Descriptors

As a result of extensive research into the characteristics of aircraft noise and human response to that noise, a standard system of descriptors has been developed. These descriptors, as used for the EA for Mammoth-Yosemite Airport, are as follows:

C.3.1 A-Weighted Sound Pressure Level

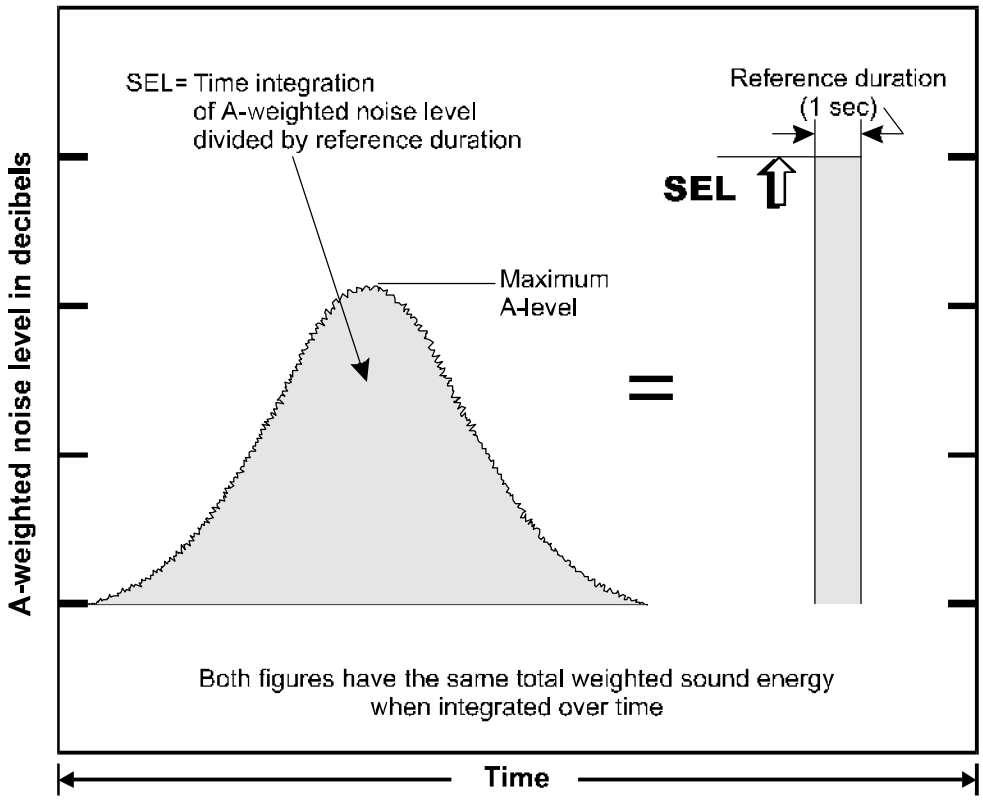
The A-weighted sound pressure level (dBA) is a frequency-weighted sound level in decibels (dB) that correlates with the way sound is heard by the human ear.

C.3.2 Sound Exposure Level

Sound exposure level (SEL) is a time-integrated measure, expressed in decibels, of the sound energy of a single noise event to a reference duration of one second. The sound level is integrated over the period that the level exceeds a threshold (normally 65 dBA for aircraft noise events). Therefore, SEL accounts for both the maximum sound level and the duration of the sound. SELs for aircraft noise events depend on the location of the aircraft relative to the noise receptor, the type of operation

(landing, takeoff, or overflight), and the type of aircraft. The SEL concept is depicted on **Exhibit C-2**.

Exhibit C-2
Sound Exposure Level Concept



Source: Brown-Buntin Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

C.3.3 Cumulative Sound Level

As required by the California Airport Noise Regulation (CCR Title 21, Subchapter 6), aircraft noise exposure has been quantified using the Community Noise Equivalent Level (CNEL). CNEL is a method used to describe the existing and predicted cumulative noise exposure from aircraft operations in an airport environ. CNEL values are expressed in dBA and represent the noise level over a 24-hour period. The CNEL values are used to estimate the effects of specific noise levels on land uses.

In the calculation of CNEL, for each hour during the nighttime period (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10-decibel weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. For each hour during the evening (7:00 p.m. to 10:00 p.m.), the sound levels are increased by a 5-decibel weighting penalty. The weighting penalty accounts for the more intrusive nature of noise during the evening and nighttime hours. CNEL is accepted in the State of California as the best method to describe aircraft noise exposure

and is the noise descriptor preferred by Caltrans (State Division of Aeronautics) for use in aircraft noise exposure analyses and land use compatibility planning in the State of California.

CNEL, as used in the EA process, is expressed as an average noise level on the basis of annual aircraft operations for a calendar year, not on the average noise levels associated with different aircraft operations. To calculate the CNEL at a specific location, the SELs at that location associated with each individual aircraft operation (landing or takeoff) are determined. Using the SEL for each noise event and applying the 10-decibel penalty for nighttime operations and 5-decibel penalty for evening operations as appropriate, a partial CNEL value is then calculated for each aircraft operation. The partial CNEL values for each aircraft operation are added logarithmically to determine the total CNEL.

The logarithmic addition process, whereby the partial CNELs are combined, can be approximated by the following guidelines presented in **Table C-2**.

Table C-2

When two CNELs differ by:	Add the following amount to the higher value:
0 or 1 dBA	3 dBA
2 or 3 dBA	2 dBA
4 to 9 dBA	1 dBA
10 dBA or more	0 dBA

For example:

70 dBA + 70 dBA (difference: 0 dBA) = 73 dBA
60 dBA + 70 dBA (difference: 10 dBA) = 70 dBA

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Adding the noise from a relatively quiet event (60 dBA) to a relatively noisy event (70 dBA) results in a value of 70 dBA because the quieter event has only 1/10 of the sound energy of the noisier event. As a result, the quieter noise event is "drowned out" by the noisier one, and there is no increase in the overall noise level as perceived by the human ear.

CNEL is used to describe existing and predicted noise exposure in communities in an airport environs based in the average daily operations over the year and the average annual operational conditions at the Airport. Therefore, at a specific location near an airport, the noise exposure on a particular day is likely to be higher or lower than the annual average exposure depending on the specific operations at the airport on that day.

C.4 Integrated Noise Model

The Integrated Noise Model (INM) is a computer model developed by the FAA and required for use in developing noise exposure maps. The INM contains aircraft operational and noise data in an aircraft database, which reflect typical aircraft operating conditions.

Version 6.0 of the INM—the latest accepted, state-of-the-art tool for determining the total effect of aircraft noise at and around airports at the time the noise exposure maps were prepared—was used for the noise analysis. The INM Version 6.0 aircraft database contains a representation of

commercial, general aviation, and military aircraft powered by turbojet, turbofan, or propeller-driven engines.

For each aircraft in the database, the following information is provided: (1) a set of departure profiles for each applicable trip length, (2) a set of approach parameters, and (3) SEL versus distance curves for several thrust settings. This information is needed to develop the noise exposure maps based on the CNEL metric.

C.4.1 CNEL and Noise Exposure Ranges

Noise exposure values of CNEL 75, 70, 65, and 60 were used as the criterion levels for the noise analysis. Five specific ranges of noise exposure were estimated: (1) CNEL 75 and higher, (2) CNEL 70 to 75, (3) CNEL 65 to 70, and (4) CNEL 60 to 65. CNEL 75 and higher is considered to be "severe" noise exposure in airport environs and CNEL 65 to 75 is considered to be "significant." CNEL 55 noise exposure values were also developed for information purposes.

C.4.2 Limitations of the CNEL Descriptor

The validity and accuracy of CNEL calculations depend on the basic information used in the calculations. For future airport activities, the reliability of CNEL calculations is affected by a number of uncertainties:

- Aviation activity levels—the forecast number of aircraft operations, the types of aircraft serving the airport, the times of operation (daytime, evening, and nighttime), and aircraft flight tracks—are estimates. Achievement of the estimated levels of activity cannot be assured.
- Aircraft acoustical and performance characteristics are also estimates. When new aircraft designs are involved, aircraft noise data and flight characteristics must be estimated.
- The noise descriptors used as the basis for calculating CNEL represent typical human response (and reaction) to aircraft noise. Because people vary in their responses to noise and because the physical measure of noise accounts for only a portion of an individual's reaction to that noise, CNEL can be used only to obtain an average response to aircraft noise that might be expected from a community.
- Single flight tracks used in computer modeling represent a wider band of actual flight tracks.

These uncertainties aside, CNEL mapping was developed as a tool to assist in land use planning around airports. The mapping is best used for comparative purposes rather than for providing absolute values. That is, CNEL calculations provide valid comparisons between different projected conditions, as long as consistent assumptions and basic data are used for all calculations.

Thus, from a standpoint of noise exposure, sets of CNEL calculations can show anticipated changes in aircraft noise exposure over time, as well as which of a series of simulated situations is better and generally how much better, from the standpoint of noise exposure. However, a line drawn on a map does not imply that a particular noise condition exists on one side of that line and not on the other. CNEL calculations are merely a means for comparing noise effects, not for precisely defining them relative to specific parcels of land.

Nevertheless, CNEL contours can be used to (1) highlight an existing or potential aircraft noise problem that requires attention, (2) assist in the preparation of noise compatibility programs, and

(3) provide guidance in the development of land use controls such as zoning ordinances, subdivision regulations, and building codes. CNEL is considered to be the best methodology available for depicting aircraft noise exposure.

C.4.3 Graphic Representation

Contours are lines on a map that connect points of equal CNEL values. For example, a contour may be drawn to connect all points with a CNEL value of 65, another may be drawn to connect all points with a CNEL value of 60, and so forth. Generally, noise contours are plotted at 5-CNEL intervals.

Noise exposure contours were also reviewed for CNEL 70 and 75 and were found to remain within the airfield boundary. Therefore, for this analysis, the INM was used to produce noise exposure contours for CNEL 55, 60, and 65.

C.5 Basic Data and Assumptions for Developing Noise Exposure Maps

The primary data required to develop noise exposure maps using the INM Version 6.0 are:

- The existing and forecast number of aircraft operations by time of day, aircraft type, and stage length (nonstop departure trip length from the Airport)
- Operational information including use of the runways, location and use of flight tracks (the paths that pilots fly to arrive at and depart from the airport), departure profiles, existing noise abatement procedures, etc.

C.5.1 Aircraft Operations

To determine existing and forecast aircraft noise exposure, aircraft operations associated with the average day of the year are used in INM. The number of aircraft operations for the average day of a calendar year is typically used in the development of noise exposure maps. The number of aircraft operations by type of operation, aircraft type, and time of day, for the average day in 1999 is provided in **Table C-3**. The operations for the average day in 1999 were based on interviews with Airport staff and the fixed based operator. The forecasts of operations for the average day in 2002, 2007, and 2017 for the growth of operations with the existing runway, shown in **Table C-4**, were derived from the annual forecasts provided in Table IV-1. The forecasts of operations for the average day in 2002, 2007, and 2017 for the growth of operations with the runway alternatives permitting air carrier operations, shown in **Table C-5**, were derived from the annual forecasts provided in Table IV-1.

As shown in Table C-2, approximately 16 average daily aircraft operations (approximately eight departures and eight arrivals) occurred at the Airport in 1999. In accordance with the forecasts of operations, approximately 18 average daily operations with the existing runway configuration and 24 average daily operations with the runway expansion alternatives will occur at the Airport in 2002. Approximately 21 average daily operations are anticipated to occur at the Airport with the existing runway configuration and 39 average daily operations with the runway expansion alternatives.

C.5.1.1 Aircraft Fleet Mix

The generalized aircraft categories listed in Tables C-3, C-4, and C-5 provide general descriptions of the aircraft. The INM aircraft types listed in the tables are those from the INM database that were actually used for the analysis. The INM aircraft types provide representative noise characteristics of a large variety of aircraft types that have operated and are anticipated to operate at the Airport.

Table C-3
1999 INM Fleet Mix Assumptions

Aircraft (a)	Average Day Operations: Day	Evening	Night	Total	Annual operations	Percent
Beech 1900	-	-	-	-	-	0.0%
Gulfstream/Challenger	0.164	0.001	-	0.164	60	1.0%
Lear 35	0.736	0.004	-	0.740	270	4.5%
Citation	0.736	0.004	-	0.740	270	4.5%
Twin turboprop	0.701	0.026	0.013	0.740	270	4.5%
Twin prop	2.932	0.108	0.056	3.096	1,130	18.8%
Large single engine prop	5.332	0.099	0.049	5.479	2,000	33.3%
Small single engine prop	5.332	0.099	0.049	5.479	2,000	33.3%
Total	16.009	0.292	0.137	16.438	6,000	100.0%

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates based on interviews with Airport and fixed based operator staff, March 2000

Table C-4
INM Fleet Mix - Base Case Without Air Carrier Operations

2002	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.180	0.001	-	0.181	70
Lear 35	0.810	0.004	-	0.814	300
Citation	0.810	0.004	-	0.814	300
Twin turboprop	0.771	0.028	0.015	0.814	300
Twin prop	3.225	0.119	0.061	3.405	1,240
Large single engine prop	5.865	0.108	0.054	6.027	2,200
Small single engine prop	5.865	0.108	0.054	6.027	2,200
Total	17.524	0.374	0.184	18.082	6,610

2007	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.207	0.001	-	0.208	80
Lear 35	0.932	0.005	-	0.937	340
Citation	0.932	0.005	-	0.937	340
Twin turboprop	0.887	0.033	0.017	0.937	340
Twin prop	3.714	0.137	0.071	3.921	1,430
Large single engine prop	6.753	0.125	0.062	6.941	2,530
Small single engine prop	6.753	0.125	0.062	6.941	2,530
Total	20.179	0.430	0.212	20.822	7,590

2022	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	-	-	-	-	-
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	-	-	-	-	-
19 seat commuter	-	-	-	-	-
Gulfstream/Challenger	0.328	0.002	-	0.330	120
Lear 35	1.478	0.007	-	1.486	540
Citation	1.478	0.007	-	1.486	540
Twin turboprop	1.407	0.052	0.027	1.486	540
Twin prop	5.888	0.218	0.112	6.218	2,270
Large single engine prop	10.707	0.198	0.099	11.005	4,020
Small single engine prop	10.707	0.198	0.099	11.005	4,020
Total	31.995	0.682	0.337	33.014	12,050

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates, Inc., March 2000

Table C-5
INM FLEET MIX - Base Case With Air Carrier Operations

2002	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	1.644	-	-	1.644	600
B-737-800/A-319	-	-	-	-	-
BAE-146	-	-	-	-	-
Regional jet	-	-	-	-	-
30 seat commuter	2.137	-	-	2.137	780
19 seat commuter	1.918	-	-	1.918	700
Gulfstream/Challenger	0.180	0.001	-	0.181	70
Lear 35	0.810	0.004	-	0.814	300
Citation	0.810	0.004	-	0.814	300
Twin turboprop	0.771	0.028	0.015	0.814	300
Twin prop	3.225	0.119	0.061	3.405	1,240
Large single engine prop	5.865	0.108	0.054	6.027	2,200
Small single engine prop	5.865	0.108	0.054	6.027	2,200
Total	23.223	0.374	0.184	23.781	8,690

2007	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	2.356	-	-	2.356	860
B-737-800/A-319	2.137	-	-	2.137	780
BAE-146	0.795	-	-	0.795	290
Regional jet	1.342	-	-	1.342	490
30 seat commuter	5.589	-	-	5.589	2,040
19 seat commuter	5.589	-	-	5.589	2,040
Gulfstream/Challenger	0.207	0.001	-	0.208	80
Lear 35	0.932	0.005	-	0.937	340
Citation	0.932	0.005	-	0.937	340
Twin turboprop	0.887	0.033	0.017	0.937	340
Twin prop	3.714	0.137	0.071	3.921	1,430
Large single engine prop	6.753	0.125	0.062	6.941	2,530
Small single engine prop	6.753	0.125	0.062	6.941	2,530
Total	37.987	0.430	0.212	38.630	14,090

2022	Average Day Operations				
Aircraft (a)	Day	Evening	Night	Total	Annual operations
B-757-200	4.932	-	-	4.932	1,800
B-737-800/A-319	4.384	-	-	4.384	1,600
BAE-146	2.055	-	-	2.055	750
Regional jet	2.329	-	-	2.329	850
30 seat commuter	9.041	-	-	9.041	3,300
19 seat commuter	9.041	-	-	9.041	3,300
Gulfstream/Challenger	0.328	0.002	-	0.330	120
Lear 35	1.478	0.007	-	1.486	540
Citation	1.478	0.007	-	1.486	540
Twin turboprop	1.407	0.052	0.027	1.486	540
Twin prop	5.888	0.218	0.112	6.218	2,270
Large single engine prop	10.707	0.198	0.099	11.005	4,020
Small single engine prop	10.707	0.198	0.099	11.005	4,020
Total	63.775	0.682	0.337	64.795	23,650

(a) Representative aircraft types from the Integrated Noise Model database may be used to estimate noise levels from a variety of similar aircraft types with similar noise and operational characteristics. This does not imply that it is anticipated that only these specific types of aircraft have or will be operated at the Airport.

Source: Ricondo & Associates, Inc., March 2000

Under some circumstances, it is appropriate to combine aircraft with similar engine types, numbers of engines, weights, performance characteristics, and (most importantly) noise exposure characteristics for the purposes of noise modeling. Examples of such circumstances include the following:

- A particular aircraft type that may not be included in the INM database may be modeled using a similar aircraft type that is included in the database.
- Only a small number of operations of a particular aircraft may occur at an Airport while a large number of operations of a similar aircraft occur at the Airport. The few operations of the first type could be combined with the operations of the more predominant aircraft type without producing a measurable effect on the noise analysis.
- The FAA has provided some aircraft types that are representative of a wide variety of specific aircraft types and can, therefore, be used to represent the wide variety of aircraft types. The best examples of this are corporate and general aviation aircraft that can be modeled using a series of aircraft types that are representative of the overall fleet. For example, the INM aircraft type "GASEPV" is representative of a wide variety of general aviation single engine propeller aircraft.

The FAA has provided a list of pre-approved aircraft substitutions that can be used for noise modeling purposes using the INM. All aircraft substitutions used in this analysis were consistent with the pre-approved list.

Aircraft noise characteristics can be classified according to federal noise level standards specified in FAR Part 36, "Noise Standards, Aircraft Type, and Airworthiness Certification," as meeting Stage 1 (noisiest), Stage 2 (quieter), or Stage 3 (quietest) standards. As of July 1, 1985, Stage 1 aircraft could no longer be operated in the United States. In accordance with the Airport Noise and Capacity Act of 1990, the FAA established a schedule for phasing out the use of FAR Part 36 Stage 2 aircraft weighing more than 75,000 pounds in favor of FAR Part 36 Stage 3 aircraft within the 48 contiguous states. FAR Part 91, "General Operating and Flight Rules," specifies that after December 31, 1999, no person may operate an FAR Part 36 Stage 2 aircraft over 75,000 pounds in the contiguous United States.

Airlines and other operators of jet aircraft weighing more than 75,000 pounds were provided the option of (1) replacing Stage 2 aircraft with Stage 3 aircraft or (2) modifying Stage 2 aircraft through re-engineering, hushkitting, or modifying the operational procedures of the aircraft to meet Stage 3 noise standards. Most of the major airlines have used a combination of the two methods and have relied to a certain extent on modifying Stage 2 aircraft to meet Stage 3 noise standards. Given the high altitude of the Airport and performance requirements of air carrier aircraft planned to operate at the Airport, it is anticipated that newer, higher performance Stage 3 aircraft, such as the B-757, would be utilized.

C.5.1.2 Time of Day

Interviews with Airport staff and the fixed based operator at the Airport were used to determine the number of operations occurring during the daytime hours (7:00 a.m. to 7:00 p.m.), evening hours (7:00 p.m. to 10:00 p.m.), and nighttime hours (10:00 p.m. to 7:00 a.m.), which are listed by aircraft type in Tables C-3, C-4, and C-5. As stated in the aeronautical charts and information for the Airport, operations after dark are not recommended at the Airport, and therefore, the number of evening and nighttime operations are relatively small. It was assumed that the split between daytime,

evening, and nighttime operations for each aircraft type would be the same in forecast years as that presented for 1999. It is also assumed that air carrier operations would occur during daytime hours.

C.5.1.3 Departure Trip Length (Stage Length)

Departure trip length, also called stage length (unrelated to "Stage" classifications of aircraft for FAR Part 36 noise certification), refers to the non-stop distance an aircraft travels after departure. This information is needed to determine average gross takeoff weights for the different aircraft types. The noise generated by departures of a specific aircraft type will vary depending on the takeoff weights of the particular operations. For example, a fully loaded aircraft departing on a long flight will weigh more on departure than the same fully loaded aircraft departing on a shorter flight, because the longer flight requires more fuel on board. It usually takes the heavier aircraft longer to reach its take off velocity, thereby using more runway length, and it then climbs at a slower rate than a lighter aircraft, particularly on hot days. Therefore, more land area will be exposed to higher levels of aircraft noise by departures of heavier aircraft than departures of the same aircraft with lighter loads.

In the INM, up to seven different stage length categories have been established representing different departure trip length distances, as presented in **Table C-6**.

Table C-6

INM Departure Stage Length Categories

Stage Length Category	Range of Departure Trip Length (nautical miles)
1	0 – 500
2	500 – 1,000
3	1,000 – 1,500
4	1,500 – 2,500
5	2,500 – 3,500
6	3,500 – 4,500
7	4,500 +

Source: Federal Aviation Administration, *INM User's Guide*
Prepared by: Ricondo & Associates, Inc.

Interviews with Airport staff, the fixed based operator, and American Airlines were used to determine the departure stage lengths as presented in **Table C-7**. The INM uses the stage length category for each operation to determine which profile to use for a specific aircraft departure. In most cases, using the published departure distances to determine the stage length, and therefore, the departure profile to be used, provides good correlation between noise levels estimated by the INM and measured noise levels.

C.5.2 Airport Operational Information

The existing and assumed future uses of the runways and flight tracks to and from the Airport are important in determining where aircraft are flying and, therefore, the noise levels generated in the Airport environs.

C.5.2.1 Runway Use

Runway use at an airport is typically a function of the prevailing wind and weather conditions, the lengths and widths of the runways, the instrumentation of the runways, the obstructions or terrain in the vicinity of the airport, and the effects of other airports or air facilities in the area. To a certain extent, runway use is also determined based on the destination of a departing aircraft or origination of an arriving aircraft and the location of the aircraft parking position on the ground. Of these factors,

Table C-7
INM Fleet Mix - Aircraft Stage Lengths

Aircraft	Stage Length 1	Stage Length 2	Stage Length 3	Total
B-757-200	0%	0%	100%	100%
B-737-800/A-319	0%	100%	0%	100%
BAE-146	100%	0%	0%	100%
Regional jet	100%	0%	0%	100%
30 seat commuter	100%	0%	0%	100%
19 seat commuter	100%	0%	0%	100%
Gulfstream/Challenger	100%	0%	0%	100%
Lear 35	100%	0%	0%	100%
Citation	100%	0%	0%	100%
Twin turboprop	100%	0%	0%	100%
Twin prop	100%	0%	0%	100%
Large single engine prop	100%	0%	0%	100%
Small single engine prop	100%	0%	0%	100%

Note: Stage lengths are based on standard classifications. Stage 1 = 0 to 500 nautical miles; Stage 2 = 500 – 1,000 nautical miles; Stage 3 = 1,000 – 1,500 nautical miles. The use of the term "Stage" in this context has no reference to FAR Part 36 noise standards.

Source: Ricondo & Associates, Inc., March 2000

wind and weather conditions and terrain in the vicinity of the Airport primarily affect runway use at Mammoth-Yosemite Airport. Typically, arrivals on Runway 27 are preferred due to prevailing winds and terrain. However, because of terrain northwest of the Airport that can affect the takeoff weight allowable for an aircraft, larger aircraft tend to prefer departing on Runway 9.

C.5.2.2 Aircraft Flight Tracks

Flight track information is another important input to the INM. However, inputting the individual tracks for each aircraft operation is not possible, and the FAA suggests that flight tracks be consolidated into a generalized set that is representative of all of the flight tracks into and out of the Airport. Deviations from the generalized flight tracks occur because of weather conditions, pilot technique, air traffic control procedures, and aircraft weight. However, the generalized flight tracks do provide representative tracks for arrivals and departures at the Airport. The generalized arrival and departure tracks assumed for the noise analysis for the existing airfield are shown in **Exhibit C-3**. The generalized flight tracks for the runway alternatives do not change significantly except that the start and end locations of the tracks change with the length/location of the runway. **Exhibit C-4** shows the generalized arrival and departure flight tracks for Alternative 2 as an example. The same flight tracks were used for the each year analyzed.

Because of terrain to the west of the Airport, air carrier jet aircraft departing Runway 27 were assumed to follow a departure procedure, track T04, in which aircraft make a slight left turn off of the runway and roughly follow U.S. 395 to gain altitude before turning right. Air carrier aircraft are not expected to turn right immediately from Runway 27.

The generalized flight tracks are used in differing percentages by different aircraft types. The estimated percentage use of the flight tracks and runway use is provided for each aircraft category in **Table C-8**.

C.5.2.3 Other Assumptions

In addition to the runway use and flight track information, the following conditions were assumed in developing noise exposure maps for the Airport:

- Departure profiles for air carrier jet aircraft, general aviation jet aircraft, general aviation and commuter turboprop aircraft, and general aviation single-engine propeller aircraft are those typical of aircraft in each of these classifications.
- All approaches flown by jet and turboprop aircraft follow a flight track descending along a three-degree glide-slope, with touchdown at a point 1,000 feet beyond the threshold of the runway.
- All approaches flown by multi-engine piston and single-engine aircraft follow a flight track descending at a five-degree glide-slope, with a touchdown point 575 feet beyond the threshold of the runway.
- Noise, thrust, and altitude information for each specific aircraft is as specified in the INM Version 6.0 aircraft database.

C.6 Land Use Compatibility Guidelines

Estimates of total noise exposure resulting from aircraft operations, as expressed in CNEL values, can be interpreted in terms of the probable effect on land uses. Suggested compatibility guidelines

Table C-8

INM Flight Track Distribution Assumptions

Departures	RW27 T01	RW27 T02	RW27 T03	RW09 T04	RW09 T05	RW09 T06	
ACJets	26.3%	0.0%	0.0%	73.7%	0.0%	0.0%	100.0% (a)
Business jets	32.9%	0.0%	0.0%	67.1%	0.0%	0.0%	100.0% (b)
Commuter/turboprop	32.9%	0.0%	0.0%	67.1%	0.0%	0.0%	100.0% (b)
Twin engine props	27.4%	41.0%	0.0%	23.7%	7.9%	0.0%	100.0% (c)
Single engine props	27.4%	13.7%	27.4%	19.0%	3.2%	9.5%	100.0% (c)
Arrivals	RW27 L01	RW27 L02	RW27 L03	RW09 L04	RW09 L05	RW09 L06	
ACJets	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Business jets	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Commuter/turboprop	68.4%	0.0%	0.0%	31.6%	0.0%	0.0%	100.0% (d)
Twin engine props	47.9%	13.7%	6.8%	11.1%	17.4%	3.2%	100.0% (d)
Single engine props	41.0%	20.5%	6.8%	11.1%	17.4%	3.2%	100.0% (d)

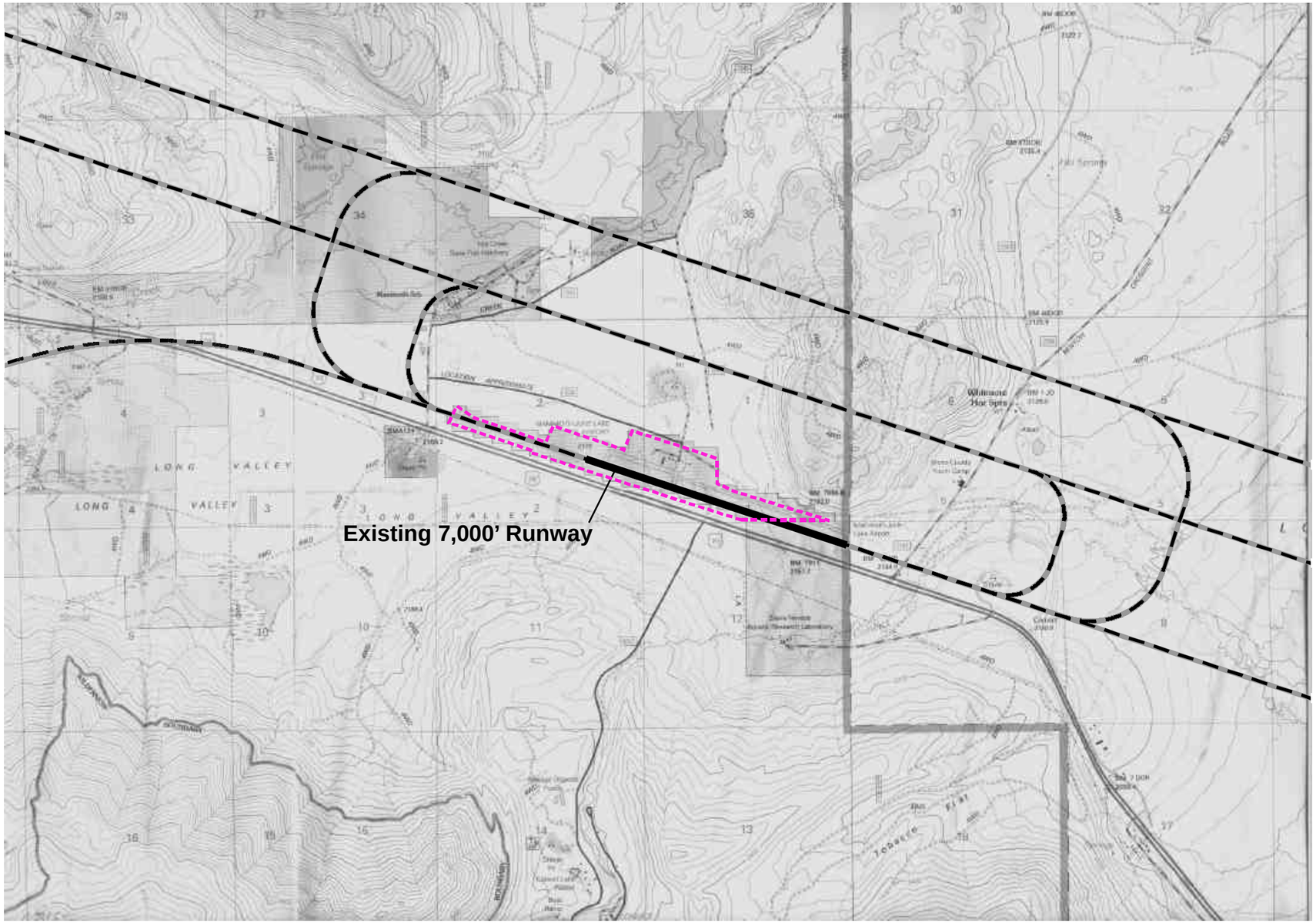
(a) Assumes preference to depart Runway 9 with up to 5 knot tailwind based on daytime (7:00 a.m. through 7:00 p.m.) wind data

(b) Assumes preference to depart Runway 9 up to 3 knot tailwind (calm conditions) based on daytime wind data

(c) Assumes preference to depart Runway 27 up to 3 knot tailwind (calm conditions) based on daytime wind data

(d) Assumes preference to land Runway 27 up to 3 knot tailwind (calm conditions) based on daytime wind data

Source: Ricondo & Associates, Inc., March 2000



Legend

- Arrival Track
- Departure Track
- Existing Property Line

Source: B rown-Buntin Associates, Inc.
Prepared by: Ricondo &Associates, Inc.

Exhibit C-3

north

Scale 1" = 3000

Existing 1999 Flight Tracks

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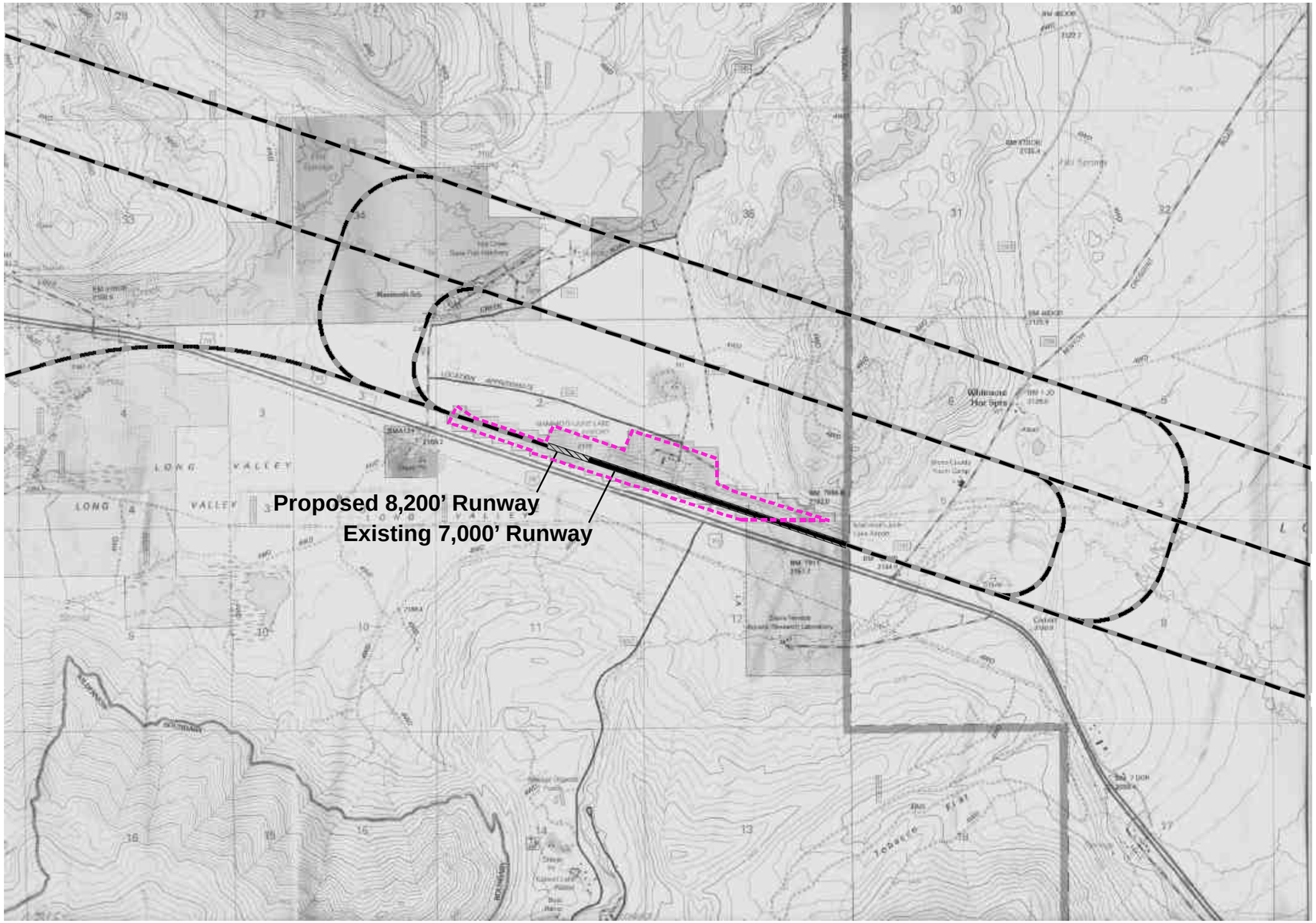

Legend

- Arrival Track
- Departure Track
- Existing Property Line

Source: B rown-Buntin Associates, Inc.
Prepared by: Ricondo &Associates, Inc.

Exhibit C-4

north

Scale 1" = 3000

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Alternative 2 (Proposed Action - 8,200' Runway) Flight Tracks

for evaluating land uses in aircraft noise exposure areas developed by the FAA are provided in **Table C-9**. Compatible or incompatible land use is determined by comparing the predicted or measured day-night average noise level (DNL) at a site with the values given in the table. The DNL metric is used by the FAA for noise analysis and differs from the CNEL metric in that 5 dBA is not added to evening operations. However, the land use compatibility guidelines for these DNL levels are consistent with CNEL. The guidelines reflect the statistical variability of the responses of large groups of people to noise. Therefore, any particular level might not accurately assess an individual's perception of or reaction to an actual noise environment.

Each generalized land use listed in Table C-8 includes a wide range of human activities having various sensitivities to noise intrusions. CNEL values and the associated listings of compatible and incompatible land uses in the table should be interpreted only as indications of the effect aircraft noise has on people living and working in areas surrounding an airport. Although specific CNEL values are obtained from a noise analysis, they do not dictate certain consequences. They are merely intended to guide a community in land use development.

Table C-9

Suggested Land Use Compatibility Guidelines In Aircraft Noise Exposure Areas

The designations in this table do not constitute a federal determination that any use of land is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities.

Land use	CNEL 65 to 70	CNEL 70 to 75	CNEL 75+
Residential			
Residential other than mobile homes and transient lodgings	NLR required *(a)*	NLR required *(a)*	Incompatible
Mobile homes	Incompatible	Incompatible	Incompatible
Transient lodgings	NLR required *(a)*	NLR required *(a)*	NLR required *(b)*
Public use			
Schools, hospitals, and nursing homes	NLR required *(a)*	NLR required *(a)*	Incompatible
Churches, auditoriums, and concert halls	NLR required *(a)*	NLR required *(a)*	Incompatible
Governmental services	Compatible	NLR required	NLR required *(b)*
Transportation	Compatible	Compatible *(c)*	Compatible *(c)*
Parking	Compatible	Compatible *(c)*	Compatible *(c,d)*
Commercial use			
Offices, business, and professional	NLR required	NLR required	NLR required *(b)*
Wholesale and retail—building materials, hardware, and farm equipment	Compatible	Compatible *(c)*	Compatible *(c,d)*
Retail trade—general	NLR required	NLR required	NLR required *(b)*
Utilities	Compatible	Compatible *(c)*	Compatible *(c,d)*
Communication	NLR required	NLR required	NLR required *(b)*
Manufacturing and production			
Manufacturing—general	Compatible	Compatible *(c)*	Compatible *(c, d)*
Photographic and optical	Compatible	NLR required	NLR required *(b)*
Agriculture (except livestock) and forestry	Compatible	Compatible	Compatible
Livestock farming and breeding	Compatible	Compatible	Incompatible
Mining and fishing resources production and extraction	Compatible	Compatible	Compatible
Recreational			
Outdoor sports arenas and spectator sports	Compatible	Compatible	Incompatible
Outdoor music shells, amphitheaters	Incompatible	Incompatible	Incompatible
Nature exhibits and zoos	Compatible	Incompatible	Incompatible
Amusements, parks, resorts, and camps	Compatible	Compatible	Incompatible
Golf courses, riding stables, and water recreation	Compatible	Compatible	Incompatible *(b, c)*

CNEL = Community Noise Equivalent Level average sound level, in A-weighted decibels.

Compatible = Generally, no special noise attenuating materials are required to achieve an interior noise level of DNL 45 in habitable spaces, or the activity (whether indoors or outdoors) would not be subject to a significant adverse effect by the outdoor noise level.

Incompatible = Generally, the land use, whether in a structure or an outdoor activity, is considered to be incompatible with the outdoor noise level even if special attenuating materials were to be used in the construction of the building.

NLR = Noise Level Reduction. NLR is used to denote the total amount of noise transmission loss in decibels required to reduce an exterior noise level in habitable interior spaces to DNL 45. In most places, typical building construction automatically provides an NLR of 20 decibels. Therefore, if a structure is located in an area exposed to aircraft noise of DNL 65, the interior noise level would be about DNL 45. If the structure is located in an area exposed to aircraft noise of DNL 70, the interior noise level would be about DNL 50, so an additional NLR of 5 decibels would be required if not afforded by the normal construction. This NLR can be achieved through the use of noise attenuating materials in the construction of the structure.

(a) The land use is generally incompatible with aircraft noise and should only be permitted in areas of infill in existing neighborhoods or where the community determines that the use must be allowed.
(b) NLR required between DNL 75 and 80; incompatible for DNL 80 and above.
(c) NLR required in offices or other areas with noise-sensitive activities.
(d) Incompatible for DNL 85 and above.

Source: Ricondo & Associates, 2000, as derived from the U.S. Department of Transportation, Federal Aviation Administration, Federal Aviation Regulations Part 150, *Airport Noise Compatibility Planning*, Code of Federal Regulations, Title 14, Chapter I, Subchapter I, Part 150, Table 1, January 18, 1985, as amended

Appendix D – Coordination

Agency	Date	Contact Person
Community Development	May 25, 2000	Michael Vance
Mammoth Lakes Airport	June 28, 2000	Bill Manning
Spill Prevention Control and Countermeasure Plan	August 8, 2000	Bill Manning
United States Dept. of Agriculture, Forest Service	October 4, 2000	Ronald F. Keil
California Historical Resources Information System	May 23, 2000	Victoria Avalos
Jones & Stokes	July 5, 2000	Leslie Fryman
Jones & Stokes	July 5, 2000	Leslie Fryman
Jones & Stokes	July 5, 2000	Leslie Fryman
Jones & Stokes	July 5, 2000	Leslie Fryman
Turner Propane	May 26, 2000	Jim Miller
Edison	May 22, 2000	Robert A. Castaneda
County of Mono Department of Public Work	June 6, 2000	Evan Nikirk
Long Valley Fire Protection District	May 24, 2000	Fred Stump
Mammoth Lakes Airport	March 8, 2000	Bill Manning
California Regional Water Quality Control Board	December 11, 2000	Hisam A. Baqai
Office of Historic Preservation	December 11, 2000	Daniel Abeyta

THE TOWN OF MAMMOTH LAKES CALIFORNIA

COMMUNITY DEVELOPMENT

P. O. Box 1609 Mammoth Lakes, CA 93546
(760) 934-8989 Fax (760) 934-8608

May 25, 2000

Mr. John Pfeifer
Federal Aviation Administration
Manager, San Francisco Airport District Office
831 Mitten Road, Room 210
Burlingame, CA 94010-1303

Re: Land Use Assurance Letter

Dear Mr. Pfeifer:

The Town of Mammoth Lakes makes the following statement of compatible land use assurance as required by Section 511(a)(5) of the Airport and Airway Improvement Act of 1982.

"The Town of Mammoth Lakes provides assurance that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Mammoth Lakes Airport activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. This action includes the consideration of both existing and planned land uses. In addition, we will encourage and support other jurisdictions in the area in their efforts to do the same."

If you have any questions regarding this matter, please contact Bill Taylor at this office at 760 934-8989, x225.

Sincerely,

Michael Vance
Community Development Director

MV/tb

MAMMOTH LAKES AIRPORT
Rt. 1 Box 209, Mammoth Lakes, CA 93546
(760) 934-3813, fax (760) 934-3119

Date: June 28, 2000

To: Steven Julian, Town Manager

From: Bill Manning, Director of Transportation

Subject: New Transit Service to Mammoth Lakes Airport

We are very pleased with the progress made on developing scheduled air carrier service to Mammoth Lakes Airport. This service would clearly be a valuable asset to the local area, regional economy, and to our local residents. However, with the addition of scheduled air carrier service, there is a need for improved ground transportation options between the Airport and the primary destination points in Town.

This letter is to notify you that it is our intent to expand the existing bus services between the Town and the resort area to include service to the Airport. In doing so, the reliance on private vehicles, rental cars, and taxicabs by passengers and employees using the Airport would be reduced. This reduced reliance on automobiles by visitors and local residents would reduce traffic congestion on highways and local streets and assist the Airport in managing the terminal curbs and parking once scheduled air service begins.

The transit service would be designed to operate in coordination with the arrival and departure times of scheduled aircraft. We plan to work with the air carriers serving the airport, travel agents, and local business owners to offer ticket sales in conjunction with the purchase of air travel, local accommodations, ski passes, etc. We believe that this coordinated marketing program would assure that the expanded transit service is successful.

It is our goal to begin the service at the same time scheduled air service begins. Please advise my office if there are any actions that we should take with the Town related to the expansion of transit services to the Airport. I can be reached at 934-3813. I look forward to working with you on implementing this valuable service.

ATTACHMENT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

PREDICTION OF POTENTIAL SPILLS

Name of Facility Mammoth Lakes Airport

Nearest Navigable Waters:

(1) River Name 1: Hot Creek three miles north of Airport
(2) River Name 2: Convict Creek one mile south of Airport

Possible Spill Sources

The possible sources of spills of oil or other hazardous substances are limited at the Mammoth Lakes Airport. The Fixed Base Operator maintains above ground aviation fuel on the field. There is a possibility of a fuel spill are aviation gasoline and automobile gasoline.

There is also mechanical work done to aircraft on the field which could result in the spillage of a small amount of engine motor oil.

No other use of fuel or other hazardous materials occurs on the airport.

Alert Procedures for Spills

Any personnel at the Mammoth Lakes Airport observing a spill of oil or gasoline will immediately notify the Airport Manager or his designee, who shall put into effect the following coordinated plan working with the State of California, the government of the United States, and local emergency agencies.

1. The United States Coast and the U.S. Environmental Protection Agency will be notified through the National Response Center (in accordance with federal law) if the hazardous material is likely to find its way into a navigable waterway or coastline.

   The telephone number of the NRC (Coast Guard) in Washington DC is (800-424-8802). The EPA 24-hour emergency telephone number for oil spills/hazardous waste spills is (916) 262-1621.

2. The California State Emergency Service/Disaster Agency (O.E.S.), telephone number is ((916) 464-3271). This agency will be contacted and given the following information:

   a. Time of observation of spill
   b. Location of spill
   c. Identity of material spilled
   d. Probable source of spill
   e. Estimate time of spill
   f. Volume and duration of spill
   g. Present and anticipated movement of spill

ATTACHMENT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

h. Weather conditions
i. Personnel at the scene
j. Action initiated by personnel at scene

3. The appropriate Emergency Response Section/Division of the State Environmental Protection Agency, Lahontan Regional Water Control Board, at telephone number (761) 241-7365, will be contacted with the above information.

4. The local Long Valley Fire Department will be contacted for emergency assistance and provided the information listed in #2 above. Telephone of local response agency ____(760) 935-4545.

5. The Airport Manager or his designee will immediately initiate responsive action by transmitting the above information to the agencies named above.

Any measure to mitigate the adverse effects of spills will be directed and coordinated by these national, state, and local emergency agencies.

When spills occur which could endanger human life and this becomes a primary concern, the discharge of the life saving protection will be carried out by Long Valley Fire Department and Mono County Paramedics.

In addition to the above, personnel at the Mammoth Lakes Airport who work in proximity to potential spills of hazardous materials and oils at the facility will be periodically trained in the techniques of prevention of spills and will be advised (or provided copies) of this spill prevention control/countermeasure plan.

Name of Responsible Official Representing Sponsor/Aviation Department

Aug 17
Date

ATTACHMENT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

Mammoth Lakes Airport
Mammoth Lakes, California

In order to comply with the Federal Water Pollution Control Act, which is intended to prevent discharges of oil and other flammable liquids into the navigable waterways of the United States, and to contain such discharges if they occur, the Mammoth Lakes Airports has developed the following plan to prevent such spills by establishing procedures, methods, and equipment requirements to achieve that goal.

GENERAL INFORMATION

1. Name and Location of Facility

   Mammoth Lakes Airport
   Highway 395 North Airport Road
   Mammoth Lakes, California 93546

2. Name of Operator

   Town of Mammoth Lakes

3. Name of Person in Charge of Facility

   Bill Manning
   Telephone (760) 934-3813 (daytime)

   760 924-3326 (home)

4. Name and Telephone Number of Person for Oil Spill Prevention at facility:

   Responsible Person: Bill Kerns
   Telephone numbers: work, home (760) 934-3813 (daytime)
   (760) 935-4950 (home)

United States Department of Agriculture | Forest Service | Inyo National Forest | Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 1920

Date: October 4, 2000

John L. Pfeifer, P.E. Manager
San Francisco Airports District Office
Federal Aviation Administration
831 Mitten Road
Burlingame , CA. 94010-1303

Dear Mr. Pfeifer:

We have reviewed the Administrative Draft Environmental Assessment for the Mammoth Lakes Airport Expansion project and are providing the following preliminary comments prior to public release of the document. As discussed in the document, the U.S. Forest Service was consulted and provided issues for consideration affecting portions of National Forest System lands.

A new Special Use permit will be issued to the Town of Mammoth Lakes prior to any ground disturbing activities on National Forest land. A separate Decision Memo will be made for actions affecting the Federal lands, per National Environmental Policy Act (NEPA) provisions. All resource findings or other information disclosed in the Environmental Assessment will be tiered to our decision document and incorporated by reference in our final decision.

We found that all preliminary issues have been addressed within the current analysis prepared by Ricondo and Associates, Inc. We have no objection to the release of this document to the general public for comment at this time. We will provide additional information or comments on any new issues affecting National Forest resources identified by the public during this general review process.

Our concerns for removal of vegetation for additional runway cuts for safety areas (RSA) along the south side of the runway appears to have been adequately addressed. A native plant species list will be provided by the U.S. Forest Service for erosion control and replanting of the disturbed areas. Specific recommendations will be provided in the decision document for replanting and successful establishment of the new vegetation. Replacement of the existing 3-strand barbed wire fence with a taller chain link fence on National Forest land appears to be acceptable, based on the visual simulations of the fence provided to our agency for review. A natural tan color, or darker green shade, as proposed should adequately blend in with the foreground zones viewed by the public from U.S. Highway 395.

If a portion of the current runway is removed during the project, or if placement of the fence creates a net loss in available grazing area to the Forest Service permittee, off-site mitigation should be considered to compensate for any loss in forage use. Creation of an additional watering source, if requested, is an example of this mitigation. It is not clear to us yet if there would be a reduction in the amount of available forage created by the expansion of the airport facilities.

There are no anticipated impacts to cultural resource values, native plant or animal species or other sensitive resources. The resource surveys conducted and referenced appear to adequately analyze the potential environmental consequences of this proposed action and will be incorporated into the NEPA process.

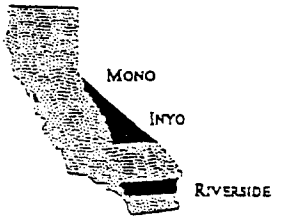
If you have any additional needs at this time, please feel to contact Rick Murray, Lands Assistant at the Lee Vining Office at (760) 647-3013. We look forward to corresponding with you in the near future following the 30 day public comment period.

Sincerely,

for RONALD F. KEIL
Acting District Ranger

Cc: Elisha Novak, FFA

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



Eastern Information Center
Department of Anthropology
University of California
Riverside, CA 92521-0418

Phone (909) 787-5745
Fax (909) 787-5409

RECEIVED
JUN - 2 2000
RICONDO & ASSOCIATES

May 23, 2000
RS #2232

Xin Wang
Ricondo & Associates
20 North Clark Street, Suite 1250
Chicago, Illinois 60602

Re: Cultural Resources Records Search for Mammoth Lakes Airport Environmental Assessment

Dear Ms. Wang:

We received your request on May 9, 2000 for a cultural resources records search for the Mammoth Lakes Airport EA, located in Sections 1, 2, and 7, T.4S, R.28E, MDBM, in the town of Mammoth Lakes in Mono County. We have reviewed our site records, maps, and manuscripts against the location map you provided.

Our records indicate that three studies have been conducted on the majority of the project areas as part of larger projects. Two archaeological sites are recorded within the project boundaries.

In addition to the California Historical Resources Information System, the following were reviewed:

The National Register of Historic Places Index (10/20/98): None.

Office of Historic Preservation, Archaeological Determinations of Eligibility (listed through 3/1/99): None.

Office of Historic Preservation, Directory of Properties in the Historic Property Data File (dated 2/26/99): None.

A review of (1953) USGS Mt. Morrison 15' topographic map indicated no historic structures/features present. The General Land Office plat maps for Mono County are on file at UC Berkeley.

Based on existing information, there is a probability of cultural resources being present on those portions of the project area that have not been surveyed for cultural resources; therefore, further archaeological study is recommended. The property should be surveyed systematically by a qualified archaeologist to identify all cultural remains and provide further recommendations for their study and treatment prior to any grading or construction. Enclosed is a list of archaeological consultants. When an archaeologist has been selected to perform the above-recommended work, please provide him/her with a copy of this letter, the records search may then be completed by this office to the level required by the archaeologist. If this finalization of the search is completed within three months of the initial search, we will not charge the consultant the minimum-per-project fee.

This statement does not constitute a negative declaration of impact. This statement reports only known archaeological materials on or in the vicinity of the property in question. The presence of additional archaeological resources on the property cannot be ruled out until a systematic survey is conducted.

State and federal law requires that if any cultural resources are found during construction, work is to stop and the lead agency and a qualified archaeologist be consulted to determine the importance of the find and its appropriate management.

Sincerely,

Victoria Avalos

Victoria Avalos
Information Officer

Enclosure

Jones & Stokes

July 5, 2000

Bridgeport Paiute Indian Colony
Vineca Hess, Chairperson
P.O. Box 37
Bridgeport, CA 93517

Dear Ms.Hess:

The City of Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth Lakes Airport in Mono County, and Jones & Stokes is assisting Reinard W. Brandley, the Consulting Airport Engineer, in preparing an Environmental Assessment (EA) to comply with the National Environmental Policy Act (1969) and its implementing regulations as required by the Federal Aviation Administration (FAA) in Order 5054.A, *Airport Environmental Handbook*. As lead federal agency, the FAA is required to comply with Section 106 of the National Historic Preservation Act regarding the potential for the airport expansion to directly or indirectly affect historic properties in the project area.

As you are most likely aware, the Long Valley area is extremely sensitive for prehistoric resources due to the abundance of volcanic flows containing obsidian, a preferred material for the manufacture of stone tools. At least 17 prehistoric quarrying and lithic reduction sites have been recorded within a mile of the project area, and there are two recorded sites located within the study area itself. Most of the study area has been previously surveyed; we completed the survey and updated the records for the 2 sites in the study area. The Consulting Airport Engineer has assured us that all proposed developments within the study area will be located well away from these two sites and they will not be disturbed as a result of the project.

We are now preparing a cultural resources technical report for reference in the EA, which will be produced by Reinard W. Brandley. If you have any input, concerns, or questions regarding cultural resources in the study area, please contact me at 916/737-3000, extension 3451.

Thank you,

Leslie R. Fryman
Senior Historian/Archaeologist

lrf:cc:RWB:enc

2600 V Street · Sacramento, CA 95818-1914 · tel. 916 737.3000 · fax 916 737.3030

Jones & Stokes

July 5, 2000

Benton Paiute Reservation
Rose Marie Saulque, Chairperson
Star Route 4, Box-56 A
Benton, CA 93512

Dear Ms. Saulque:

The City of Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth Lakes Airport in Mono County, and Jones & Stokes is assisting Reinard W. Brandley, the Consulting Airport Engineer, in preparing an Environmental Assessment (EA) to comply with the National Environmental Policy Act (1969) and its implementing regulations as required by the Federal Aviation Administration (FAA) in Order 5054.A, *Airport Environmental Handbook*. As lead federal agency, the FAA is required to comply with Section 106 of the National Historic Preservation Act regarding the potential for the airport expansion to directly or indirectly affect historic properties in the project area.

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Leslie R. Fryman

Leslie R. Fryman
Senior Historian/Archaeologist

lrf:cc:RWB:enc

2600 V Street · Sacramento, CA 95818-1914 · tel. 916 737 3000 · fax 916 737 3030

Jones & Stokes

July 5, 2000

Owens Valley Paiute Shoshone Cultural Center
Raymond Andrews, Co-Chairman
P.O. Box 1281
Bishop, CA 93515

Dear Mr. Andrews:

The City of Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth Lakes Airport in Mono County, and Jones & Stokes is assisting Reinard W. Brandley, the Consulting Airport Engineer, in preparing an Environmental Assessment (EA) to comply with the National Environmental Policy Act (1969) and its implementing regulations as required by the Federal Aviation Administration (FAA) in Order 5054.A, *Airport Environmental Handbook*. As lead federal agency, the FAA is required to comply with Section 106 of the National Historic Preservation Act regarding the potential for the airport expansion to directly or indirectly affect historic properties in the project area.

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Thank you,

Leslie R. Fryman

Leslie R. Fryman
Senior Historian/Archaeologist

lrf:cc:RWB: enc

2600 V Street · Sacramento, CA 95818-1914 · tel 916 737.3000 · fax 916 737.3030

Jones & Stokes

July 5, 2000

Washoe / Paiute of Antelope Valley
Westley Dick
P.O. Box 52
Coleville, CA 96107

Dear Mr. Dick:

The City of Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth Lakes Airport in Mono County, and Jones & Stokes is assisting Reinard W. Brandley, the Consulting Airport Engineer, in preparing an Environmental Assessment (EA) to comply with the National Environmental Policy Act (1969) and its implementing regulations as required by the Federal Aviation Administration (FAA) in Order 5054.A, *Airport Environmental Handbook*. As lead federal agency, the FAA is required to comply with Section 106 of the National Historic Preservation Act regarding the potential for the airport expansion to directly or indirectly affect historic properties in the project area.

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Thank you,

Leslie R. Fryman

Leslie R. Fryman
Senior Historian/Archaeologist

lrf:cc:RWB : enc

2600 V Street · Sacramento, CA 95818-1914 · tel 916 737.3000 · fax 916 737.3030

TURNER PROPANE

Propane Sales

P.O. Box 87 • Mammoth Lakes, California 93546 • Telephone (760) 934-6811

May 24, 2000

Attention: Mr. Bill Manning
Mammoth Yosemite Airport
Route 1, Box 209
Mammoth Lakes, CA 93546

Re: Propane Supply - Terminal Building

Mr. Bill Manning,

This letter is to inform you of our ability to service and supply all improvements including the terminal building at the Mammoth-Yosemite Airport. We have the expertise and resources to provide a master distribution facility which would serve all gas load requirements from a single stationary facility. We also have a supply network which guarantees that ample supply of product will always be available. We at Turner have the largest bulk storage facility in the area at 150,000 gallons.

We look forward to the completion of this project, and welcome the opportunity to meet with you regarding site location for tanks and load requirements, please do not hesitate to call as we understand your accelerated schedule.

Respectfully,

Jim Miller

SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL™ Company

May 22, 2000

Mammoth Lakes Airport
Mammoth Lakes , Ca.

Subject: Mammoth Lakes Airport, County of Mono, State of California
To whom it may concern:

I have been requested to advise you that the Southern California Edison Company stands ready to install electrical distribution facilities within the subject area known as Airport Dr. Mammoth Lakes Airport, County of Mono, State of California. Installation to be in accordance with the then applicable tariff schedules which are the effective rates and rules of the Southern California Edison Company on file with and approved by the California Public Utilities Commission and subject to the receipt of such permits or other authorizations from public agencies as may be required for such installation. Also, rules hereinafter referred to in this letter include such changes, modifications, and amendments which the Public Utilities Commission may from time to time direct in the exercise of its jurisdiction.

All requested and/or necessary installation of Southern California Edison Company electrical distribution facilities will be contingent upon our receiving the necessary easements.

Should a shortage of energy and/or generating capacity ever occur, the utility will apportion its available supply of electricity among its customers as set forth in Rule No.14, Shortage of Supply and Interruption of Delivery.

When requested by the developer, underground and/or overhead facilities within the subdivision, tract or parcel require advances under provisions set forth in Rule No. 15. Requirements for advances from the developer for underground and/or overhead lines to reach the subdivision, tract or parcel are also set forth in Rule No. 15. An underground or overhead service lateral from the installed underground and/or overhead distribution system within the development to individual parcels will be in accordance with Rule No.16.

P. O. Box 7529
3001 Chateau Rd.
Mammoth Lakes, CA 93546
760-934-8256

Should an individual applicant require service to his parcel prior to the installation of an underground and/or overhead distribution system to and within the development, as may be installed at the expense of a developer, or within a development for which the developer has undertaken no obligation for the installation of an underground and/or overhead distribution system, an advance will be required from the individual as set forth in Rule No. 15.

Should you have any questions, please do not hesitate to call me at (760) 934-8236

Sincerely,

Robert A. Castaneda
Service Planner
Bishop / Mammoth S/C

RICHARD BOARDMAN
Director of Public Works
JOHN K. BECK
Assistant Director of Public Works
EVAN NIKIRK
Assistant Director of Public Works
SUSAN ARELLANO
Administrative Assistant

County of Mono
Department of Public Works

Post Office Box 457 • 74 North School Street • Bridgeport, California 93517

TELEPHONE
(760) 932-5252
(760) 932-5253
FACSIMILE
(760) 932-7607

June 6, 2000

Mr. Bill Kerns
Mammoth Lakes-Yosemite Airport
Route 1 Box 209
Mammoth Lakes, California 93546

Via Facsimile and 1st Class Mail
(760) 934-3119; No. Pages: 1

Re: Projected Impact of Expanded Airport Waste Stream

Dear Mr. Kerns:

Pursuant to your request, the Mono County Department of Public Works has evaluated the potential impact that expansion of services at the Mammoth Lakes-Yosemite Airport may have on the Benton Crossing Landfill. The Public Works Department is responsible for solid waste management in Mono County and for daily operation of the Benton Crossing Landfill, which is the destination for all municipal solid waste generated in the Mammoth Lakes area.

Industry literature indicates that a typical waste generation rate for commercial airplanes is one pound per passenger per trip. Given the projected estimate of four to five planes per day and approximately 250 passengers per airplane, we can assume that an additional 1,250 pounds per day may ultimately be generated by the increased air traffic. Further, depending upon the type of services provided in an expanded terminal, the waste generation rate would at least double, bringing the total waste generation at the facility to an estimated 2,500 pounds per day.

Therefore, the quantity of waste that may potentially be generated at an expanded Mammoth Lakes-Yosemite Airport would not have a significant impact on County landfills. The existing permitted landfill capacity will be able to accommodate such an increase in the waste stream.

Please contact me at 932-5252 should you have any additional comments or questions. Thank you for the opportunity to comment on this issue.

Sincerely,

Mono County Department of Public Works

Evan Nikirk, P.E.
Assistant Director

Long Valley Fire Protection District

Rt. 1, P.O. Box 1145 • Crowley Lake, CA 93546
(760) 935-4545

May 24, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, Ca. 93546

Re: Alternative emergency access to the Mammoth Lakes Airport

Dear Mr. Manning,

This letter is to support your proposal to use the current and only gate location between the runway and Highway 395 as alternative emergency access to the airport. This access will take the place of a secondary access road into the airport until that road is completed. As we discussed the dimensions for the gate as well as fire department lock access will be agreed to by us, and the service road controlled by the gate will be kept open year round. Having an access point in this location will be of benefit even when the secondary road is complete due to its proximity to the runway. If there are questions, please contact me.

Sincerely,

Fred Stump
Chief

MAMMOTH LAKES AIRPORT
Rt. 1 Box 209, Mammoth Lakes, CA 93546
(760) 934-3813, fax (760) 934-3119

March 8, 2000

Mr. John Pfeifer, Manager
Federal Aviation Administration
Airports District Office
831 Mitten Road
Burlingame, CA 94010

Dear Mr. Pfeifer:

This letter is to provide you and your staff an update on the coordination efforts between the Town of Mammoth Lakes, California, and the City of Bishop, California, regarding future airport development plans for the region.

On January 31 a meeting was held in Bishop with representatives of both communities in attendance. Representing the Town of Mammoth Lakes were Mayor John Eastman, Councilman Kathy Cage, Airport Manager Bill Manning, and Community Development Director Mike Vance. Representing the City of Bishop was Councilman Bob Kimble. Inyo County was represented by County Supervisor Julie Baer, County Supervisor Linda Arcularius, County Administrator Rene Mendez, and Public Works Director Jeff Jewett. At this time, the Mammoth Lakes Expansion Project, as currently conceptualized, was presented to Bishop and Inyo County representatives. The plan, designed to bring commercial air service to the Eastern Sierra region, was well received by representatives of the Bishop area.

The Bishop and County representatives presented their thoughts on the possible future of the Bishop Airport. Strategic planning for the future use of Bishop Airport is just beginning and can be described as broadly conceptual in nature. The production of an Airport Master Plan is being contemplated after discussions solidify the future vision for the Airport.

Currently, the City of Bishop desires some type of local commuter service to a major airline hub, of which the local population can take advantage. While the Mammoth Lakes Airport Expansion Project could provide this service, the City of Bishop would, understandably like this service to be as convenient as possible.

The improvement at Bishop Airport would benefit the entire region. If the Bishop Airport were improved to Federal Air Regulation (FAR) Part 139 standards, the airport could be

available for use as an alternate airport should Mammoth Lakes Airport be impacted by adverse weather conditions.

In conclusion, the airport development programs of Mammoth Lakes and Bishop agree to be complimentary in nature rather than competitive. Each jurisdiction is planning in areas that meet both the needs of their respective communities and the region as a whole.

Thank you for your time and attention in this matter. Should you have any questions or comments, please contact me at (760) 934-3813.

Respectfully,

William B. Manning
Airport Manager

California Regional Water Quality Control Board

Lahontan Region

Winston H. Hickox
Secretary for Environmental Protection

Victorville Office
Internet Address: http://www.swrcb.ca.gov/rwqcb6
15428 Civic Drive, Suite 100, Victorville, California 92392
Phone (760) 241-6583 • FAX (760) 241-7308

Gray Davis
Governor

December 11, 2000

FILE No.: 6B26S003680

William Manning
Airport Manager
Mammoth Yosemite Airport
Rt. 1, Box 209
Mammoth Lakes, CA 93546

PROPOSED MAMMOTH YOSEMITE AIRPORT EXPANSION, MONO COUNTY

This letter is in response to Regional Water Quality Control Board staff (Regional Board staff) telephone conversation on Wednesday, December 6, 2000, with Mr. Reinard Brandley, consulting airport engineer. Mr. Brandley requested a "Water Quality Assurance Letter" which is required by Federal Aviation Administration (FAA) under Section 509(7)(A) of the Airport Airway Improvement Act. Information provided by the Town of Mammoth Lakes, Reinard Brandley, the Environmental Impact Report dated 1997, and the draft Environmental Assessment dated 2000, are sufficient for Regional Board staff to comply with Mr. Brandley's request.

Pursuant to Section 509(7)(A) of the Airport Airway Improvement Act, and based on the information provided to us by the Town and proponents, we certify there is reasonable assurance that the proposed Mammoth Yosemite Airport Expansion project will be located, designed, constructed, and operated so as to comply with water quality control standards as required by the Lahontan Regional Water Quality Control Board.

As we advised you, you must apply to this office for any proposed discharges of waste or wetlands disturbance.

If you have any questions, please contact Douglas E. Feay at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,

Hisam A. Baqai, P.E.
Supervising Engineer

cc: Mailing List

DF/rc/Final/MmthairWQ.doc

MAILING LIST

Reinard W. Brandley
Consulting Airport Engineer
6125 King Road, Suite 200
Loomis, CA 95650

Tom Cornell
Ricondo Associates
221 Main Street, Suite 1460
San Francisco, CA 94105

STATE OF CALIFORNIA – THE RESOURCES AGENCY
GRAY DAVIS, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

December 11, 2000

REPLY TO: FAA000210A

Joseph R. Rodriquez, Supervisor, Planning and Programming Section
Federal Aviation Administration
San Francisco Airports District Office
831 Mitten Road
Burlingame, CA 94010-1303

Subject: **Mammoth Yosemite Airport Improvement Project, Mammoth Lakes, Mono County, California**

Dear Mr. Rodriquez:

Thank you for consulting me concerning the undertaking cited above pursuant to 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. I understand that the project includes an extension of runway 9-27 1,200 feet to the west, widening the runway to 150 feet, extension of a taxiway of equal length and width of 50 feet, construction of a passenger terminal and other support facilities capable of supporting air carrier and charter operations. Your letter of November 16, 2000 transmitted a copy of a cultural resources report prepared by Jones & Stokes entitled "Mammoth Lakes Airport Improvement Project, Mono County, California" (July 2000) and requested my concurrence with the Federal Aviation Administration's (FAA) determination that no historic properties will be affected by implementation of the proposed project.

Review of the supporting documentation indicates that reasonable measures were taken to identify historic properties within the undertaking's area of potential effects (APE). These efforts to identify historic properties conform to applicable standards and the documentation provided is consistent with the requirements of § 800.11(d) for a finding of "no historic properties affected." Therefore, pursuant to § 800.4(d)(1), because I do not object to this adequately documented finding, your responsibilities under Section 106 are now fulfilled.

Your consideration of historic properties in the project planning process is appreciated. If you have any questions please contact staff Charles Whatford of my staff at (916) 653-2716 or cwhat@ohp.parks.ca.gov

Sincerely,

Daniel Abeyta, Deputy
State Historic Preservation Officer

RECEIVED
DEC 13 2000

ORM 99 (7-90)

TRANSMITTAL

# of pages ▸ 1	
1 Cornell	From E. Novak
Ricondo & Assc.	Phone #
547-1940	Fax #

317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Appendix E – Air Quality Construction Emissions Calculations

This appendix contains input data and assumptions for the construction emissions analysis conducted during the preparation of the environmental assessment for Mammoth Lakes Airport.

Construction related emissions associated with the proposed action, the no build action, and other alternatives considered in the environmental assessment were estimated using standard emissions calculation/modeling techniques. Pollutant emissions from Non-Road construction equipment and On-Road construction equipment were evaluated separately.

Non-Road vehicles are defined as equipment that do not travel on highways (e.g., Dozers, Loaders, Cranes, etc.). Emissions factors for non-road vehicles equipped with gasoline-powered engines were derived from the EPA document *AP-42: Compilation of Air Pollutant Emissions Factors: Mobile Sources* (April, 1998). Emissions factors for diesel-powered engines were derived from Tier 1 standards regulated under *40 CFR, Part 89.112* (USEPA, September 1997). **Table E-1** summarizes all of the individual input data and assumptions used to determine pollutant emissions factors for nonroad equipment (Alternatives 2 and 5). **Table E-3** presents similar information for Alternatives 3 and 4.

On-road vehicles include equipment that can and would travel on highways (e.g., cars, light duty trucks, tractor trailers, etc.). On-road emissions factors were calculated using the California Air Resources Board's EMFAC7G pollutant emissions factor model. This model determines the emissions factors of 10 different types of vehicles (light duty automobiles, light heavy diesel trucks, etc.), vehicle technology type (non-catalyst and catalyst gasoline-powered vehicles and diesel powered vehicles), the season of year, average ambient temperature, and average speed. **Tables E-2** and **E-4** list all of the individual factors used in the determination of pollutant emissions factors for on-road equipment. Table D-5 presents the raw data output of the EMFAC7G model.

Table E-1

Non-Road Construction Emissions -- Alternatives 2 and 5

Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	Non-Road Construction Pollutant Emissions: Emissions in lb/hp-hr HC	CO	NOx	PM10	Emissions in tons/yr VOC	CO	NOx	PM10
Clearing & Grubbing	Dozer	D	144	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.04	0.19	0.02
	Scraper	D	192	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.10	0.48	0.04
	Blade	D	96	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.24	0.02
Excavation	Blade	D	600	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.08	0.31	1.49	0.14
	Scraper	D	1600	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.23	0.81	3.98	0.37
	Compactor	D	800	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.08	0.35	0.03
	Dozer	D	800	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.06	0.21	1.03	0.10
Subgrade-Scarify&Recompact	Blade	D	192	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.10	0.48	0.04
	Compactor	D	384	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
Aggregate Subbase	Blade	D	1200	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.17	0.61	2.99	0.28
	Dozer	D	240	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.31	0.03
	Compactor	D	160	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.02	0.07	0.01
Aggregate Base	Blade	D	1800	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.25	0.92	4.48	0.42
	Dozer	D	360	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.09	0.46	0.04
	Compactor	D	240	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.10	0.01
Heater Remix	Heater Rig	G	96	68%	25	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.36	0.01	0.00
	Sweeper	D	96	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.05	0.00
	Tractor	D	48	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.02	0.00
	Roller	D	96	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.06	0.01
Bituminous Surface Course	Paver	D	200	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.13	0.01
	Roller	D	800	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.04	0.12	0.53	0.05
	F.E. Loader-Tractor	D	200	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
Portland Cement Concrete Pavement	Batch Plant	D	48	78%	127	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Paver	D	48	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.03	0.00
	Finish Machine	D	96	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Saw	D	96	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	Sweeper	D	48	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	F.E. Loader-Tractor	D	48	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.03	0.00

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
3. NO_x emissions factors determined using AP-42 and Tier 1 standards
4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
6. The conversion factor listed is used to translate lb/yr to tons/yr.
7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Table E-1 (Cont.)

Non-Road Construction Emissions Alternative 2

Non-Road Construction Pollutant Emissions														
							Emissions in lb/hp-hr				Emissions in tons/yr			
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	HC	CO	NOx	PM10	HC	CO	NOx	PM10
Saw & Seal Pavement	Saw	D	1280	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.05	0.13	0.44	0.04
	Sweeper	D	640	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.10	0.35	0.03
Groove Runway	Grinder	D	160	73%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.10	0.01
	Sweeper	D	160	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.09	0.01
Marking: Remove Marking	Sandblaster	D	96	38%	92	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	Sweeper	D	48	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
Marking: New Marking	Striper	D	96	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.24	0.02
Drainage	Trencher	D	480	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.05	0.18	0.02
	Backhoe	D	480	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.06	0.20	0.02
	F.E. Loader-Tractor	D	240	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
Lighting	Trencher	D	480	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.05	0.18	0.02
	Backhoe	D	480	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.02	0.06	0.20	0.02
	F.E. Loader-Tractor	D	240	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
Structures-Manholes-Retaining Walls	Backhoe	D	160	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.07	0.01
	Compactor	D	320	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
	F.E. Loader-Tractor	D	160	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.12	0.01
Terminal Construction	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Backhoe	D	37	55%	112	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Grader	D	24	61%	140	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Tandem Roller	D	24	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Crane (5 ton)	D	108	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.01	0.07	0.01
	Cement Finisher	D	729	53%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.09	0.32	0.03
	Gas Vibrator	G	729	43%	5	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.34	0.01	0.00
	Crane (90 ton)	D	248	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.01	0.03	0.17	0.01
	Gas Welder	G	830	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.08	1.55	0.04	0.00
	Torch, Gas & Air	G	100	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.01	0.19	0.00	0.00
	Mixer	D	208	56%	11	0.0005	0.00336	0.01136	0.01979	0.00207	0.00	0.01	0.01	0.00
										Total	1.51	7.14	21.83	2.02

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
3. NO_x emissions factors determined using AP-42 and Tier 1 standards
4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
6. The conversion factor listed is used to translate lb/yr to tons/yr.
7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Table E-2

On-Road Constructions Emissions Inventory – Alternatives 2 and 5

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions														
			Emissions Factor in lb/mi						Emissions in Tons per Year					
Phase	Equipment	Total Miles per Year	VOC	CO	NOx	Total Exhaust PM10	Entrained Road Dust	Conversion Factor lb to tons	VOC	CO	NOx	Total Exhaust PM10	Entrained Road Dust
Clearing & Grubbing	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Water Truck	1411	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.14
Excavation	Pick Up Truck	2940	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Water Truck	3920	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.16
	Employees	25500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.22	0.02	0.00	1.01
Subgrade-Scarify & Recompact	Pick Up Truck	706	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Water Truck	2822	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.04	0.01	0.00	0.11
	Employees	5400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.05	0.00	0.00	0.21
Aggregate Subbase	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck-HDDV	23520	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.05	0.33	0.26	0.02	0.93
	Truck-Roundtrip	329000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.32	2.21	3.82	0.23	13.06
	Water Truck	3136	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.05	0.01	0.00	0.12
	Employees	6000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.05	0.00	0.00	0.24
Aggregate Base	Pick Up Truck	882	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Truck-HDDV	35280	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.07	0.49	0.39	0.02	1.40
	Truck-Roundtrip	350000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.34	2.35	4.07	0.25	13.89
	Water Truck	4704	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.07	0.01	0.00	0.19
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.08	0.01	0.00	0.36
Heater Remix	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Employees	2160	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.09
Rejuvenating Agent	Pick Up Truck	147	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Truck-Roundtrip	2700	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.03	0.00	0.03
	Employees	600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
Bituminous Surface Course	Pick Up Truck	2205	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-HDDV	78400	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.16	1.09	0.87	0.06	3.11
	Truck-Roundtrip	224000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.22	1.50	2.60	0.16	8.89
	Asphalt Trucks	72000	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.06	0.41	0.61	0.03	2.86
	Employees	13500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.11	0.01	0.00	0.54
Prime Coat	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.12
Tack Coat	Truck-Roundtrip	3600	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.04	0.00	0.07

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Notes:
1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
3. Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Table E-2 (Cont.)

On-Road Constructions Emissions Inventory

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions														
			Emissions Factor in lb/mi						Emissions in Tons per Year				
Phase	Equipment	Total Miles per Year	VOC	CO	NOx	Total Exhaust PM10	Entrained Road Dust	Conversion Factor lb to tons	VOC	CO	NOx	Total Exhaust PM10	Entrained Road Dust
Portland Cement Concrete Pavement	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Cement Truck	300	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Concrete Trucks	1400	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.01	0.01	0.00	0.06
	Water Truck	470	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.14
Saw & Seal Pavement	Pick Up Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.09
	Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.09
	Water Truck	6272	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.10	0.01	0.00	0.25
	Employees	14400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.12	0.01	0.00	0.57
Groove Runway	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	1568	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Employees	3000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.12
Marking: Remove Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Water Truck	941	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Employees	900	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
Marking: New Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.01
	Truck-Roundtrip	1200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.01	0.01	0.00	0.03
	Employees	540	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.00	0.00	0.00	0.02
Drainage	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.25
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.13	0.10	0.01	0.37
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Lighting	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Truck-Roundtrip	10000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.07	0.12	0.01	0.20
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.13	0.10	0.01	0.37
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.25
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Structures-Manholes-Retaining Walls	Pick Up Truck	1176	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.05
	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.07	0.00	0.12
	Truck-HDDV	6272	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.01	0.09	0.07	0.00	0.25
	Truck-Roundtrip	4200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.03	0.05	0.00	0.17
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.08	0.01	0.00	0.36
Terminal Construction	Employees	60000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.02	0.51	0.04	0.00	2.38
								Total	1.41	11.39	13.66	0.83	55.88

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
3. Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Table E-3

Non-Road Construction Emissions - Alternatives 3 and 4

Non-Road Construction Pollutant Emissions														
							Emissions in lb/hp-hr				Emissions in tons/yr			
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	HC	CO	NOx	PM10	VOC	CO	NOx	PM10
Clearing & Grubbing	Dozer	D	180	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.01	0.05	0.23	0.02
	Scraper	D	240	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.60	0.06
	Blade	D	120	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.30	0.03
Excavation	Blade	D	750	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.11	0.38	1.87	0.17
	Scraper	D	2000	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.28	1.02	4.98	0.46
	Compactor	D	1000	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.03	0.10	0.44	0.04
	Dozer	D	1000	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.07	0.26	1.29	0.12
Subgrade-Scarify&Recompact	Blade	D	240	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.60	0.06
	Compactor	D	480	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.21	0.02
Aggregate Subbase	Blade	D	1500	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.21	0.76	3.73	0.35
	Dozer	D	300	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.08	0.39	0.04
	Compactor	D	200	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.09	0.01
Aggregate Base	Blade	D	2250	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.32	1.15	5.60	0.52
	Dozer	D	450	55%	305	0.0005	0.00087	0.00314	0.01537	0.00143	0.03	0.12	0.58	0.05
	Compactor	D	300	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.13	0.01
Heater Remix	Heater Rig	G	120	68%	25	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.45	0.01	0.00
	Sweeper	D	120	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.07	0.01
	Tractor	D	60	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.02	0.00
	Roller	D	120	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.02	0.08	0.01
Bituminous Surface Course	Paver	D	250	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.01
	Roller	D	1000	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.05	0.15	0.67	0.06
	F.E. Loader-Tractor	D	250	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.18	0.02
Portland Cement Concrete Pavement	Batch Plant	D	60	78%	127	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.05	0.00
	Paver	D	60	62%	130	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00
	Finish Machine	D	120	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.05	0.00
	Saw	D	120	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.04	0.00
	Sweeper	D	60	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
	F.E. Loader-Tractor	D	60	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.01	0.04	0.00

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
3. NO_x emissions factors determined using AP-42 and Tier 1 standards
4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
6. The conversion factor listed is used to translate lb/yr to tons/yr
7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Table E-3 (Cont.)

Non-Road Construction Emissions Alternative 3

Non-Road Construction Pollutant Emissions															
							Emissions in lb/hp-hr				Emissions in tons/yr				
Phase	Equipment	Fuel Type	Total Hours	Load Factor	Horse Power	Conversion Factor (lb to ton)	HC	CO	NOx	PM10	HC	CO	NOx	PM10
Saw & Seal Pavement	Saw	D	1600	73%	56	0.0005	0.00186	0.00495	0.01676	0.00154	0.06	0.16	0.55	0.05
	Sweeper	D	800	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.05	0.13	0.44	0.04
Groove Runway	Grinder	D	200	73%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.04	0.12	0.01
	Sweeper	D	200	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.03	0.11	0.01
Marking: Remove Marking	Sandblaster	D	120	38%	92	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.04	0.00
	Sweeper	D	60	68%	97	0.0005	0.00186	0.00495	0.01676	0.00154	0.00	0.01	0.03	0.00
Marking: New Marking	Striper	D	120	72%	450	0.0005	0.00087	0.00314	0.01537	0.00143	0.02	0.06	0.30	0.03
Drainage	Trencher	D	600	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.23	0.02
	Backhoe	D	600	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.25	0.02
	F.E. Loader-Tractor	D	300	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.22	0.02
	Compactor	D	600	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.06	0.26	0.02
Lighting	Trencher	D	600	75%	60	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.23	0.02
	Backhoe	D	600	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.03	0.07	0.25	0.02
	F.E. Loader-Tractor	D	300	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.05	0.22	0.02
	Compactor	D	600	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.02	0.06	0.26	0.02
Structures-Manholes-Retaining Walls	Backhoe	D	200	55%	90	0.0005	0.00186	0.00495	0.01676	0.00154	0.01	0.02	0.08	0.01
	Compactor	D	400	53%	100	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.04	0.17	0.02
	F.E. Loader-Tractor	D	200	55%	160	0.0005	0.00111	0.00361	0.01644	0.00149	0.01	0.03	0.14	0.01
Terminal Construction	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Backhoe	D	37.125	55%	112	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Grader	D	24	61%	140	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Tandem Roller	D	24	56%	145	0.0005	0.00111	0.00361	0.01644	0.00149	0.00	0.00	0.02	0.00
	Dozer	D	24	64%	200	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.00	0.02	0.00
	Crane (5 ton)	D	108	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.00	0.01	0.07	0.01
	Cement Finisher	D	729	53%	99	0.0005	0.00186	0.00495	0.01676	0.00154	0.04	0.09	0.32	0.03
	Gas Vibrator	G	729	43%	5	0.0005	0.02148	0.43659	0.01056	0.00072	0.02	0.34	0.01	0.00
	Crane (90 ton)	D	248	43%	194	0.0005	0.00104	0.00314	0.01603	0.00143	0.01	0.03	0.17	0.01
	Gas Welder	G	830	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.08	1.55	0.04	0.00
	Torch, Gas & Air	G	100	45%	19	0.0005	0.02148	0.43659	0.01056	0.00072	0.01	0.19	0.00	0.00
	Mixer	D	208	56%	11	0.0005	0.00336	0.01136	0.01979	0.00207	0.00	0.01	0.01	0.00
										Total	1.85	8.36	27.10	2.51

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. Load Factor based on information contained in the EPA document *Median Life, Annual Activity, and Load Factor Value for Nonroad Engine Emissions Modeling* (Report NR-005a)
2. Emissions factors are determined by fuel type and horsepower in conjunction with Tier 1 standards
3. NO_x emissions factors determined using AP-42 and Tier 1 standards
4. VOC emissions factors determined using AP-42 or Tier 1 standards for Hydrocarbons
5. Hydrocarbon emissions converted to VOC emissions according to the methodology presented in the EPA document *Conversion Factors for Hydrocarbon Emission Components* (Report NR-002)
6. The conversion factor listed is used to translate lb/yr to tons/yr
7. Tier 1 standards from Federal Register, October 23, 1998, page 57001, Table 1

Table E-4

On-Road Constructions Emissions Inventory -- Alternatives 3 and 4

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions														
			Emissions Factor in lbs/mi						Emissions in Tons per Year					
Phase	Equipment	Total Miles per Year	VOC	CO	NOX	Total Exhaust PM10	Entrained Road Dust	Conversion Factor lbs to tons	VOC	CO	NOX	Total Exhaust PM10	Entrained Road Dust
Clearing & Grubbing	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	1411	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.07
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.04	0.00	0.00	0.18
Excavation	Pick Up Truck	2940	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.06	0.01	0.00	0.15
	Water Truck	3920	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.08	0.01	0.00	0.19
	Employees	25500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.27	0.02	0.00	1.26
Subgrade-Scarify & Recompact	Pick Up Truck	706	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
	Water Truck	2822	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.14
	Employees	5400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.06	0.00	0.00	0.27
Aggregate Subbase	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Truck-HDDV	23520	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.06	0.41	0.32	0.02	1.17
	Truck-Roundtrip	329000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.40	2.76	4.78	0.29	16.32
	Water Truck	3136	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.06	0.01	0.00	0.16
	Employees	6000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.06	0.00	0.00	0.30
Aggregate Base	Pick Up Truck	882	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.04
	Truck-HDDV	35280	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.09	0.61	0.49	0.03	1.75
	Truck-Roundtrip	350000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.42	2.94	5.09	0.31	17.36
	Water Truck	4704	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.09	0.01	0.00	0.23
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.09	0.01	0.00	0.45
Heater Remix	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	2160	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.11
Rejuvenating Agent	Pick Up Truck	147	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Truck-Roundtrip	2700	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.02	0.04	0.00	0.07
	Employees	600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
Bituminous Surface Course	Pick Up Truck	2205	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.04	0.00	0.00	0.11
	Truck-HDDV	78400	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.19	1.36	1.08	0.07	3.89
	Truck-Roundtrip	224000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.27	1.88	3.26	0.20	11.11
	Asphalt Trucks	72000	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.07	0.51	0.76	0.04	1.79
	Employees	13500	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.14	0.01	0.00	0.67
Prime Coat	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.15
Tack Coat	Truck-Roundtrip	3600	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.03	0.05	0.00	0.09

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
*Some truck-roundtrips had travel outside of the air basin and values for entrained road dust were based on only 50% of roundtrip miles being within the air basin limits
Notes:
1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
3. Entrained road dust emissions factors are from the Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5

Table E-4 (Cont.)

On-Road Constructions Emissions Inventory Alternative 3

On-Road Construction, Offsite Hauling, and Material Transportation Pollutant Emissions

Phase	Equipment	Total Miles per Year	Emissions Factor in lbs/mi VOC	CO	NOX	Total Exhaust PM10	Entrained Road Dust	Conversion Factor lbs to tons	Emissions in Tons per Year VOC	CO	NOX	Total Exhaust PM10	Entrained Road Dust
Portland Cement Concrete Pavement	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Cement Truck	300	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.00	0.00	0.00	0.01
	Concrete Trucks	1400	0.00154	0.01127	0.01687	0.00095	0.07937	0.0005	0.00	0.01	0.01	0.00	0.07
	Water Truck	470	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Employees	3600	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.04	0.00	0.00	0.18
Saw & Seal Pavement	Pick Up Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Truck	2352	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.05	0.00	0.00	0.12
	Water Truck	6272	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.01	0.12	0.02	0.00	0.31
	Employees	14400	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.15	0.01	0.00	0.71
Groove Runway	Pick Up Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Truck	588	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
	Water Truck	1568	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.08
	Employees	3000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.03	0.00	0.00	0.15
Marking: Remove Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Water Truck	941	0.00213	0.03166	0.00415	0.00005	0.07937	0.0005	0.00	0.02	0.00	0.00	0.05
	Employees	900	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.04
Marking: New Marking	Pick Up Truck	353	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.01	0.00	0.00	0.02
	Truck-Roundtrip	1200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.00	0.01	0.02	0.00	0.03
	Employees	540	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.01	0.00	0.00	0.03
Drainage	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.31
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.16	0.13	0.01	0.47
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.19	0.01	0.00	0.89
Lighting	Pick Up Truck	1764	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.03	0.00	0.00	0.09
	Truck-Roundtrip	10000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.08	0.15	0.01	0.25
	Truck-HDDV	9408	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.16	0.13	0.01	0.47
	Truck-Roundtrip	6300	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.31
	Employees	18000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.01	0.19	0.01	0.00	0.89
Structures-Manholes-Retaining Walls	Pick Up Truck	1176	0.00151	0.03115	0.00300	0.00006	0.07937	0.0005	0.00	0.02	0.00	0.00	0.06
	Truck-Roundtrip	6000	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.05	0.09	0.01	0.15
	Truck-HDDV	6272	0.00397	0.02784	0.02210	0.00142	0.07937	0.0005	0.02	0.11	0.09	0.01	0.31
	Truck-Roundtrip	4200	0.00192	0.01343	0.02325	0.00142	0.07937	0.0005	0.01	0.04	0.06	0.00	0.21
	Employees	9000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.00	0.09	0.01	0.00	0.45
Terminal Construction	Employees	60000	0.00080	0.01688	0.00131	0.00005	0.07937	0.0005	0.02	0.51	0.04	0.00	2.38
							Total		1.76	14.11	17.06	1.04	67.51

Source: Brandley Engineering and Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.
Notes:
1. On-Road emissions factors from the California Air Resources Board EMFAC7G model
2. Total exhaust PM10 is a composite of EMFAC7G PM10 emissions factors for PM10 from exhaust, PM10 from tire wear, and PM10 from break wear
3. Entrained road dust emissions factors are from the *Air Quality Management Plan for the Town of Mammoth Lakes, November 30, 1990, page 3-5*

Table E-5

EMFAC7G On-Road Emissions Factors

On-Road Emissions Factors From The California Air Resources Board EMFAC7G Software Model																				
ABN	CY	MYA	MYB	PROCESS	CLASS	TECH	I/M	SEASON	DP	TEMP	SPD	VOC	CO	NOX	CO2	PMEX10	PMTW10	PMBW10	FUEL	EVAP	TIMES
GBV	2001	1967	2001	R	1	2	N	S	56	76	20	0.362	7.6545	0.5921	339.5391	0.0042	0.008	0.0127	27.0637	0.2102	0
GBV	2001	1967	2001	R	2	2	N	S	56	76	10	0.6863	14.1283	1.3598	697.6967	0.0043	0.008	0.0127	20.7598	0.7445	0
GBV	2001	1967	2001	R	3	2	N	S	56	76	10	0.9641	14.3589	1.8808	1038.9091	0.004	0.008	0.0127	11.6975	0.6406	0
GBV	2001	1967	2001	R	7	3	N	S	56	76	50	0.7001	5.1141	7.6535	0	0.4068	0.012	0.0127	6.3099	0	0
GBV	2001	1967	2001	R	8	3	N	S	56	76	50	0.8717	6.0915	10.5471	0	0.594	0.036	0.0127	6.1819	0	0

Source: Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Notes:

1. CY is the year the emissions factors are applicable.
2. Class is a number scale of 1 through 0 (10) where each number represents a type of vehicle:
   - 1 Light duty automobiles
   - 2 Light duty trucks
   - 3 Medium duty trucks
   - 4 Light heavy gas trucks
   - 5 Light heavy diesel trucks
   - 6 Medium heavy gas trucks
   - 7 Medium heavy diesel trucks
   - 8 Heavy heavy diesel trucks
   - 9 Buses
   - 0 Motorcycles
3. Tech is the vehicle technology type as defined with a value of 1 to 3 where:
   - 1 Non-catalyst gasoline powered vehicles
   - 2 Catalyst powered vehicle
   - 3 Diesel powered vehicle
4. Season is defined as S or W for Summer and Winter.
5. Temperature is the average temperature over the course of the study period.
6. PMEX10 is PM10 emissions from exhaust.
7. PMTW10 is PM10 emissions from tire wear.
8. PMBW10 is PM10 emissions from break wear.
9. All emissions factors are provided in grams per mile.
10. EMFAC7G is a product of the California Air Resources Board (www.arb.ca.gov/).

Appendix F - Historical and Forecast of Aviation Demand Background Information

F.1 Mammoth Lakes Market Area

The Mammoth Lakes region is abundant with mountains, lakes, streams, and forests. Based on statistics provided by the California Department of Transportation (CalTrans), approximately 1.5 million summer visitors are attracted to the Mammoth Lakes region yearly. As a result, the tourism industry is a major contributor to the region's economic health.

Historical and projected population for the California counties of Inyo and Mono (the Two-County Area that surrounds Mammoth Lake), the State of California (California), and the United States is presented in **Table F-1**. As shown, population in the Two-County Area increased at an annual compounded growth rate of 0.4 percent between 1980 and 2000, which was less than the 1.8 percent increase for California and the 1.0 percent increase for the nation during this same period. Between the 1999 through 2025 period, however, population in the Two-County Area is projected to increase at an annual compounded growth rate that is comparable to that for California and the nation.

Table F-2 and **Table F-3** present historical and projected per capita personal income (PCPI) and nonagricultural employment, respectively, for the Two-County Area, California, and the nation between 1989 and 2025. As shown, historical and projected trends for these economic indicators are similar to those for population. Growth in PCPI and nonagricultural employment (total and services-oriented) for the Two-County Area was below that for California and the nation between 1989 and 1999. However, their projected growth rates for the Two-County Area are more in line with (actually exceeds) those for California and the nation between 1999 and 2025.

Currently, there are approximately 14,730 rental beds/pillows in Mammoth Lakes, of which 28 percent are hotel rooms and 72 percent are rentable condominiums. Mammoth Lake's bed base is projected to increase dramatically in the next few years with the development of three new Intrawest projects: Juniper Springs, Sierra Star, and Gondola Village. These three developments are anticipated to add approximately 2,100 units to the existing bed base. In addition, Mammoth Mountain is in the midst of a five-year, $132 million improvement program.

Between 1985 and 1995, the Airport was provided with commercial service by Trans World Express, via Beech 1900 aircraft, with up to five daily roundtrips from Los Angeles and San Francisco combined. This service was discontinued due to the financial difficulties and restructuring of Trans World Airlines. In addition, United Express also served the Airport during the winter seasons in 1993 and 1994, with daily flights to Fresno. Discontinued service by United Express was largely due to several business and market factors, including frequent overbookings out of the Fresno market that resulted in poor passenger loyalty and low repeat business. Since 1995, the Airport has not been provided with a scheduled commercial air service.

Table F-1

Historical and Projected Population

					Annual Compounded Growth			
	Historical			Projected	Historical			Projected
Area	1980	1990	1999	2025	1980-1990	1990-1999	1980-1999	1999-2025
Mono County	8,650	10,080	10,690	16,260	1.5%	0.7%	1.1%	1.6%
Inyo County	17,910	18,270	18,020	21,420	0.2%	-0.2%	0.0%	0.7%
TWO-COUNTY AREA	26,560	28,350	28,710	37,680	0.7%	0.1%	0.4%	1.1%
California	23,792,840	29,925,530	33,125,060	45,243,640	2.3%	1.1%	1.8%	1.2%
United States	227,225,620	249,438,710	272,890,020	345,950,400	0.9%	1.0%	1.0%	0.9%

Source: NPA Data Services, Inc., June 2000.

Prepared By: Ricondo & Associates, Inc., October 2000

Table F-2

Per Capital Personal Income

Year	Two-County Area	California	United States
Historical			
1989	$19,678	$22,870	$20,526
1990	$19,162	$22,993	$20,618
1991	$18,405	$22,197	$20,268
1992	$18,617	$22,191	$20,547
1993	$18,640	$21,849	$20,671
1994	$17,921	$21,332	$20,499
1995	$18,102	$21,842	$21,001
1996	$18,909	$22,760	$21,874
1997	$19,581	$23,537	$22,619
1998	$20,309	$24,819	$23,394
1999	$21,137	$25,458	$24,305
Projected			
2025	$33,191	$37,117	$35,426
Annual Compounded Growth			
1989 - 1999	0.7%	1.1%	1.7%
1999 - 2025	1.8%	1.5%	1.5%

Source: NPA Data Services, Inc., June 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Nonagricultural Employment

Year	Total Nonagricultural Employment: Two-County Area	California (000)	United States (000)
1989	16,660	16,303	134,118
1990	16,850	16,692	136,034
1991	16,110	16,634	135,682
1992	16,360	16,302	136,362
1993	16,810	16,267	138,993
1994	16,850	16,477	142,693
1995	17,240	16,821	146,378
1996	17,410	17,297	149,709
1997	17,670	17,743	153,453
1998	17,790	18,205	156,125
1999	18,150	18,700	158,912
Projected			
2025	30,760	28,422	224,844
Annual Compounded Growth			
1989 - 1999	0.9%	1.4%	1.7%
1999 - 2025	2.0%	1.6%	1.3%

Year	Services Industry Employment: Two-County Area	California (000)	United States (000)
1989	5,450	4,885	37,235
1990	5,500	5,132	38,662
1991	5,250	5,298	39,572
1992	5,460	5,280	40,476
1993	5,640	5,384	41,903
1994	5,600	5,476	43,117
1995	5,660	5,691	44,905
1996	5,820	5,939	46,588
1997	5,830	6,079	48,227
1998	5,860	6,282	49,636
1999	5,970	6,519	50,943
Projected			
2025	10,660	11,189	80,198
Annual Compounded Growth			
1989 - 1999	0.9%	2.9%	3.2%
1999 - 2025	2.3%	2.1%	1.8%

Source: NPA Data Services, Inc., June 2000.
Prepared By: Ricondo & Associates, Inc., October 2000.

Currently, the nearest commercial service airport to the Mammoth Lakes area is Reno, located approximately 170 miles north of Mammoth Lakes. The next closest commercial service airports are Fresno (190 miles), Sacramento (220 miles) the three Bay-area airports (San Francisco/Oakland/San Jose - roughly 250 miles), Las Vegas (310 miles) and Los Angeles (320 miles). The driving times from these areas to Mammoth Lakes range from three to eight hours. The majority of visitors to Mammoth Lakes arrive via car from the Los Angeles area, either originating travel in the Los Angeles area or flying to a Los Angeles area airport and renting a car to drive to Mammoth Lakes. With the exception of the drive from Los Angeles and Reno via U.S. 395, the drive from each of these airports is via winding mountainous roads through the Sierra Nevada Mountain range, some of which are not open during the winter season. Another airport in the region is Bishop Airport, approximately 45 miles south of Mammoth Lakes, but Bishop Airport is a general aviation facility and does not provided commercial service.

Over the last several years, interests within the Mammoth Lakes area have explored the opportunity of providing air carrier service to the Mammoth Lakes region. Discussions have been conducted with American Airlines to provide air carrier and commuter service to Mammoth Lakes during both winter and summer seasons. Agreements between the airline and local business interests have been negotiated with air carrier service scheduled to initiate in the 2001/2002 winter season.

F.2 Case Study Airports

In order to provide a basis for potential air carrier service at Mammoth Yosemite Airport, historical activity, local demographics, and tourism-related visitor statistics were reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:

- Yampa Valley Regional Airport (Steamboat Springs, CO)
- Vail/Eagle County Airport (Vail, CO)
- Aspen-Pitkin County Airport (Aspen, CO)
- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MO)

In order compare each airport's market characteristics, the following factors were examined and summarized in **Table F-4**:

- Number of annual ski visitors (represented as skier days)
- Number of ski lifts, trails and skiable acreage
- Number of area beds/pillows
- Number of annual national park visitors
- Driving distances from competing commercial service airports
- Historical enplanement levels

These factors, along with each case airport's commercial activity levels, serve to give an overall idea of the level of service that might be expected at Mammoth Lakes.

Table F-5 presents each case study airport's historical growth in aviation activity from 1990 through 1998. In addition, historical ski visitor statistics for Steamboat Springs, Vail, and Aspen, as well as historical visitors for the national parks surrounding Jackson Hole and Glacier Park International, are presented in Table F-5. As shown, the estimated number of 1998 winter enplanements per ski visitor

Table F-4

Comparison of Case Study Airport Market Characteristics

	Mammoth Lakes	Steamboat Springs	Vail	Aspen	Jackson Hole	Kalispell/ Whitefish
General Statistics						
Skier Days	956,573 [3]	1,027,729 [1]	5,736,902 [2]	1,510,144 [8]	541,000 [5]	556,000 [9]
Number of Lifts	30	25 [1]	115 [2]	45 [8]	18	10
Number of Trails	150	155 [1]	780 [2]	383 [8]	173	67
Skiable Acreage	3,500 +	2,964 [1]	13,481 [2]	5,242 [8]	5,900	3,000
Beds/Pillows	14,730	N/A	44,000 [4]	N/A	7,822 [5]	N/A
Number of National Park Visitors	5,375,090 [6]	–	–	–	5,877,890 [7]	2,234,456 [10]
Driving Distance to Nearest Commerical Service Airport (miles)						
Reno	170					
Las Vegas	310					
Fresno	190					
San Francisco / Oakland / San Jose	250					
Los Angeles	320					
Denver International Airport		210	120	170		
Yampa Valley Regional Airport		–	85	130		
Vail/Eagle County Airport		85	–	75		
Aspen		130	100	–		
Idaho Falls					100	
Jackson Hole					–	
Yellowstone Regional					70	
Riverton Regional					130	
Salt Lake City					270	
Casper					280	
Missoula						125
Great Falls						230
Helena						200
1998 Activity Statistics						
Annual Enplanements	–	110,621	169,740	248,510	184,903	133,515
Annual Scheduled Aircraft Seats	–	165,817	301,324	541,496	334,364	231,389
Load Factor	–	66.7%	56.3%	45.9%	55.3%	57.7%

1 Colorado Ski Country USA. Includes the ski resorts located in the Front Range Destination including, Arapahoe Basin, Beaver Creek, Breckenridge, Copper Mountain, Keystone, Vail, and Ski Cooper.

2 Colorado Ski Country USA. Includes Howelsen Hill and Steamboat resorts.

3 California Department of Transportation (CalTrans).

4 Vail Chamber of Commerce.

5 National Park Service. Includes Yellowstone National Park and the Grand Teton National Park

6 National Park Service. Includes Yosemite National Park, Kings Canyon National Park, and Death Valley National Park.

7 Jackson Chamber of Commerce.

8 Colorado Ski Country USA. Includes the Aspen Highlands, Aspen Mountain, Buttermilk, Snowmass, and Sunlight ski resorts.

9 Big Mountain Ski Resort.

10 National Park Service. Includes Yellowstone National Park, Kings Canyon National Park, and Death Valley National Park.

Source: Ricondo & Associates, Inc., October 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Table F-5

Historical Activity at Case Study Airports

YAMPA VALLEY REGIONAL AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (100%)	Skier Days 1	EPs per Ski Visitor
1990	46,075	–	94,335	48.8%	46,075	N/A	N/A
1991	60,309	30.89%	125,416	48.1%	60,309	N/A	N/A
1992	58,643	-2.76%	91,981	63.8%	58,643	N/A	N/A
1993	66,317	13.09%	90,233	73.5%	66,317	N/A	N/A
1994	69,299	4.50%	106,945	64.8%	69,299	1,037,320	0.0668
1995	93,173	34.45%	154,790	60.2%	93,173	1,027,701	0.0907
1996	97,975	5.15%	150,310	65.2%	97,975	1,035,110	0.0947
1997	110,170	12.45%	168,662	65.3%	110,170	1,121,487	0.0982
1998	110,621	0.41%	165,817	66.7%	110,621	1,068,091	0.1036
(1990-1998) Annual Compounded Growth Rate		11.6%	7.3%			0.7%	

VAIL/EAGLE COUNTY AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (90%)	Skier Days 1	EPs per Ski Visitor
1990	5,956	–	16,302	36.5%	5,360	N/A	N/A
1991	28,341	375.84%	58,608	48.4%	25,507	N/A	N/A
1992	35,317	24.61%	56,513	62.5%	31,785	N/A	N/A
1993	55,490	57.12%	102,541	54.1%	49,941	N/A	N/A
1994	57,821	4.20%	86,495	66.8%	52,039	4,667,635	0.0111
1995	77,882	34.70%	115,514	67.4%	70,094	5,476,402	0.0128
1996	110,063	41.32%	149,519	73.6%	99,057	5,896,743	0.0168
1997	159,874	45.26%	263,144	60.8%	143,887	6,136,048	0.0234
1998	169,740	6.17%	301,324	56.3%	152,766	5,935,018	0.0257
(1990-1998) Annual Compounded Growth Rate		52.0%	44.0%			6.2%	

ASPEN-PITKIN COUNTY AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Winter Enplanements (60%)	Skier Days 1	EPs per Ski Visitor
1990	214,725	–	448,770	47.8%	128,835	N/A	N/A
1991	206,041	-4.04%	435,057	47.4%	123,625	N/A	N/A
1992	238,097	15.56%	472,268	50.4%	142,858	N/A	N/A
1993	251,914	5.80%	460,037	54.8%	151,148	N/A	N/A
1994	239,050	-5.11%	438,874	54.5%	143,430	1,542,094	0.0930
1995	200,685	-16.05%	312,216	64.3%	120,411	1,518,723	0.0793
1996	210,672	4.98%	345,494	61.0%	126,403	1,433,187	0.0882
1997	224,815	6.71%	431,884	52.1%	134,889	1,536,309	0.0878
1998	248,510	10.54%	541,496	45.9%	149,106	1,661,775	0.0897
(1990-1998) Annual Compounded Growth Rate		1.8%	2.4%			1.9%	

Table F-5

Historical Activity at Case Study Airports

JACKSON HOLE AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (35%)	National Park Visitors 2	EPs per NP Visitor
1990	148,144	--	299,613	49.4%	51,850	4,411,825	0.0118
1991	170,458	15.06%	335,281	50.8%	59,660	4,546,289	0.0131
1992	192,283	12.80%	390,526	49.2%	67,299	4,889,041	0.0138
1993	192,982	0.36%	391,856	49.2%	67,544	5,480,882	0.0123
1994	181,080	-6.17%	328,837	55.1%	63,378	5,586,844	0.0113
1995	169,062	-6.64%	289,470	58.4%	59,172	5,856,300	0.0101
1996	180,120	6.54%	327,931	54.9%	63,042	5,745,610	0.0110
1997	191,057	6.07%	334,045	57.2%	66,870	5,548,275	0.0121
1998	199,693	4.52%	334,364	59.7%	69,893	5,877,890	0.0119
(1990-1998) Annual Compounded Growth Rate		3.8%	1.4%			3.7%	

GLACIER PARK INTERNATIONAL AIRPORT

Year	Annual Enplanements	Annual Growth	Aircraft Seats	Load Factor	Estimated Summer Enplanements (50%)	National Park Visitors 3	EPs per NP Visitor
1990	70,883	--	198,591	35.7%	35,442	2,173,164	0.0326
1991	76,652	8.14%	206,852	37.1%	38,326	2,300,619	0.0333
1992	85,953	12.13%	205,748	41.8%	42,977	2,411,191	0.0356
1993	89,553	4.19%	220,138	40.7%	44,777	2,383,980	0.0376
1994	101,715	13.58%	226,570	44.9%	50,858	2,403,603	0.0423
1995	114,971	13.03%	252,711	45.5%	57,486	2,091,783	0.0550
1996	121,341	5.54%	223,545	54.3%	60,671	2,025,179	0.0599
1997	130,620	7.65%	253,713	51.5%	65,310	2,055,902	0.0635
1998	133,515	2.22%	231,389	57.7%	66,758	2,234,456	0.0598
(1990-1998) Annual Compounded Growth Rate		8.2%	1.9%			0.3%	

[1] Colorado Ski County USA.

[2] National Park Service. Includes Yellowstone National Park and the Grand Teton National Park.

[3] National Park Service. Includes Glacier National Park and Glacier Bay National Park.

Source: Individual Airport Records.

Prepared by: Ricondo & Associates, Inc., October 2000.

ranges from a low of approximately 0.026 enplanements per skier at Vail/Eagle County Airport to a high of 0.104 enplanements per ski visitor at Yampa Valley Regional Airport. Enplanements to national park visitors range from approximately 0.02 enplanements per national park visitor at Jackson Hole Airport, to nearly 0.06 enplanements per national park visitor at Glacier Park International Airport.

As also shown in Table F-5, with the exception of Vail/Eagle County and Aspen-Pitkin County airports, average aircraft load factors have generally increased at each case study airport from the 35-45 percent range to the 60-70 percent range. At Vail/Eagle County and Aspen-Pitkin County airports, the average aircraft load factors have decreased in recent years after peaking at 73 and 64 percent, respectively. These decreases in load factors at Vail/Eagle County and Aspen-Pitkin County airports are due to the following:

- Load factors at Vail/Eagle County Airport have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and/or expansion of new nonstop hub service by United to LaGuardia, Chicago, and Dulles; American to Chicago, Los Angeles, and Newark; and Continental to Houston and Newark.

- Load factors at Aspen-Pitkin County Airport have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and expansion of new nonstop hub service by Aspen Mountain Air to Denver; Mesaba Aviation to Minneapolis; and Mesa Airlines to Phoenix.

Table F-6 presents a summary of each case study airport's air service, including the airlines serving each airport, nonstop markets, number of daily flights, and aircraft types.

A detailed discussion of the specific factors contributing to the commercial air service levels at each of the case study airports is provided in the following sections.

F.2.1 Yampa Valley Regional Airport (Steamboat Springs, Colorado)

The Yampa Valley Regional Airport is situated in the Rocky Mountains in Northwestern Colorado. Yampa Valley predominately serves winter ski visitors to the area. In terms of skiing characteristics, Steamboat Springs is the most comparative in size to Mammoth Lakes. The Yampa Valley Regional Airport essentially serves two area ski resorts: the Steamboat and Howelsen ski resorts. Combined, these two ski resorts accommodated 1,028,000 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. Similarly, these ski resorts provide similar size ski facilities, in terms of number of lifts (25 lifts versus 30 lifts at Mammoth Lakes), number of ski trails (155 trails versus 150 trails at Mammoth Lakes), and skiable acreage (2,964 acres versus 3,500 plus acres at Mammoth Lakes).

In addition to the Yampa Valley Regional Airport, three other commercial service airports are located nearby including Denver International (210 miles), Vail/Eagle County Airport (85 miles), and Aspen (130 miles). Given the proximity and the level of service provided at Denver, these airports likely serve some ski visitors traveling to the Steamboat Springs area. Due to the indirect two lane access from these airports to Steamboat Springs, however, approximately 75 to 85 percent

Table F-6

Existing Air Service at Case Study Airports

Airport	Airlines	Nonstop Markets	Number of Daily Flights	Aircraft Types
Yampa Valley Regional Airport (Winter Schedule)	American, Continental, Trans World, United Express	Denver, Dallas/Ft. Worth, Newark, Houston, St. Louis	11	B-737-300, B-737-500, B-757, BAE 146, Dornier 328, MD-80
Vail/Eagle County Airport (Winter Schedule)	American, Continental, Delta, Mesa, Northwest, United, United Express	Atlanta, Denver, Dallas/Ft. Worth, Detroit, Newark, Houston, Los Angeles, LaGuardia, Miami, Minneapolis, Chicago O'Hare, Phoenix, San Francisco	16	B-757, BAE 146, Dash-8
Aspen-Pitkin County Airport (Winter Schedule)	America West, Mesa, Mesaba, Northwest, United, United Express	Denver, Los Angeles, Minneapolis, Phoenix	17	BAE 146, Dash-8, Dornier 328
Jackson Hole Airport (Summer Schedule)	American, Skywest, Delta, United, United Express	Dallas/Ft. Worth, Denver, Salt Lake City	17	A-319, B-757, BAE 146, Emb 120
Glacier Park International Airport (Summer Schedule)	Alaska, Continental, Delta, Big Sky, Northwest, Horizon	Spokane, Great Falls, Helena, Missoula, Minneapolis, Seattle, Salt Lake City	14	Dash-8, DC-9-30/40/50, F28, Metro, B-727-200, B-737-300

Source: Official Airline Guide, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

of the ski visitors traveling by air are estimated to arrive via the Yampa Valley Regional Airport.[1]

Until as recently as this summer, Yampa Valley Regional Airport did not have any scheduled commercial service during the summer months. During the 1999 winter season, Yampa Valley Regional was provided with 11 daily flights by four commercial air carriers (American, Continental, Trans World and United) and one regional/commuter airline (United Express). United Express also provides service to Yampa Valley in the summer. As shown in Table F-5, Yampa Valley's enplanements have increased from 46,100 in 1990 to 110,600 in 1998, representing an annual compounded growth rate of 11.6 percent. Overall, average aircraft load factors have increased as well, averaging approximately 66.7 percent in 1998.

Table F-7 presents the top 30 origin and destination (O&D) markets for Yampa Valley Regional Airport. As shown, Chicago O'Hare is Yampa Valley's top O&D market, with over 7 percent of the Airport's traffic originating from the Chicago O'Hare Airport. The states of New York and Texas also constitute major O&D markets for Yampa Valley.

Ski visitors to Steamboat Springs resorts have remained relatively constant since 1994, averaging approximately 1.06 million visitors from 1994 to 1998 (see Table F-5). Based on conversations with staff, historical scheduled seats at the Airport and winter enplanements are estimated to be approximately 90 percent of the Airport's total annual enplanements. When compared to ski visitor statistics for Steamboat Springs, the number of estimated winter enplanements per ski visitor has increased since 1994 from 0.067 enplanements per ski visitor to approximately 0.104 enplanements per ski visitor in 1998.

F.2.2 Vail/Eagle County Airport (Vail, Colorado)

Vail/Eagle County Airport is situated in the Rocky Mountains in Northwestern Colorado. Similar to the Yampa Valley Regional Airport, Vail/Eagle County Airport also predominately serves winter ski visitors to the area. Skiing activity in Vail is nearly six times greater than that of Mammoth Lakes or Steamboat Springs. There are seven ski resorts located in the Vail area: Arapahoe Basin, Beaver Creek, Breckenridge, Copper Mountain, Keystone, Vail and Ski Cooper. Combined, these ski resorts accommodated 5,737,000 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. These seven ski resorts provide 115 ski lifts, 780 ski trails, and 13,481 skiable acres.

In addition to the Vail/Eagle County Airport, three other commercial service airports are located nearby: Yampa Valley Regional Airport (85 miles), Aspen (100 miles) and Denver International (120 miles). Given their proximity, particularly Denver International Airport, these airports serve some ski visitors traveling to the Vail area. Direct interstate access via I-70 is provided from Denver to Vail, thereby likely resulting in some diversion of air traffic destined for the Vail area.

[1] Source: Yampa Valley Regional Airport.
[2] Source: Yampa Valley Regional Airport.

Table F-7

Yampa Valley Regional Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	O'Hare Intl	IL	7,210	7.3%
2	George Bush Int	TX	5,340	5.4%
3	Newark Intl	NY	5,320	5.4%
4	Dallas/Ft Worth	TX	4,800	4.9%
5	Atlanta	GA	3,680	3.7%
6	Denver Intl	CO	3,520	3.6%
7	La Guardia	NY	3,300	3.3%
8	St Paul Intl	MN	2,810	2.8%
9	Los Angeles Intl	CA	2,700	2.7%
10	Philadelphia Intl	PA	2,470	2.5%
11	Lambert-St Louis	MO	2,400	2.4%
12	Tampa Intl	FL	2,110	2.1%
13	Boston Logan	MA	2,070	2.1%
14	Orlando Intl	FL	2,040	2.1%
15	Miami Intl	FL	2,000	2.0%
16	Detroit	MI	1,870	1.9%
17	Dulles Intl	DC	1,840	1.9%
18	Moisant Intl	LA	1,770	1.8%
19	San Francisco Intl	CA	1,580	1.6%
20	Baltimore/Wash Intl	MD	1,560	1.6%
21	Sky Harbor Intl	AZ	1,440	1.5%
22	Austin	TX	1,270	1.3%
23	Memphis Intl	TN	1,270	1.3%
24	Hopkins Intl	OH	1,220	1.2%
25	Lindberg Field	CA	1,170	1.2%
26	Indianapolis	IN	1,160	1.2%
27	Fort Laud Intl	FL	1,150	1.2%
28	Nashville	TN	1,120	1.1%
29	Charlotte	NC	1,040	1.1%
30	Birmingham	AL	980	1.0%
TOTAL - TOP 30 MARKETS			72,210	73.2%
TOTAL - ALL MARKETS			98,700	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

Commercial service was initiated at Vail/Eagle County Airport in late 1990. Since that time, the level of commercial service and airport enplanements has grown considerably. As shown in Table F-5, enplanements have increased from 6,000 in 1990 to 170,000 in 1998, representing an annual compounded growth rate of 52.0 percent. Similarly, the number of scheduled aircraft seats at the

Vail/Eagle County Airport has increased at an annual compounded rate of 44.0 percent from 1990 to 1998. Overall, average aircraft load factors have increased as well, averaging approximately 56.3 percent in 1998. As mentioned previously, the airport's average aircraft load factors have decreased in recent years due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and/or expansion of new nonstop hub service by United to LaGuardia, Chicago, and Dulles; American to Chicago, Los Angeles, and Newark; and Continental to Houston and Newark. While the Airport is still in a growth mode, the market is considered to be maturing and is likely to level off in terms of overall air service and enplanement growth in the near-term.

During the 1999 winter season, Vail/Eagle County Airport was provided with 16 daily flights on weekdays and 30 flights on weekends, by five commercial air carriers (American, Continental, Delta, Northwest and United) and two regional/commuter airline (United Express and Mesa). United Express also provides service to the Airport in the summer.

Table F-8 presents the top 30 origin and destination (O&D) markets for Vail/Eagle County Airport. Similar to Yampa Valley, the states of New York and Texas constitute major O&D markets for the Airport. In particular, when combined, the New York markets account for 17.3 percent of the Airport's demand. Chicago O'Hare and Los Angeles are also major markets for Vail, accounting for 6.0 percent and 5.3 percent of Vail/Eagle County Airport's O&D traffic, respectively.

Ski visitors to the Vail ski resorts have increased since 1994 from 4.7 million skiers in 1994 to nearly 6.0 million skiers in 1998 (see Table F-5). Based on conversations with staff, historical scheduled seats at the Airport and winter enplanements are estimated to be approximately 90 percent of the Airport's total annual enplanements. The number of estimated winter enplanements per ski visitor has increased in the last five years from approximately 0.011 in 1994 to approximately 0.026 in 1998. The lower ratio of enplanements to ski visitor ratio for Vail/Eagle County Airport can be directly attributed to the competition for commercial service with other nearby commercial service airports, primarily Denver International Airport.

F.2.3 Aspen-Pitkin County Airport (Aspen, Colorado)

Aspen-Pitkin County Airport is situated in the Rocky Mountains in Northwestern Colorado. Similar to the Yampa Valley Regional and Vail/Eagle County airports, the Airport predominately serves winter ski visitors. There are five ski resorts located in the Aspen area: Aspen Highlands, Aspen Mountain, Buttermilk, Snowmass, and Sunlight ski resorts. Combined, these ski resorts accommodated 1,510,144 ski visitors in 1998, as compared to the 957,000 ski visitors to Mammoth Mountain in 1999. Combined, these five ski resorts provide 45 ski lifts, 383 ski trails, and 5,242 skiable acres.

In addition to the Aspen-Pitkin County Airport, three other commercial service airports are located nearby: Vail/Eagle County (75 miles), Yampa Valley Regional Airport (130 miles), and Denver

Table F-8

Vail/Eagle County Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	Newark Intl	NY	16,100	10.2%
2	La Guardia	NY	11,160	7.1%
3	O'Hare Intl	IL	9,430	6.0%
4	Dallas/Ft Worth	TX	8,350	5.3%
5	Los Angeles Intl	CA	8,340	5.3%
6	Miami Intl	FL	6,950	4.4%
7	George Bush Int	TX	5,700	3.6%
8	Atlanta	GA	5,270	3.4%
9	St Paul Intl	MN	4,720	3.0%
10	Detroit	MI	4,200	2.7%
11	Boston Logan	MA	4,000	2.5%
12	Philadelphia Intl	PA	3,860	2.5%
13	Tampa Intl	FL	2,810	1.8%
14	San Francisco Intl	CA	2,440	1.6%
15	Dulles Intl	DC	2,390	1.5%
16	Fort Lauderdale Intl	FL	2,300	1.5%
17	Baltimore/Wash Intl	MD	2,080	1.3%
18	Nashville	TN	2,020	1.3%
19	Raleigh/Durham	NC	1,900	1.2%
20	Orlando Intl	FL	1,890	1.2%
21	West Palm Beach	FL	1,770	1.1%
22	Bradley Intl	CT	1,680	1.1%
23	Birmingham	AL	1,650	1.0%
24	Memphis Intl	TN	1,630	1.0%
25	Hopkins Intl	OH	1,590	1.0%
26	Charlotte	NC	1,560	1.0%
27	Indianapolis	IN	1,550	1.0%
28	Ronald Regan National	DC	1,520	1.0%
29	Moisant Intl	LA	1,500	1.0%
30	Pittsburgh Intl	PA	1,420	0.9%
TOTAL - TOP 30 MARKETS			121,780	77.4%
TOTAL - ALL MARKETS			157,310	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

International (170 miles). Given their proximity, particularly Denver International Airport, these airports serve some ski visitors traveling to the Aspen area.

During the 1999 winter season, Aspen-Pitkin County Airport was provided with 17 daily flights by three commercial air carriers (America West, Northwest, and United) and three regional/commuter airlines (Mesa, Mesaba, and United Express). As shown in Table F-5, the Airport's enplanements have increased from 214,725 in 1990 to 248,510 in 1998, representing an annual compounded growth rate of 1.8 percent. Overall, average aircraft load factors have decreased in recent years, averaging approximately 45.9 percent in 1998. This decrease in average aircraft load factors is due an increase in the number of aircraft seats relative to the airport's enplanement growth. These additional scheduled aircraft seats are due to the initiation and expansion of new nonstop hub service by Aspen Mountain Air to Denver; Mesaba Aviation to Minneapolis; and Mesa Airlines to Phoenix.

Table F-9 presents the top 30 origin and destination (O&D) markets for Aspen-Pitkin County Airport. As shown, Denver constitutes the Airport's top O&D market with nearly 13 percent of the Airport's passengers traveling to and from Denver. Similar to Yampa Valley and Vail/Eagle County airports, the states of California, New York, and Texas also constitute major O&D markets for the Aspen-Pitkin County Airport. When combined, California markets account for 14.0 percent of the Airport's demand, while the New York markets account for 10.4 percent of the Airport's demand.

Chicago O'Hare is also a major market from Aspen, accounting for 6.9 percent of the Airport's O&D traffic. Visitors to Aspen ski resorts have increased since 1994 from 1.5 million skiers in 1994 to nearly 1.7 million skiers in 1998 (see Table F-5). Based on conversations with staff, historical scheduled seats at the Aspen-Pitkin County Airport, winter enplanements are estimated to be approximately 60 percent of the Airport's total annual enplanements. The number of estimated winter enplanements per ski visitor has remained relatively constant in the last five years, averaging approximately 0.088 winter enplanements per skier.

F.2.4 Jackson Hole Airport (Jackson, Wyoming)

Jackson Hole Airport is located in the Rocky Mountain range in Northwestern Wyoming. Similar to Mammoth Lakes, Jackson Hole serves two distinct seasonal attractions, skiing in the winter and numerous outdoors recreational activities in the summer. Skiing is provided at the Snow King, Jackson Hole and Grand Targhee resorts. Combined, these ski resorts attracted approximately 541,000 skiers to the region in 1998. During the summer, major attractions are the Grand Teton National Park, Yellowstone National Park and numerous national forest parks in the region. Based on statistics provided by the National Park Service, nearly 6.0 million tourists visited nearby Yellowstone and Grand Teton national parks in 1998.

Five other commercial service airports are located in the region: Yellowstone Regional Airport (70 miles), Idaho Falls Airport (100 miles), Riverton Regional Airport (130 miles), Salt Lake City (270 miles), and Natrona County International Airport (280 miles). The close proximity of Yellowstone Regional and Idaho Falls in particular, result in competition for commercial air service visitors to the region.

Commercial service at Jackson Hole Airport also revolves around its winter and summer seasons. Commercial service during the winter and summer increases, while it decreases during the spring and fall. In 1999, during the winter and summer an average of 17 daily flights were provided via three air carrier airlines (American, Delta and United) and two regional/commuter airlines (Delta Connection and

Table F-9

Aspen-Pitkin County Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	Denver Intl	CO	29,980	12.8%
2	O'Hare Intl	IL	16,130	6.9%
3	Los Angeles Intl	CA	15,410	6.6%
4	La Guardia	NY	15,150	6.5%
5	Dallas/Ft Worth	TX	10,210	4.4%
6	San Francisco Intl	CA	9,170	3.9%
7	Newark Intl	NY	9,160	3.9%
8	Miami Intl	FL	8,770	3.7%
9	Dulles Intl	DC	6,650	2.8%
10	George Bush Intl	TX	5,900	2.5%
11	Phoenix	AZ	5,660	2.4%
12	Logan Intl	MA	5,320	2.3%
13	Detroit	MI	5,050	2.2%
14	Philadelphia Intl	PA	4,590	2.0%
15	Atlanta	GA	4,530	1.9%
16	Minneapolis	MN	4,470	1.9%
17	San Diego	CA	3,820	1.6%
18	John Wayne Intl	CA	3,100	1.3%
19	Seattle	WA	2,890	1.2%
20	Baltimore/Wash Intl	MD	2,610	1.1%
21	Orlando Intl	FL	2,610	1.1%
22	St Louis	MO	2,610	1.1%
23	Tampa Intl	FL	2,410	1.0%
24	Hopkins Intl	OH	2,300	1.0%
25	New Orleans	LA	2,130	0.9%
26	Kansas City Intl	MO	1,840	0.8%
27	Indianapolis	IN	1,740	0.7%
28	San Jose Mun	CA	1,500	0.6%
29	Las Vegas	NV	1,460	0.6%
30	Oakland	CA	1,430	0.6%
TOTAL - TOP 30 MARKETS			188,600	80.5%
TOTAL - ALL MARKETS			234,270	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

United Express). Of the Airport's annual enplanements, however, winter enplanements represent a larger percentage of total enplanements than summer enplanements. Based on discussions with airport staff, it is estimated that between 60 and 70 percent of total enplanements occur in the winter, while the remaining 30 to 40 percent of enplanements occur in the summer. This is based on a number of factors including:

- Change in traveler types (i.e., singles/couples in the winter, who are more likely to fly, versus families in the summer, who are more likely to drive)
- Adverse weather for driving conditions during the winter
- More affluent ski travelers in the winter

As shown in Table F-5, Jackson Hole Airport's enplanements have increased from 148,000 in 1990 to 185,000 in 1998, representing an annual compounded growth rate of 2.8 percent. Overall, average aircraft load factors have increased as well, averaging approximately 55.3 percent in 1998.

Table F-10 presents the top 30 origin and destination (O&D) markets for Jackson Hole Airport. As shown, Chicago is the Airport's top O&D market, with nearly 6 percent of the Airport's traffic originating from the Chicago O'Hare Airport. Denver represents the Airport's second highest O&D market, with 5.5 percent of the Airport's traffic originating from Denver. The states of New York (8.5 percent), California (9.6 percent), and Texas (5.3 percent) also constitute major O&D markets for the Jackson Hole Airport.

National park visitors to Yellowstone and Grand Tenton National parks have increased from 4.4 million visitors in 1990 to nearly 5.9 million visitors in 1998 (see Table J-5). Based on conversations with staff, historical scheduled seats at the Airport, summer enplanements are estimated to be approximately 35 percent of total annual enplanements. When compared to national park visitor statistics provided by the National Park Service, the number of estimated summer enplanements per national park visitor has remained relatively constant since 1990, averaging approximately 0.0119 summer enplanements per visitor.

F.2.5 Glacier Park International Airport (Kalispel, Montana)

Glacier Park International Airport is located in the Rocky Mountain range in Northwestern Montana. Similar to Mammoth Lakes and Jackson Hole, Glacier Park serves two distinct seasonal attractions, skiing in the Winter and numerous outdoor recreational activities in the summer. Skiing is provided at the Big Mountain ski resort. This ski resort served approximately 556,000 skiers in 1999. During the summer, major attractions include the Glacier National Park, Flathead Lake, Flathead National Forest, and numerous other national parks in the region. Based on statistics provided by the National Park Service, nearly 2.2 million tourists visited nearby Glacier National Park in 1998.

Compared to the other case study airports, Glacier Park International Airport is considered to have less competition for air travelers to the region due to its distance from other airports in the region.

Table F-10

Jackson Hole Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	O'Hare Intl	IL	10,620	5.9%
2	Denver Intl	CO	9,940	5.5%
3	Los Angeles Intl	CA	6,930	3.8%
4	La Guardia	NY	6,770	3.8%
5	Atlanta	GA	6,740	3.7%
6	Boston Logan	MA	6,500	3.6%
7	Dallas/Ft Worth	TX	6,410	3.6%
8	Newark Intl	NY	5,940	3.3%
9	San Francisco Intl	CA	5,920	3.3%
10	Dulles Intl	DC	5,700	3.2%
11	Salt Lake Intl	UT	5,330	3.0%
12	Philadelphia Intl	PA	4,460	2.5%
13	George Bush Intl	TX	3,070	1.7%
14	St Paul Intl	MN	3,030	1.7%
15	Sky Harbor Intl	AZ	2,810	1.6%
16	Detroit	MI	2,790	1.5%
17	San Diego	CA	2,640	1.5%
18	John F Kennedy	NY	2,530	1.4%
19	Seattle/Tacoma	WA	2,530	1.4%
20	Orlando Intl	FL	2,360	1.3%
21	Baltimore/Wash Intl	MD	2,120	1.2%
22	Nashville	TN	2,060	1.1%
23	Cincinnati/N KY Intl	OH	2,030	1.1%
24	Raleigh/Durham	NC	2,030	1.1%
25	John Wayne Intl	CA	2,030	1.1%
26	Bradley Intl	CT	1,940	1.1%
27	San Jose	CA	1,750	1.0%
28	Charlotte	NC	1,710	0.9%
29	Miami Intl	FL	1,690	0.9%
30	Tampa Intl	FL	1,680	0.9%
TOTAL - TOP 30 MARKETS			122,060	67.7%
TOTAL - ALL MARKETS			180,310	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared by: Ricondo & Associates, Inc., October 2000.

The other commercial service airports located in proximity to the region are Missoula (125 miles), Helena (200 miles) and Great Falls International (230 miles).

Commercial service at Glacier Park International Airport also revolves around its winter and summer seasons. During the winter and summer, commercial service increases, while it decreases during the spring and fall months. During the 1999 summer season, 14 daily flights are provided via four air carrier airlines (Alaska, Continental, Delta, and Northwest) and two regional/commuter airlines (Big Sky and Horizon). Historically, summer activity has accounted for a majority of annual enplanements, however recently, winter skiing at Big Mountain has increased. Based on discussions with airport staff, it is estimated that approximately 50 percent of total enplanements now occur in the winter.

As shown in Table F-5, Glacier Park International Airport's enplanements have increased from 70,883 in 1990 to 133,515 in 1998, representing an annual compounded growth rate of 8.2 percent. Overall, average aircraft load factors have increased as well, averaging approximately 57.7 percent in 1998.

Table F-11 presents the top 30 origin and destination (O&D) markets for Glacier Park International Airport. As shown, the Airport's O&D patterns are more heavily weighted towards West Coast markets than the other case study airports. With the exception of Minneapolis and Dallas/Ft. Worth, eight of the Airport's top ten O&D markets are western markets. Seattle and Los Angeles represent the first and second highest O&D markets, accounting for 8.8 percent and 4.8 percent of the O&D traffic, respectively.

Visitors to Glacier National Park have remained relatively constant, averaging 2.2 million visitors in 1998 (see Table F-5). As mentioned previously, based on conversations with staff, historical scheduled seats at the Airport, summer enplanements are estimated to be approximately 50 percent of total annual enplanements. When compared to national park visitor statistics provided by the National Park Service, the number of estimated summer enplanements per national park visitor has increased since 1990, from 0.033 enplanements per national park visitor to 0.060 enplanements per national park visitor in 1998.

F.3 Basis for Enplanement Projections

For the purposes of case study methodology in this analysis, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. As such, actual statistics for skier-days at each of the comparable airports were obtained. Skier-days represent the number of days (i.e., duration) multiplied by the number of skiers visiting each of the ski resorts. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport. Skier-day statistics also represent a reliable source of data since this data is collected by the ski resorts through lift ticket sales, and is used by the ski resorts to track historical skier activity at each respective resort. This historical data is also used by the ski resorts to provide estimates of future skier activity for the ski resorts, which can be used as a basis for estimating future winter enplanements at the Airport.

Table F-11

Glacier Park International Airport - Top O&D Markets

Rank	Airport	State	Passengers	Percent
1	Seattle	WA	11,350	8.8%
2	Los Angeles Intl	CA	6,160	4.8%
3	Phoenix	AZ	5,550	4.3%
4	Salt Lake Intl	UT	5,350	4.1%
5	San Francisco Intl	CA	4,350	3.4%
6	Portland	OR	4,230	3.3%
7	Denver Intl	CO	3,890	3.0%
8	Las Vegas	NV	3,490	2.7%
9	Minneapolis	MN	3,300	2.6%
10	Dallas/Ft Worth	TX	3,240	2.5%
11	San Diego	CA	2,840	2.2%
12	O'Hare Intl	IL	2,750	2.1%
13	Sacramento Metro	CA	2,630	2.0%
14	Atlanta	GA	2,510	1.9%
15	San Jose Mun	CA	2,390	1.9%
16	John Wayne Intl	CA	2,080	1.6%
17	Orlando Intl	FL	1,820	1.4%
18	Billings	MT	1,810	1.4%
19	Ontario Intl	CA	1,810	1.4%
20	Dulles Intl	DC	1,720	1.3%
21	John F Kennedy	NY	1,720	1.3%
22	Kansas City Intl	MO	1,590	1.2%
23	Boston	MA	1,580	1.2%
24	Oakland	CA	1,510	1.2%
25	Newark Intl	NY	1,430	1.1%
26	Elko	NV	1,320	1.0%
27	George Bush Intl	TX	1,310	1.0%
28	Philadelphia Intl	PA	1,310	1.0%
29	Anchorage Intl	AK	1,300	1.0%
30	Reno	NV	1,240	1.0%
TOTAL - TOP 30 MARKETS			87,580	67.8%
TOTAL - ALL MARKETS			129,150	100.0%

Source: USDOT Origin & Destination Survey of Airline Passenger Traffic, December 1999.

Prepared By: Ricondo & Associates, Inc., October 2000.

F.4 Projection of Passenger Enplanements

Summer season enplanements at the Airport are assumed to be a function of the number of national park visitors to the region's national parks. As a result, the number of annual national park visitors at the respective national parks served by each of the comparable airports was gathered. This data served to provide an estimate of the level of summer enplanements that might be expected to occur at the Airport. Summer season enplanements were then determined based on an estimate of a percentage of the Airport's annual enplanements anticipated to occur during the summer season.

Enplanements at the Airport by regional residents are anticipated to be a small percentage of the summer and winter traffic at the Airport. Local passengers were included as part of the overall statistics for the case study airports and forecasts for Mammoth Yosemite Airport.

Three enplanement scenarios were examined for the Airport to give an estimate of the range of enplanement activity that might occur at the Airport: Base Case scenario, Low Case scenario, and High Case scenario. The Base Case scenario was selected as the most reasonable forecast level to use for planning, design, engineering, and environmental analyses. Each of these scenarios are discussed in greater detail in the following sections.

F.4.1 Base Case Scenario

The Base Case scenario, which is modeled after the ratio of enplanements to skier days experienced at Aspen-Pitkin County Airport, is presented in **Table F-12**. As presented earlier in Table F-5, Aspen-Pitkin County Airport experiences more of an average enplanement to skier ratio - higher than those experienced at Vail/Eagle County Airport, but lower than those experienced at Yampa Valley Regional Airport. As shown under this scenario, the Airport's enplanements are projected to increase from approximately 37,000 in 2002 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent.

As mentioned previously, it is anticipated that the Airport would not immediately realize its full demand potential. As such, a ratio of only 0.035 winter enplanements per skier was assumed for the Airport's first full year of operation in 2002. Beyond 2002, estimated winter enplanements per ski visitor for the Airport are assumed to increase from a ratio of approximately 0.035 winter enplanements per skier to approximately 0.085 winter enplanements per skier by 2022. This level of winter enplanements per skier approximates those experienced at Aspen-Pitkin County Airport.

Initially, the Airport is anticipated to provide commercial service only during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 37,000 in 2002 to 200,300 by 2022. Summer enplanements are projected to increase from approximately 48,000 in 2007 to 133,500 in 2022.

F.4.2 Low Case Scenario

Table F-13 presents projected activity for the Airport under the Low Case scenario. As shown, under this scenario, the Airport's enplanements are projected to increase from approximately 27,500 in 2002 to approximately 217,500 enplanements in 2022, representing an annual compounded growth rate of 10.9 percent. Under this scenario, the Airport would experience a winter enplanement

Table F-12

Projected Base Case Enplanements

Year	Projected Mammoth Lakes Area Skier Days[1]	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2002	1,058,000	0.035	37,000	100.0%	0	0.0%	37,000
2007	1,473,000	0.076	111,900	70.0%	48,000	30.0%	159,900
2012	1,775,000	0.082	145,600	60.0%	97,100	40.0%	242,700
2017	2,053,000	0.084	172,500	60.0%	115,000	40.0%	287,500
2022	2,356,000	0.085	200,300	60.0%	133,500	40.0%	333,800
Annual Compounded Growth Rate							
2002-2022	4.1%		8.8%		--		11.6%
2007-2022	3.2%		4.0%		7.1%		5.0%
2012-2022	2.9%		3.2%		3.2%		3.2%
2017-2022	2.8%		3.0%		3.0%		3.0%

[1] Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Table F-13

Projected Low Case Enplanements

Year	Projected Mammoth Lakes Area Skier Days[1]	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2002	1,058,000	0.026	27,500	100.0%	0	0.0%	27,500
2007	1,473,000	0.046	67,800	75.0%	22,600	25.0%	90,400
2012	1,775,000	0.056	99,400	65.0%	53,500	35.0%	152,900
2017	2,053,000	0.058	119,100	65.0%	64,100	35.0%	183,200
2022	2,356,000	0.060	141,400	65.0%	76,100	35.0%	217,500
Annual Compounded Growth Rate							
2002-2022	4.1%		8.5%		--		10.9%
2007-2022	3.2%		5.0%		8.4%		6.0%
2012-2022	2.9%		3.6%		3.6%		3.6%
2017-2022	2.6%		3.5%		3.5%		3.5%

[1] Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

to skier ratio less than both Yampa Valley Regional and Aspen-Pitkin County airports, but higher than that of Vail/Eagle County Airport (due to the high competition that Vail/Eagle County Airport experiences from Denver International).

As mentioned previously, it is anticipated that the Airport would not immediately realize its full demand potential. As such, a ratio of only 0.026 winter enplanements per skier was assumed for the Airport's first full year of operation in 2002. Beyond 2002, estimated winter enplanements per ski visitor for the Airport are projected to increase from a ratio of approximately 0.026 winter enplanements per skier to approximately 0.060 winter enplanements per skier by 2022.

Similar to the Base Case scenario, it is assumed that initially the Airport would only provide commercial service during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 65 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 27,500 in 2002 to 141,400 by 2022. Summer enplanements are projected to increase from approximately 22,600 in 2007 to 76,100 in 2022.

F.4.3 High Case Scenario

Table F-14 presents projected activity for the Airport under the High Case scenario. As shown, under this scenario, the Airport's enplanements are projected to increase from approximately 79,400 in 2002 to approximately 449,800 enplanements in 2022, representing an annual compounded growth rate of 9.1 percent. Under this scenario, the Airport would experience a winter enplanement to skier ratio which is higher than all of the case study airports. In addition, winter enplanements are estimated to account for approximately 55 percent of the Airport's annual enplanements. This level of enplanements might be experienced if the Airport were to secure a high level of nonstop service during both the winter and summer seasons, particularly from the Los Angeles market, thereby capturing a large number of visitors currently driving to the region.

As shown, the estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.075 winter enplanements per skier in 2002 to approximately 0.105 winter enplanements per skier by 2022. During the initial year of operation, it is assumed that the Airport would only provide commercial service during the winter season, with scheduled service in the summer season beginning soon thereafter. As a result, winter enplanements are projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 55 percent of total airport enplanements by 2022. Based on these assumptions, winter enplanements are projected to increase from approximately 79,400 in 2002 to 247,400 by 2022. Summer enplanements are projected to increase from approximately 74,600 in 2007 to 202,400 in 2022.

F.5 Projection of Airline Departures

Operations projections were developed for the commercial air carrier and regional/commuter carriers anticipated to serve the Airport. Enplaned passenger projections presented in the previous section were used in conjunction with historical and expected trends in load factors and average seats per departure in order to develop projected passenger airline operations. Assumptions were also made in regards to which markets would be provided with nonstop service from the Airport in the future.

Table F-14

Projected High Case Enplanements

Year	Projected Mammoth Lakes Area Skier Days[1]	Winter Enplanements per Skier Visit	Winter Enplanements	%	Summer Enplanements	%	Total Enplanements
2002	1,058,000	0.075	79,400	100.0%	0	0.0%	79,400
2007	1,473,000	0.094	138,500	65.0%	74,600	35.0%	213,100
2012	1,775,000	0.097	172,200	55.0%	140,900	45.0%	313,100
2017	2,053,000	0.101	207,400	55.0%	169,700	45.0%	377,100
2022	2,356,000	0.105	247,400	55.0%	202,400	45.0%	449,800
Annual Compounded Growth Rate							
2002-2022	4.1%		5.8%				9.1%
2007-2022	3.2%		3.9%		6.9%		5.1%
2012-2022	2.9%		3.7%		3.7%		3.7%
2017-2022	2.8%		3.6%		3.6%		3.6%

[1] Mammoth Mountain Ski Resort.

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Projected nonstop service to future markets is purely hypothetical, however, and would be based on the Airport's actual passenger demand and individual airline decisions.

As mentioned previously, it is anticipated that it would take the Airport roughly five years to reach its full demand potential. As such, during the first full year of operation (2002), it is assumed that the Airport would have service only during the winter season from two to four hub airports, via B-757 and commuter aircraft.

In general, aircraft load factors during the winter season are estimated to increase from approximately 50 percent in 2002 to approximately 65% percent by 2022. The predominate increase in load factors is anticipated to occur between 2002 and 2007, as the Airport's market matures. Aircraft load factors during the summer season are projected to be slightly less than those during the winter season, increasing from approximately 50 percent in 2002 to approximately 60 percent in 2022. This lower load factor during the summer season is based on changing visitor demographics discussed previously.

Details concerning the airline departure projections for each projection scenario are described below.

F.5.1 Base Case Airline Departures

Under the Base Case scenario, it is assumed that the Airport would initially (the first few years) be provided with nonstop service to Dallas/Ft. Worth, Chicago O'Hare, Los Angeles, and San Francisco and/or San Jose. In later years, regular nonstop service may be provided to short-range hubs (such as Denver and Phoenix), and longer-range hub (such as St. Louis, Houston, and Atlanta). Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table F-15 presents projected airline departures for the Base Case scenario. As shown, total annual aircraft departures are projected to increase from 1,040 in 2002 to 5,800 in 2022, representing an annual compounded growth rate of approximately 9.0 percent. By 2022, the winter season is projected to account for 3,410 annual airline departures, while the remaining 2,390 annual airline departures are anticipated to occur in the summer season. Similarly, of the 5,800 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 2,500 annual departures (43 percent), while regional/commuter aircraft are projected to account for the remaining 3,300 annual departures (57 percent).

F.5.2 Low Case Airline Departures

Under the Low Case scenario, it is assumed that the Airport would initially be provided with nonstop service to only Dallas/Ft. Worth, Los Angeles, and San Francisco and/or San Jose. In later years, nonstop service to a short-range hub such as Denver, Phoenix, or Seattle may also be provided at the Airport. Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop

Table F-15

Summary of Projected Aircraft Departures - Base Case

Year	WINTER SEASON DEPARTURES Air Carrier	Regional/ Commuter	Total	SUMMER SEASON DEPARTURES Air Carrier	Regional/ Commuter	Total	TOTAL ANNUAL DEPARTURES Air Carrier	Regional/ Commuter	Total
2002	300	740	1,040	0	0	0	300	740	1,040
2007	840	1,420	2,260	370	620	990	1,210	2,040	3,250
2012	1,130	1,500	2,630	770	1,020	1,790	1,900	2,520	4,420
2017	1,290	1,720	3,010	890	1,180	2,070	2,180	2,900	5,080
2021	1,470	1,940	3,410	1,030	1,360	2,390	2,500	3,300	5,800
Annual Compounded Growth Rate									
2002-2022	8.3%	4.9%	6.1%	–	–	–	11.2%	7.8%	9.0%
2007-2022	3.8%	2.1%	2.8%	7.1%	5.4%	6.1%	5.0%	3.3%	3.9%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table F-16 presents projected airline departures for the Low Case scenario. As shown, total annual aircraft departures are projected to increase from 470 in 2002 to 2,770 in 2022, representing an annual compounded growth rate of approximately 9.3 percent. By 2022, the winter season is Table F-15 projected to account for 1,760 annual airline departures, while the remaining 1,010 annual airline departures are anticipated to occur in the summer season. Similarly, of the 2,770 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 1,480 annual departures (53 percent), while regional/commuter aircraft are projected to account for the remaining 1,290 annual departures (47 percent).

F.5.3 High Case Airline Operations

Under the High Case scenario, it is assumed that the Airport would initially be provided with regular nonstop service to a number of markets, including Dallas/Ft. Worth, Los Angeles, Chicago O'Hare, and San Francisco and/or San Jose. In later years, nonstop service to one or more short-range hubs (such as Denver, Phoenix, or Seattle) and one or more longer-range hubs (such as Atlanta, St. Louis, or Minneapolis) may also be provided at the Airport. Of these potential nonstop markets, Los Angeles is assumed to be provided with service via both air carrier jet aircraft and regional/commuter aircraft, while San Francisco and/or San Jose are assumed to be provided with service via regional/commuter aircraft. All other potential markets are assumed to be provided with air carrier jet service. As mentioned previously, projected nonstop service to future markets is purely hypothetical, and would be based on the Airport's actual passenger demand and individual airline decisions.

Table F-17 presents projected airline operations for the High Case scenario. As shown, total annual aircraft departures are projected to increase from 2,320 in 2002 to 7,670 in 2022, representing an annual compounded growth rate of approximately 6.2 percent. By 2022, the winter season is projected to account for 4,110 annual airline departures, while the remaining 3,560 annual airline departures are anticipated to occur in the summer season. Similarly, of the 7,670 annual airline departures projected for 2022, air carrier jet aircraft are estimated to account for 3,200 annual departures (42 percent), while regional/commuter aircraft are projected to account for the remaining 4,470 annual departures (58 percent).

F.6 Summary of Projected Airline Activity Based on Skier-Day Enplanement Projections and Case Study Airports

Table F-18 summarizes projected airline activity, in terms of passenger enplanements and aircraft departures, for the Airport for the skier-day enplanement projects and case study projects described above. The following points summarize key findings with regard to this projected airline activity:

- Initially, a number of enplanement scenarios were examined for the Airport to give an idea of the range of enplanement activity that might occur at the Airport. These enplanement projections were based on a relationship of skier-days to annual enplanements at several comparable airports.

- In order to provide a basis for the potential for air carrier service at Mammoth Yosemite Airport, historical activity, local demographics and tourism-related visitor statistics were

Table F-16

Summary of Projected Aircraft Departures - Low Case

	WINTER SEASON DEPARTURES			SUMMER SEASON DEPARTURES			TOTAL ANNUAL DEPARTURES		
Year	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total	Air Carrier	Regional/ Commuter	Total
2002	240	230	470	0	0	0	240	230	470
2007	490	430	920	170	150	320	660	580	1,240
2012	700	610	1,310	400	340	740	1,100	950	2,050
2017	820	710	1,530	450	400	850	1,270	1,110	2,380
2022	940	820	1,760	540	470	1,010	1,480	1,290	2,770
Annual Compounded Growth Rate									
2002-2022	7.1%	6.6%	6.8%	--	--	--	9.5%	9.0%	9.3%
2007-2022	4.4%	4.4%	4.4%	8.0%	7.9%	8.0%	5.5%	5.5%	5.5%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Table F-17

Summary of Projected Aircraft Departures - High Case

Year	WINTER SEASON DEPARTURES Air Carrier	Regional/ Commuter	Total	SUMMER SEASON DEPARTURES Air Carrier	Regional/ Commuter	Total	TOTAL ANNUAL DEPARTURES Air Carrier	Regional/ Commuter	Total
2002	600	1,720	2,320	0	0	0	600	1,720	2,320
2007	980	1,750	2,730	540	970	1,510	1,520	2,720	4,240
2012	1,260	1,770	3,030	1,070	1,480	2,550	2,330	3,250	5,580
2017	1,470	2,060	3,530	1,260	1,730	2,990	2,730	3,790	6,520
2022	1,720	2,390	4,110	1,480	2,080	3,560	3,200	4,470	7,670
Annual Compounded Growth Rate									
2002-2022	5.4%	1.7%	2.9%	–	–	–	8.7%	4.9%	6.2%
2007-2022	3.8%	2.1%	2.8%	7.0%	5.2%	5.9%	5.1%	3.4%	4.0%

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

Table F-18

Summary of Projected Airline Activity

	2002	2007	2012	2017	2022
ENPLANEMENT PROJECTIONS					
Base Case	37,000	159,900	242,700	287,500	333,800
Low Case	27,500	90,400	152,900	183,200	217,500
High Case	79,400	213,100	313,100	377,100	449,800
AIRLINE DEPARTURES					
Base Case					
Regional/Commuter Departures	740	2,040	2,520	2,900	3,300
Air Carrier Departures	300	1,210	1,900	2,180	2,500
Total Base Case Departures	1,040	3,250	4,420	5,080	5,800
Low Case					
Regional/Commuter Departures	230	580	950	1,110	1,290
Air Carrier Departures	240	660	1,100	1,270	1,480
Total Low Case Departures	470	1,240	2,050	2,380	2,770
High Case					
Regional/Commuter Departures	1,720	2,720	3,250	3,790	4,470
Air Carrier Departures	600	1,520	2,330	2,730	3,200
Total High Case Departures	2,320	4,240	5,580	6,520	7,670

Source: Ricondo & Associates, Inc., July 2000.

Prepared By: Ricondo & Associates, Inc., October 2000.

reviewed at five comparable airports, as prescribed in the FAA's Benefit-Cost Analysis Guidance:

- Yampa Valley Regional Airport (Steamboat Springs, CO)
- Vail/Eagle County Airport (Vail, CO)
- Aspen-Pitkin County Airport (Aspen, CO)
- Jackson Hole Airport (Jackson, WY)
- Glacier Park International Airport (Kalispell, MT)

- For the purpose of the initial enplanement projections, ski visitor statistics were used as the basis for projecting winter season enplanements at the Airport. Skier-days represent the number of days multiplied by the number of skiers visiting the ski resort. The number of skier-days was found to provide a strong correlation to the activity levels at each comparable airport.

- It is anticipated that the Airport would not immediately realize its full demand potential. As a result, the Airport's growth during the first five years of operation is expected to be strong until the market's full potential is realized. Once the market matures, the Airport's growth is expected to slow to more typical growth levels as experienced at airports throughout the U.S. This high initial growth is best illustrated by examining the enplanement growth that occurred at Vail/Eagle County Airport. During the first five years of operations from 1990 to 1995, enplanements at Vail/Eagle County Airport increased at an annual compounded growth rate of over 67 percent. From 1995 to 1998, however, enplanement growth at the airport has increased at an annual compounded growth rate of 27 percent. While this growth is still much higher than that of the U.S. overall, it is lower than exhibited during the initial startup of service at the Airport.

- In general, three enplanement scenarios were examined: a Base Case scenario, Low Case scenario, and a High Case scenario.

- Under the Base Case Scenario, the Airport's enplanements were projected to increase from approximately 37,000 in 2002 (the anticipated first full year of operation), to approximately 333,800 enplanements in 2022, representing an annual compounded growth rate of 11.6 percent overall (34.0 percent ACG from 2002-2007 and 5.0 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.035 winter enplanements per skier in 2002 to approximately 0.085 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 60 percent of total airport enplanements by 2022.

- Under the Low Case Scenario, the Airport's enplanements were projected to increase from approximately 27,500 in 2002 (the anticipated first full year of operation), to approximately 217,500 enplanements in 2022, representing an annual compounded growth rate of 10.9 percent overall (26.9 percent ACG from 2002-2007 and 6.0 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.026 winter enplanements per skier in 2002 to approximately 0.060 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100

percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 65 percent of total airport enplanements by 2022.

- Under the High Case Scenario, the Airport's enplanements were projected to increase from approximately 79,400 in 2002 (the anticipated first full year of operation), to approximately 449,800 enplanements in 2022, representing an annual compounded growth rate of 9.1 percent overall (21.8 percent ACG from 2002-2007 and 5.1 percent ACG from 2007-2022). Estimated winter enplanements per ski visitor for the Airport would increase from a ratio of approximately 0.075 winter enplanements per skier in 2002 to approximately 0.105 winter enplanements per skier by 2022. Winter enplanements were projected to represent 100 percent of the Airport's enplanements in 2002, and decreasing thereafter to approximately 55 percent of total airport enplanements by 2022.

F.7 Projected Airline Activity Based on City Pair Market Analysis

Based on comments from the FAA, an additional forecasting methodology based on city pair market analyses was used to estimate future passenger enplanements and aircraft operations. This analysis used information from the existing agreement being developed between American Airlines and Mammoth Mountain (see attached Air Service Agreement), development of markets at the case study airports, and professional judgement and experience from Ricondo & Associates staff and Mr. Kent Myers, air service consultant to Mammoth Mountain. **Table F-19** presents enplanement and operations projects from the City Pair market analysis. The following points summarize key findings of this market analysis:

- In order to provide another estimate of the level of activity that might be realized at the Airport, a City Pair Market Analysis was conducted. This analysis was based on the recently negotiated agreement with American Airlines, as well as other assumptions regarding additional airline service at the Airport. In general, this analysis serves as a "back-in" analysis whereby certain levels of daily or weekly flights to various markets are assumed. Based on these assumed service levels, basic assumptions regarding the number of aircraft seats and load factors are assumed to estimate the potential number of enplanements for each city pair examined.

  - In general, the following additional air service components were examined:

  - American Airlines Committed Service – Based on the recently negotiated agreement with American Airlines for air service at the Airport from 2002 through 2006.

  - Regional Service – Assumes that regional air service would be provided via regional/commuter aircraft, or regional jets, to the northern and southern California markets.

  - Non-Winter Service – Assumes that service would be provided throughout the remainder of the year (i.e., 36 weeks) by both regional/commuter and jet aircraft.

  - Additional Hub Service – Assumes that additional air service would be provided to two additional airline hubs.

Table F-19
City Pair Market Analysis - Mammoth Lakes Airport

	Season	Aircraft	Avg. Seats	2002 Annual Departures	2002 Load Factor	2002 Enplanements	2007 Annual Departures	2007 Load Factor	2007 Enplanements	2012 Annual Departures	2012 Load Factor	2012 Enplanements	2017 Annual Departures	2017 Load Factor	2017 Enplanements	2022 Annual Departures	2022 Load Factor	2022 Enplanements
American Airlines Committed Service																		
Dallas/Ft. Worth	Winter	B-757	176	128	50.0%	11,300	300	65.0%	34,100	360	65.0%	40,700	420	65.0%	48,600	510	65.0%	58,000
Chicago O'Hare	Winter	B-757	176	128	50.0%	11,300	300	65.0%	34,100	360	65.0%	40,700	420	65.0%	48,600	510	65.0%	58,000
Subtotal				256		22,600	600		68,200	720		81,400	840		97,200	1,020		116,000
Regional Service																		
Southern California Region	Winter	RJ/Comm.	40	336	60.0%	8,100	368	65.0%	9,600	440	65.0%	11,500	530	65.0%	13,700	630	65.0%	16,400
Northern California Region	Winter	RJ/Comm.	40	224	60.0%	5,400	288	65.0%	7,500	350	65.0%	9,000	410	65.0%	10,700	490	65.0%	12,800
Subtotal				560		13,500	656		17,100	790		20,500	940		24,400	1,120		29,200
Non-Winter Airline Service																		
RJ / Commuter Aircraft	Rest of Year		40	0	--	0	516 [1]	65.0%	13,400	620	65.0%	16,000	730	65.0%	19,100	880	65.0%	22,800
Jet Aircraft	Rest of Year		130	0	--	0	224 [2]	65.0%	18,900	270	65.0%	22,600	320	65.0%	27,000	380	65.0%	32,200
Subtotal				0		0	740		32,300	890		38,600	1,050		46,100	1,260		55,000
Additional Hub Service																		
Additional Hub #1	Winter		130	0	--	0	224	55.0%	16,000	230	65.0%	19,100	270	65.0%	22,800	320	65.0%	27,200
Additional Hub #2	Winter		130	0	--	0	144	55.0%	10,300	150	65.0%	12,300	170	65.0%	14,700	210	65.0%	17,500
Subtotal				0		0	368		26,300	380		31,400	440		37,500	530		44,700
TOTALS				816		36,100	2,364		143,900	2,780		171,900	3,270		205,200	3,930		244,900

Winter Service =	16 Weeks
Non-Winter Service =	36 Weeks
16 weeks of 7 flights per week =	112 Flights
16 weeks of 8 flights per week =	128 Flights
16 weeks of 9 flights per week =	144 Flights
16 weeks of 14 flights per week =	224 Flights
16 weeks of 16 flights per week =	256 Flights
16 weeks of 18 flights per week =	288 Flights

[1] Equals 16 weeks with 21 flights per week and 20 weeks with 9 flights per week, for a total of 516 flights.

[2] Equals 16 weeks with 14 flights per week.

Source: Ricondo & Associates, Inc., Kent Myers, and committed service information from American Airlines.
Prepared by: Ricondo & Associates, Inc., October 2000.

- From 2002 to 2006, the *American Airlines Committed Service* is based on the recently negotiated agreement with American, and results in an estimated 576 annual flights and nearly 66,000 estimated enplanements for the winter season in 2006. Beyond 2006, annual

- enplanements for the committed American Airlines service are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA.[3] By 2022, approximately 116,000 annual enplanements are projected for the American Airlines service.

- *Regional Service* assumes that service would be provided to via regional/commuter and/or regional jet aircraft to markets in Southern California (i.e., Los Angeles, San Diego, etc.), as well as Northern California (i.e., San Francisco, San Jose, etc.). Initially in 2002, 21 weekly flights were assumed to be provided to Southern California, while 14 weekly flights were assumed to be provided to Northern California. By 2007, 23 weekly flights were assumed to be provided to Southern California, while 18 weekly flights were assumed to be provided to Northern California. Based on these assumptions, approximately 13,500 enplanements are estimated to be accommodated via regional service in 2002, and 17,100 enplanements in 2007. Beyond 2007, annual enplanements for are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 29,200 annual enplanements are projected to be accommodated via regional service.

- *Non-Winter Service* was assumed to be provided beginning between 2002 and 2007 for the remaining 36 weeks throughout the year. This service could be provided to any number hub airports. In general, non-winter service was assumed to be provided via both regional/commuter and jet aircraft. Initially, 516 total flights were assumed via regional/commuter aircraft, while 224 total flights were assumed via jet aircraft.[4] Based on these assumptions, approximately 32,300 enplanements are estimated to be accommodated via regional service in 2007. Beyond 2007, annual enplanements for are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 77,900 annual enplanements are projected to be accommodated via non-winter service.

- *Additional Hub Service* was assumed to be provided to two additional airline hubs, including the following potential hubs:

    - *Short-Range Hub Airports* – Phoenix and Seattle
    - *Mid-Range Hub Airports* – Minneapolis, Houston (Intercontinental), and St. Louis
    - *Long-Range Hub Airports* – Pittsburgh, Detroit, New York, and Atlanta

[3] FAA Aerospace Forecasts, Fiscal Years 2000 – 2001.
[4] 516 flights = 16 weeks with 21 flights per week and 20 weeks with 9 flights per week
224 flights = 16 weeks with 14 flights per week (summer season)

- Potential service from these hubs would likely be dependent on the airlines electing to provide service, as well as the location of the airline's hub, and potential aircraft they would use to service the Mammoth Lakes market. Nonstop hub service at each of the case study airports was initiated to either one or two major hub airports. As each airport's nonstop hub service matured, service to other major hub airports was added. In each case, the airport's hub service fully matured within a five to ten year period. While this type of maturity may not necessary occur for Mammoth Lakes, it is reasonable to assume that given time and the proper marketing by the region, the Airport could provide nonstop service to at least three or four major hub airports within a five to ten year period after the initiation of commercial service.

  It is assumed that an average aircraft size in the range of 130-seats, such as the B-737 series, or mix of B-757 and regional jets, would begin service to these additional hubs in 2007. Initially, 14 weekly flights were assumed to be provided to one hub, while 9 weekly flights were assumed for the second hub. Based on these flight assumptions, approximately 26,300 enplanements are estimated to be accommodated in 2007. Beyond 2007, annual enplanements are estimated to increase at an annual compounded growth rate of 3.6 percent, which equals the growth rate projected for the nation by the FAA. By 2022, approximately 44,700 annual enplanements are projected to be accommodated via additional hub service.

- When combined, the various components of air service assumed for the City Pair Market Analysis result in 36,100 annual enplanements in 2002, increasing to 143,900 enplanements in 2007, and to 244,900 annual enplanements by 2022. Overall, this enplanement growth represents an annual compounded growth rate of approximately 9.5 percent (31.8 percent ACG from 2002-2007 and 3.6 percent ACG from 2007-2022).

- By 2022, winter service is estimated to account for approximately 70 percent (189,900 enplanements), while non-winter service is estimated to account for the remaining 30 percent (55,000 enplanements).

- By comparison, beyond the initial five year startup period, the City Pair Growth Analysis is roughly 11 percent higher than the Low Case Scenario and 27 percent lower than the Base Case Scenario presented earlier. **Table F-20** presents a summary of the various enplanements projections:

Table F-20

Mammoth Mountain Enplanement Forecast Comparison

Year	Base Case	Low Case	High Case	City Pair
2002	37,000	27,500	79,400	36,100
2007	159,900	90,400	213,100	143,900
2012	242,700	152,900	313,100	171,900
2017	287,500	183,200	377,100	205,200
2022	333,800	217,500	449,800	244,900

Source: Ricondo & Associates, Inc., July 2000.

The exhibits on the following pages present the results of the three enplanement projection scenarios from the skier-day/case study analysis and the city pair market analysis. As shown in this comparison, in the first five years, the Base Case and City Pair are similar in enplanements. However, the slower growth rate of 3.6% beyond 2007 results in the City Pair long-term trend being between the Low Case and Base Case. The city pair market analysis is sensitive to the assumptions of the number of air carriers and number of cities served from Mammoth Yosemite Airport. The information provided above is based on the best available information from airline discussions regarding service at Mammoth Yosemite Airport and experience at other startup airport operations such as at Vail/Eagle County Airport. The addition of service of additional hub airports beyond those assumed above could result in similar long-term demand levels as the Base Case.[5]

F.8 General Aviation Forecasts

A forecast of general aviation activity was developed for the 1997 Environmental Impact Report (EIR). A review of this forecast was conducted by examining existing records (FAA Form 5010 dated 01/16/96) and interviewing personnel from airport management.

The airport manager confirmed the general aviation activity, that was forecasted in the 1997 EIR, has failed to materialize. These sources indicated that Mammoth Yosemite Airport experiences approximately 600 operations per month during peak seasons. General aviation activity reported on FAA Form 5010 for the 12 months ending July 1996, was 12,000 annual operations. However, based on interviews with the airport manager and FBO operator, the annual operations for 1999 was estimated to be 6,000.

Although the annual general aviation operations levels are well below the estimates in the FAA Terminal Area Forecast, it is anticipated that there would be growth in general aviation activity of about 3% annually over the next 20 years up to the 12,000 annual operations level of the FAA Terminal Area Forecast. This growth is anticipated as a result of recent construction of high quality hanger facilities at the Airport and the leasing of these hanger facilities to new airport users. Additional hanger development is also planned. **Table F-21** summarizes the general aviation component for the forecast. It is also assumed that military operations would remain consistent with the FAA Terminal Area Forecast at 50 annual operations from year 2000 on.

Table F-21

General Aviation Operations Forecast

Year	General Aviation Annual Operations
2002	6,600
2007	7,600
2012	8,900
2017	10,300
2022	12,000

Source: Ricondo & Associates, Inc., July 2000.

[5] 516 flights = 16 weeks with 21 flights per week and 20 weeks with 9 flights per week
224 flights = 16 weeks with 14 flights per week (summer season)

F.9 Summary of Forecasts

Table F-22 presents a summary of the comparison of the passenger and operations forecasts for each of the forecast scenarios developed in this study. **Table F-23** shows the FAA Terminal Area Forecast through 2012. The primary difference between the FAA Terminal Area Forecast and the forecast scenarios documented in this study lies in the reduced general aviation activity at the Airport and projected air carrier/commuter activity. The FAA Terminal Area Forecast was based in part on the limited data for past air carrier/commuter service and estimates of industry intentions. At the time that the FAA Terminal Area Forecast was developed, there was no commitment from the airline industry for commercial service to Mammoth Lakes. The forecast developed for the Airport has the advantage of knowledge that a member of the airline industry has committed, subject to airport improvements, to commercial service to Mammoth Lakes.

Table F-23

FAA Terminal Area Forecast

	Annual Aircraft Operations				
Year	Air Carrier	Commuter	GA	Military	Total
2002	500	700	12,000	50	13,250
2007	500	700	12,000	50	13,250
2012	500	700	12,000	50	13,250

Source: Federal Aviation Administration (FAA)
Prepared by: Ricondo & Associates, Inc., October 2000.

Forecasts were also prepared as part of the preparation of the Subsequent Environmental Impact Report for the Mammoth Lakes Airport Expansion, March 1997. These forecasts estimated 1,460 air carrier jet operations by 2005 and 2,920 by 2015 and overall operations growing from 29,010 in the year 2005 to 34,430 by 2015. Annual enplanements were anticipated to be 60,000 by 2005 and between 90,000 and 125,000 by 2015. These forecasts were based on the best available information at the time, which did not include the current Air Service Agreement from American Airlines.

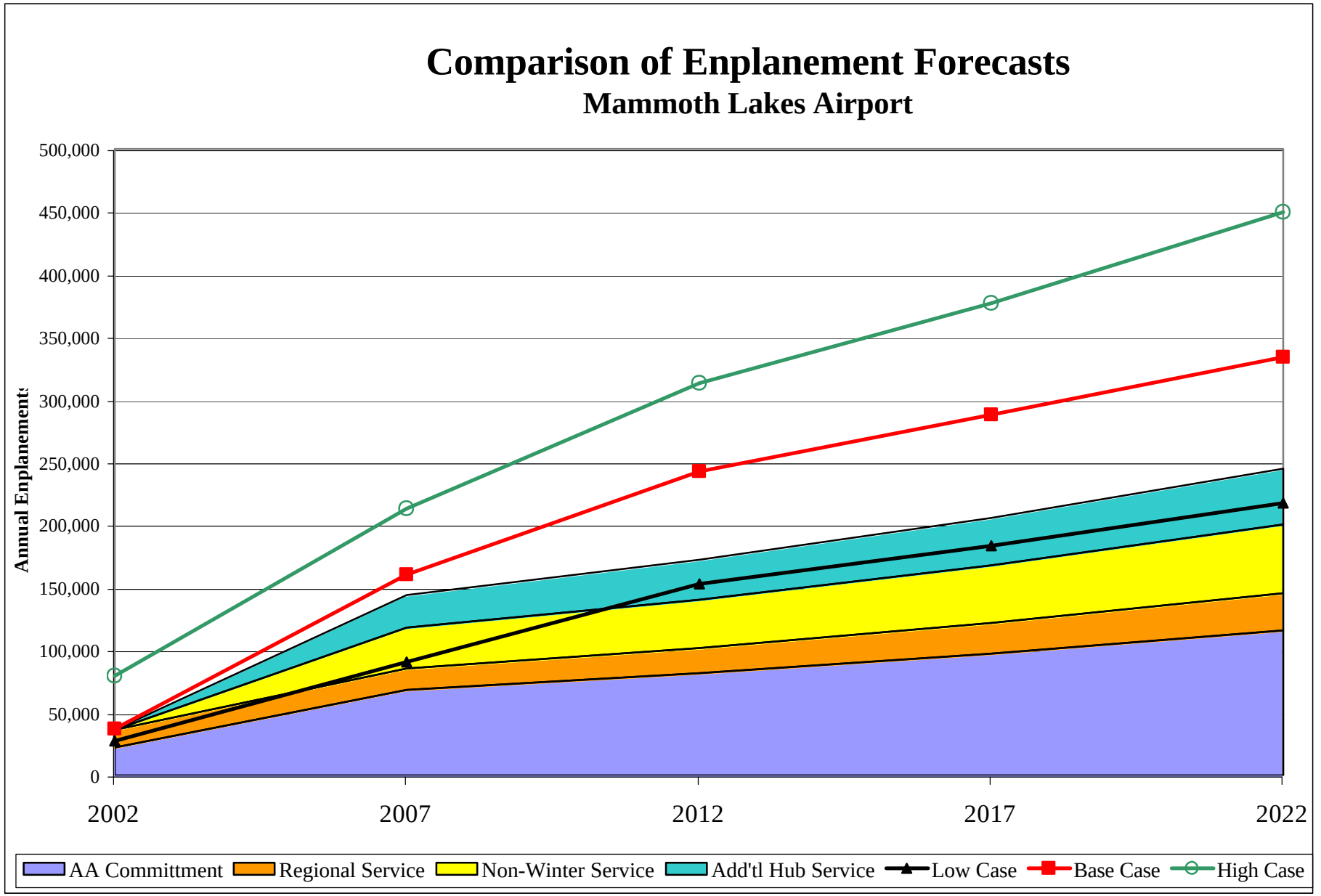
Table F-22

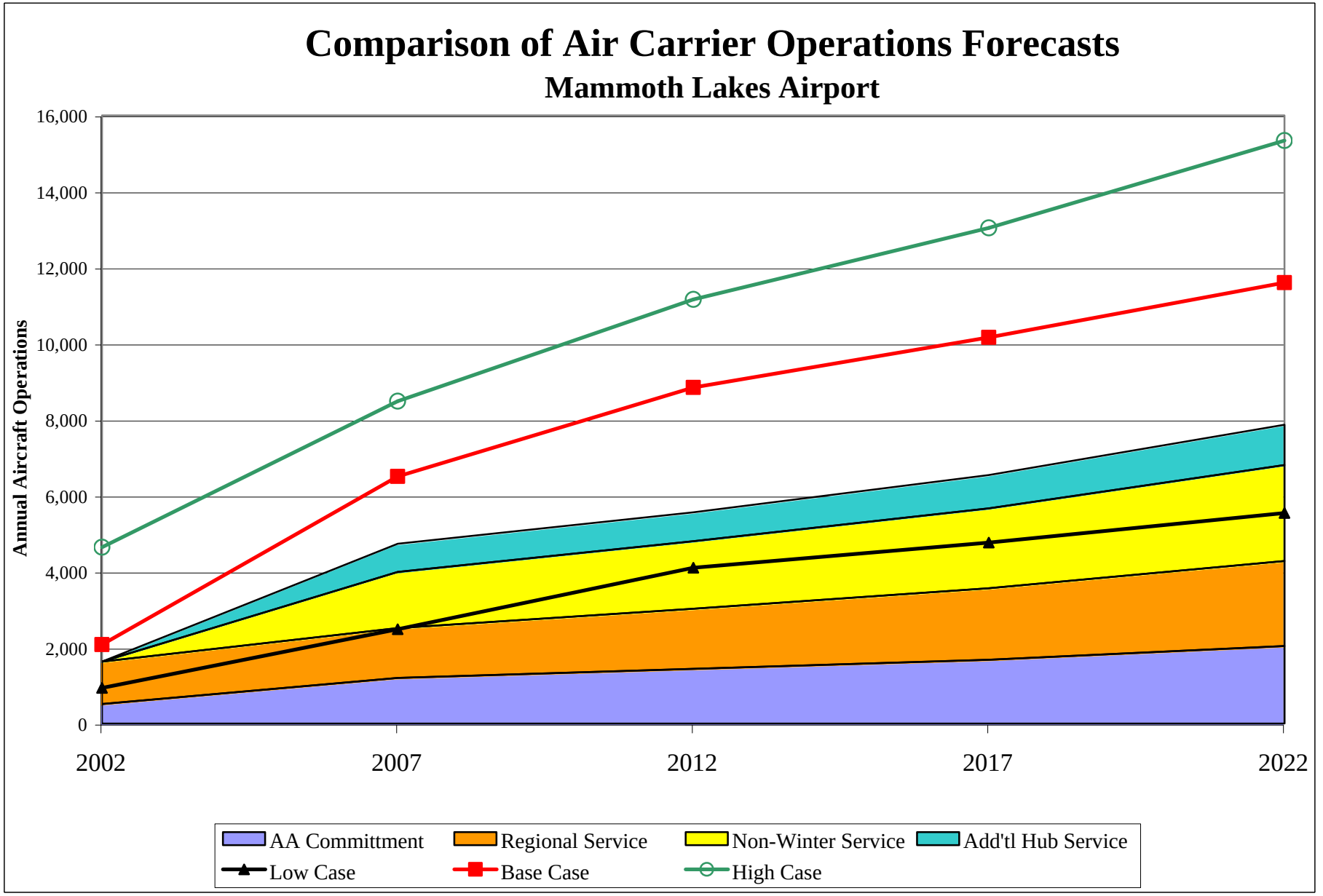
Summary of Projected Aviation Activity at Mammoth Lakes Airport
Years 2002, 2007, 2012, 2017, and 2022

	1999	2002	2007	2012	2017	2022
ANNUAL AIRLINE ENPLANEMENT PROJECTIONS						
Base Case	--	37,000	159,900	242,700	287,500	333,800
Low Case	--	27,500	90,400	152,900	183,200	217,500
High Case	--	79,400	213,100	313,100	377,100	449,800
City Pair Market Analysis	--	36,100	143,900	171,900	205,200	244,900
ANNUAL AIRCRAFT OPERATIONS						
Base Case						
Air Carrier	--	600	2,420	3,800	4,360	5,000
Regional/Commuter/RJ	--	1,480	4,080	5,040	5,800	6,600
General Aviation/Military	6,050	6,650	7,650	8,950	10,350	12,050
Total Base Case Operations	6,050	8,730	14,150	17,790	20,510	23,650
Low Case						
Air Carrier	--	480	1,320	2,200	2,540	2,960
Regional/Commuter/RJ	--	460	1,160	1,900	2,220	2,580
General Aviation/Military	6,050	6,650	7,650	8,950	10,350	12,050
Total Low Case Operations	6,050	7,590	10,130	13,050	15,110	17,590
High Case						
Air Carrier	--	1,200	3,040	4,660	5,460	6,400
Regional/Commuter/RJ	--	3,440	5,440	6,500	7,580	8,940
General Aviation/Military	6,050	6,650	7,650	8,950	10,350	12,050
Total High Case Operations	6,050	11,290	16,130	20,110	23,390	27,390
City Pair Market Analysis						
Air Carrier	--	512	2,384	2,740	3,200	3,860
Regional/Commuter/RJ	--	1,120	2,344	2,820	3,340	4,000
General Aviation/Military	6,050	6,650	7,650	8,950	10,350	12,050
Total Market Analysis Operations	6,050	8,282	12,378	14,510	16,890	19,910

Source: Ricondo & Associates, Inc., Kent Myers, and American Airlines.

Prepared by: Ricondo & Associates, Inc, October 2000.


Comparison of Enplanement Forecasts
Mammoth Lakes Airport
Annual Enplanements
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
2002
2007
2012
2017
2022
AA Committment
Regional Service
Non-Winter Service
Add'tl Hub Service
Low Case
Base Case
High Case


Comparison of Air Carrier Operations Forecasts
Mammoth Lakes Airport
Annual Aircraft Operations
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2002
2007
2012
2017
2022
AA Committment
Regional Service
Non-Winter Service
Add'tl Hub Service
Low Case
Base Case
High Case

Appendix G – Biological Study

Final

Biological Study for the Mammoth Lakes Airport Expansion Project, Mono County, California

September 25, 2000

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Chapter 1. Summary of Findings

INTRODUCTION

Jones & Stokes was retained by Reinard Brandley, Consulting Airport Engineer, to document environmental conditions and prepare a biological report on the expansion of the Mammoth Lakes Airport, which is proposed by the Town of Mammoth Lakes in Mono County, California. This report summarizes the biological resource study methods and results for the project and is intended to support preparation of an environmental assessment (EA).

SUMMARY OF FINDINGS

As a result of biological analysis, Jones & Stokes determined that implementing the project would result in the following effects on biological resources:

- loss or disturbance of sagebrush and associated wildlife habitat,
- disturbance of the margin of dry meadow and associated wildlife habitat,
- potential disturbance or loss of high-quality holdover and summer resident mule deer (*Odocoileus hemionus*) habitat, and
- disturbance of sage grouse (*Centrocercus urophasianus*) foraging habitat and its potential nesting and rearing habitat.

The biological study recommends the following measures to avoid or minimize effects on sensitive biological resources:

- Compensate at a 1:1 ratio (1 acre restored for each acre removed) for the removal of high-quality habitat for holdover and summer resident mule deer and sage grouse.
- Limit construction timing to between May 15 and September 30 for the western expansion of the runway. This recommendation applies to only the new construction activities associated with the airport expansion and not to routine or on-going maintenance activities at the airport.

- Conduct surveys to determine grouse use on the eastern portion of the study area as a lek site and any effects on the offsite lek (identified by the U.S. Bureau of Land Management [BLM] as Lek #2). BLM Lek #2 is only effected by Alternative 5; therefore, monitoring of this lek is only recommended for Alternative 5.

- Protect habitat adjacent to the construction area.

Other recommended measures consist of compliance with existing laws and ordinances include:

- implementing state and federal permit conditions, and

- developing and implementing a storm water pollution prevention plan and appropriate sediment control measures to prevent sediment discharge into Convict Creek.

Chapter 2. Project Description

PROJECT COMPONENTS

Mammoth Lakes is pursuing an expansion of the existing facilities located at the Mammoth Lakes Airport. The project consists of the following components:

- strengthening the runway and taxiways to accommodate up to B-757-200 aircraft;
- widening the runway from 100 feet to 150 feet on its south side, thereby shifting the runway centerline 25 feet to the south;
- widening the parallel taxiway from 50 feet to 75 feet; 20 feet on its south side and 5 feet on its north side;
- extending the runway 1,200 feet to the west to provide the necessary runway length for air-carrier aircraft operations (e.g., the B-757-200);
- extending the parallel taxiway to be consistent with the length of the runway extension;
- adding an air-carrier apron for three to six air-carrier aircraft;
- adding a 75-foot-wide connecting taxiway to access the air-carrier apron area;
- adding turn buttons at the ends of the runway to permit back-taxiing on the runway during the initial phase of development;
- expanding the Runway Safety Area (RSA) from 500 feet to 1,000 feet to the east of the runway (as required for compliance with Federal Aviation Administration [FAA] airport design standards for current operations);
- improving the security fencing from the existing three-strand barbed wire to a 6- to 8-foot-high chain-link fence to meet FAA standards;
- ~~developing passenger terminal building facilities;~~
- constructing airport access-road improvements;

- expanding the automobile parking lot; and

- acquiring in fee simple and/or lease of lands owned by the Los Angeles Department of Public Works that currently occupy the future extension of the RSA (required for compliance with FAA airport design standards for current operations).

PRELIMINARY ILLUSTRATIVE ALTERNATIVES

As listed below, nine preliminary alternatives have been identified and would be assumed in the EA if they are initially determined to warrant further consideration. Alternatives 1–7, which pertain to the Mammoth Airport, are reviewed in detail in this report; Alternatives 8 and 9 would not directly pertain to Mammoth Airport and are therefore not discussed after this chapter. These alternatives primarily address various runway extension alternatives.

- **Alternative 1. No Action:** Retain Runway 9-27 at its existing length of 7,000 feet and do not make any further improvements to the airport except for maintenance or improvements required by the FAA for safety measures.

- **Alternative 2. Proposed Action—8,200-Foot Runway:** Extend Runway 9-27 to the west to a length of 8,200 feet and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

- **Alternative 3. Extend Runway to 9,000 Feet:** Extend Runway 9-27 to the west to a length of 9,000 feet and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

- **Alternative 4. Extend Runway Beyond 9,000 Feet:** Extend Runway 9-27 to the west to a length greater than 9,000 feet and widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

- **Alternative 5. Extend Runway to the East:** Extend Runway 9-27 to the east to a length of 8,200, 9,000, or greater than 9,000 feet.

- **Alternative 6. Widen Runway but Retain Existing Length of 7,000 Feet:** Retain Runway 9-27 at its existing length of 7,000 feet but widen the runway to 150 feet, thereby shifting the runway centerline 25 feet to the south.

- **Alternative 7. Widen the Runway Without Shifting the Runway 25 Feet to the South:** Widen Runway 9-27 equally on the north and south sides, retaining the existing centerline.

- **Alternative 8. Develop Another Airport in the Region:** Develop air-carrier facilities at an airport in the region other than Mammoth Lakes Airport. (This alternative is not reviewed in this report.)

- **Alternative 9. Use Alternate Modes of Transportation:** Continue to assume major access to the Mammoth Lakes region would be via private vehicle, bus, or a new rail system. (This alternative is not reviewed in this report.)

Chapter 3. Study Methodology

STUDIES REQUIRED

The following biological studies are required for the project and have been conducted by Jones & Stokes as part of this report:

- habitat assessments for special-status species;
- identification of waters of the United States (including wetlands); and
- identification of important natural communities.

Each of these studies is described below.

Prefield Survey Investigation

Before conducting field surveys, botanists and wildlife biologists conducted a literature and information search to identify special-status species (defined below) known to occur in or with the potential to occur in the project region. Sources consulted included California Department of Fish and Game's (DFG's) Natural Diversity Data Base (NDDB) (2000); the California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Vascular Plants of California, 5th edition (Skinner and Pavlik 1994); current wildlife literature; previously prepared environmental documents (Jones & Stokes Associates 1995); and local agency personnel (Thomas pers. comm., Rossi pers. comm., Murray pers. comm.).

DFG wildlife biologist Ron Thomas was contacted by telephone on June 6, 2000, and July 12, 2000, to discuss sensitive resource issues, such as mule deer use of the study area. Rick Murray of the U.S. Forest Service (USFS) Mammoth Ranger District was contacted by telephone on June 6, 2000, and July 12, 2000, to discuss biological issues related to the project, and he was visited on June 6, 2000, to obtain USFS Sensitive and Special-Interest Plant Species lists. BLM biologist Terry Rossi was contacted on June 6, 2000, to discuss use of the study area by sage grouse. A message was left with Vern Carr, Hot Creek Hatchery acting manager, soliciting his input on the project because of the close proximity (less than 1 mile north) of the hatchery to the airport.

Field Survey

Botany

Botany field surveys were conducted by a Jones & Stokes biologist on June 16, 2000. The intent of the field surveys was to determine the potential presence of special-status species and to identify and characterize potentially important natural communities. Meandering transects were used to cover the study area, with survey intensity varying by habitat type. All plant species were identified to the level necessary to determine their legal status.

Wildlife

Wildlife field surveys were conducted on June 1–3, 2000 by Jones & Stokes wildlife biologist Steven Avery and subconsultant Timothy Taylor. The intent of the field surveys was to identify and characterize suitable habitat for special-status species. The survey consisted of walking the project site using straight-line transects. Specific survey methods for sage grouse and mule deer are described below. Evaluation of other special-status species is based on literature reviews, discussions with agency personnel, and knowledge of habitat conditions in the study area.

Mule Deer. Mule deer use of the study area was determined from fecal pellet–group counts. Pellet-group counting is a standard method used by wildlife managers to index or estimate deer population levels (Neff 1968, Eberhardt and White 1980). Fecal pellet groups were counted on temporary 100-square-foot (0.0023 acre) circular plots distributed at 66-foot intervals along transects. Transects were systematically spaced at 500-foot intervals and oriented parallel to the airport runway at a compass declination of 270° west (Figure 1). Transects 1–4 were located in the eastern half of the study area between the main airport entrance and Benton Crossing Road. Transects 5 and 6, located west of Convict Creek, were later determined to be outside the project study area and therefore are not included in this analysis. Transects 7–10 were located in the western half of the study area between the aircraft hangers and Hot Creek Hatchery Road.

Pellet groups were defined as 10 or more pellets within a 3.0-inch radius of each other. Pellet groups located on the border of a circular plot were counted as being inside the plot if 10 pellets were located within the circular plot. Pellet groups from previous years were distinguished by discoloration and deterioration and were not counted. Estimates of deer use derived from pellet counts were based on an average deposition rate of 12.7 pellet groups per day (McCain 1948) and represent deer use from the preceding spring (early April–early June). A t-test was used to test the null hypothesis that mean pellet-group density on each transect was the same as the overall mean number of pellet groups per plot.

Sage Grouse. Surveys for sage grouse were performed simultaneously with the deer-pellet counts. The locations of all grouse and grouse sign (e.g., tracks and droppings) observed during the survey were noted. No dogs were used to flush birds during the survey because birds were likely to

Figure 1
Mammoth Lakes Airport
Habitat Type Locations and
Mule Deer Pellet Group Transects

Legend:

- Dry Meadow
- Transition Area
- High Quality Big Sagebrush Scrub Habitat (High quality deer habitat)
- Low Quality Big Sagebrush Scrub Habitat
- Deer Pellet Group Transects

BUILDING INVENTORY

1	TERMINAL BUILDING	14	RESERVED
2	AIRPORT OFFICE	15	FEDERAL APRON
3	ARFF / SNOW EQUIPMENT BUILDING	16	FUTURE ATTACHED HANGARS
4	ELECTRICAL VAULT	17	SQUARE AREA
5	ARFF TANKS (TO BE REMOVED)	18	PUBLIC COMMERCIAL APRON
6	RESERVED	19	FUEL BUILDING
7	RESERVED	20	SELF-SERVICE ARFF TANKS
8	ABOVEGROUND HANGARS	21	DEVELOPMENTAL DEVELOPMENT AREA
9	RESERVED	22	AVIATION DEVELOPMENT AREA (INCLUDES A [illegible]
10	ARFF CONC. UNDERGROUND TANKS	23	SEPLAV GAS STORAGE - PHASE I
11	ATCT TOWER	24	CORPORATE APRON
12	R.A.P.I.	25	GENERAL AVIATION APRON EXPANSION
13	PARTIAL TERMINAL BUILDING SITE	26	WATER STORAGE FACILITY

LEGEND

	EXISTING	TOTAL
AIRPORT PROPERTY LINE		
[illegible]		
[illegible]		
PAVING		
[illegible]		
[illegible]		
[illegible]		
[illegible]		

0 400 800
1 inch = approx. 850 feet

Base map provided by:
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER

- species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register [proposed species]);

- species that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR 40: 7596-7613, February 28, 1996);

- species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR 670.5);

- species that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA) (State CEQA Guidelines, Section 15380);

- plants listed as rare or endangered under the California Native Plant Protection Act (Cal. Fish and Game Code, Section 1900 et seq.);

- plants considered by the CNPS to be "rare, threatened, or endangered in California" (Lists 1B and 2 in Skinner and Pavlik 1994);

- plants listed by the CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik 1994), which may be included as special-status species on the basis of local significance or recent biological information;

- animal species of special concern to the DFG (Remsen 1978 [birds], Williams 1986 [mammals], and Jennings and Hayes 1994 [amphibians and reptiles]); and

- animals fully protected in California (Cal. Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

- plants and animals listed as sensitive by the local USFS Region 5 (Forest Service Manual 2670);

Waters of the United States

"Waters of the United States" is an inclusive term used for areas under federal jurisdiction in accordance with Section 404 of the federal Clean Water Act. For the purpose of this report, waters of the United States are categorized as "wetlands" and "other waters of the United States".

be nesting during the time of the survey or to be with young broods, and the use of dogs during this period could increase bird mortality.

Waters of the United States (including Wetlands)

Jones & Stokes botanists conducted a delineation of jurisdictional waters of the United States (including wetlands) during the June 2000 field survey. Waters of the United States (including wetlands) were delineated based on the legal definition of these terms (33 CFR 328.3) and the 1987 U.S. Army Corps of Engineers (Corps) Wetland Delineation Manual (Environmental Laboratory 1987). The manual provides guidelines and methods for using a three-parameter approach to determine whether areas supporting positive hydrophytic vegetation, hydric soils, and wetland hydrology are jurisdictional wetlands.

Important Natural Communities

Important natural communities were identified on the basis of physical setting, vegetation characteristics, and plant species assemblages. These communities were mapped (Figure 1), characterized, and assessed for wildlife habitat use and general habitat function and value.

DEFINITIONS OF TERMS USED IN THIS REPORT

The following terms are commonly used in this report and are defined below:

- special-status species,
- waters of the United States,
- common natural community, and
- important natural community.

Special-Status Species

Special-status species are plants and animals that are legally protected under state and federal Endangered Species Acts (ESAs) or other regulations and species that are considered sufficiently rare by the scientific community to qualify for such listing. Special-status plants and animals are species in the following categories:

- species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register [proposed species]);

- species that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR 40: 7596-7613, February 28, 1996);

- species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR 670.5);

- species that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA) (State CEQA Guidelines, Section 15380);

- plants listed as rare or endangered under the California Native Plant Protection Act (Cal. Fish and Game Code, Section 1900 et seq.);

- plants considered by the CNPS to be "rare, threatened, or endangered in California" (Lists 1B and 2 in Skinner and Pavlik 1994);

- plants listed by the CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik 1994), which may be included as special-status species on the basis of local significance or recent biological information;

- animal species of special concern to the DFG (Remsen 1978 [birds], Williams 1986 [mammals], and Jennings and Hayes 1994 [amphibians and reptiles]); and

- animals fully protected in California (Cal. Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

- plants and animals listed as sensitive by the local USFS Region 5 (Forest Service Manual 2670);

Waters of the United States

"Waters of the United States" is an inclusive term used for areas under federal jurisdiction in accordance with Section 404 of the federal Clean Water Act. For the purpose of this report, waters of the United States are categorized as "wetlands" and "other waters of the United States".

Wetlands

Wetlands are defined as "areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b], 40 CFR 230.3). To be considered under federal jurisdiction, a wetland must support positive indicators for hydrophytic vegetation, hydric soil, and wetland hydrology as defined in the Corps' Wetland Delineation Manual (Environmental Laboratory 1987).

Other Waters of the United States

"Other waters of the United States" refers to seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark (OHWM) but lack positive indicators for one or more of the three wetland parameters listed above (33 CFR 328.4). The OHWM is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear and natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328.3 [e]).

Common Natural Community

A common natural community is a native or naturalized habitat that has not been substantially altered by farming or other extreme land disturbances. Big sage scrub grassland is the only common natural community on the project site. Although common natural communities are not typically considered sensitive from a botanical perspective, they may support habitat for special-status wildlife species (e.g., burrowing owls). Therefore, impacts on these communities may be considered significant on a particular site if special-status plant or wildlife species are associated with the habitat.

Important Natural Community

The term "important natural community" refers to communities that are especially diverse; regionally uncommon; considered sensitive natural communities by DFG; or regulated by local, state, or federal agencies. Most important natural communities are given special consideration because they provide important ecological functions (e.g., maintaining water quality) and essential habitat for plant, wildlife, or fish species. Some natural communities support a unique or diverse assemblage of plant species and are therefore considered sensitive from a botanical standpoint. In addition, the distributions of some of these natural communities may be limited locally and throughout California compared with the communities' historical distributions.

For these reasons, important natural communities are afforded special protection or consideration under federal and state policies and regulations. Dry meadow habitat is an example of an important natural communities on the project site.

Chapter 4. Environmental Setting

BIOLOGICAL COMMUNITIES

The project site is located within the East Sierra Nevada Region of the Great Basin Floristic Province at approximately 7,080 to 7,130 feet above sea level. Much of the study area lies close to Mammoth Lakes Airport, U.S. Highway 395 (U.S. 395), and Airport Road and has been disturbed by these developments.

The project site is dominated by big sagebrush scrub and also includes nonjurisdictional dry meadow located between the east end of the airport runway and Benton Crossing Road. These biological communities are described below and depicted in Figure 1.

Big Sagebrush Scrub

Vegetation

Big sagebrush scrub is the predominant plant community in the project study area. Much of this community in the study area has been disturbed by construction and maintenance of airport facilities, access road, and highway facilities.

The big sagebrush scrub community occupies well-drained upland sites on sandy to gravelly soils and is dominated by shrubs and scattered grass and herb species. Dominant shrub species are big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), and rubber rabbitbrush (*Chrysothamnus nauseosus*), with scattered desert peach (*Prunus andersonii*) and horsebush (*Tetradymia canescens*). Rabbitbrush is the dominant shrub in some areas. Common grass species include cheatgrass (*Bromus tectorum*), needle-and-thread (*Hesperostipa comata* ssp. *comata*), Indian ricegrass (*Achnatherum hymenoides*), and squirreltail (*Elymus elymoides*). Commonly encountered native herbs include sulphur buckwheat (*Eriogonum umbellatum* ssp. *subaridum*), buckwheat (*E. elatum* var. *elatum*), spurred lupine (*Lupinus argenteus*), Eriastrum (*Eriastrum sparsiflorum*), Nuttall's tiquilia (*Tiquilia nuttallii*), mentzelia (*Mentzelia sp.*), cryptantha (*Cryptantha circumcissa*), prickly phlox (*Leptodactylon pungens*), Stansbury's phlox (*Phlox stansburyi*), groundsmoke (*Gayophytum diffusum*), nama (*Nama* sp.), and others. Ruderal non-native species include goosefoot (*Chenopodium* sp.), amaranth (*Amaranthus* sp.), and woolly mullein (*Verbascum thapsus*).

Wildlife

The following wildlife species were observed in big sagebrush scrub habitat: gopher snake (*Pituophis melanoleucus*), sage thrasher (*Oreoscoptes montanus*), green-tailed towhee (*Pipilo chlorurus*), common raven (*Corvus corax*), black-billed magpie (*Pica pica*), rock wren (*Salpinctes obsoletus*), Nuttall's cottontail (*Sylvilagus nuttallii*), and California ground squirrel (*Spermophilus beecheyi*). Wildlife that prefer big sagebrush scrub habitat include sagebrush lizard (*Sceloporus graciosus*), Brewer's sparrow (*Spizella breweri*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

Important Natural Communities

Nonwetland Dry Meadow

Vegetation. Nonwetland dry meadow is associated with the eastern portion of the project area between the east end of the runway and Benton Crossing Road. This community supports hydrophytic vegetation and exhibits low chroma (10YR 2/1), which is a hydric soil indicator. The project site lacks primary or secondary indicators of hydrology and therefore does not meet the definition of a jurisdictional wetland. Water appears to enter the site in the form of seasonal snowmelt and overland runoff from adjacent highway and runway surfaces. A small, artificially excavated drainage feature drains surface runoff toward the site from the north margin of U.S. 395. Although the site does not qualify as a jurisdictional wetland, it does perform limited wetland functions such as stormwater sediment and pollution retention and wildlife forage.

The dry meadow is dominated by mostly native hydrophytic rhizomatous grass and grasslike species including Baltic rush (*Juncus balticus*) (OBL), straight-leaved rush (*Juncus orthophyllus*) (FACW), clustered field sedge (*Carex praegracilis*) (FACW-), Nebraska sedge (*Carex nebrascensis*) (OBL), and Kentucky bluegrass (*Poa pratensis*) (FACU). Common herbaceous forbs include long-stalked clover (*Trifolium longipes*) (FACW), long-stalked starwort (*Stellaria longipes* var. *longipes*) (OBL), Missouri iris (*Iris missouriensis*) (OBL), and dandelion (*Taraxacum officinale*) (FACU). Also present are a few scattered interior rose (*Rosa woodsii*) (FAC-), and several small willow shrubs (*Salix sp.*) (> FAC).

Wildife. Species using dry meadow habitat include killdeer (*Charadrius vociferus*), western meadowlark (*Sturnella neglecta*), and sage grouse. Most of the wildlife species found in the adjacent big sagebrush scrub habitat (described above) would also forage in the dry meadow habitat.

SPECIAL-STATUS SPECIES

Special-Status Plants

The prefield investigation identified four special-status plant species that could occur in the project region (Table 1). These species were identified based on information from the NDDB (2000) and from the CNPS database for the Convict Lake and Whitmore Hot Springs U.S. Geological Survey (USGS) 7.5-minute quadrangles. No special-status plant species were identified in the study area during the field surveys.

Special-Status Wildlife

The NDDB (2000) search of the USGS quadrangles identified no records of special-status wildlife species at the study area. Based on existing information, distribution data, and communication with agency personnel, 17 special-status wildlife species were identified as having the potential to occur in the study area (Table 2). These species fall into one of four categories: species that have not been observed in the study area but that may occasionally forage or roost at the site, avian species that may occasionally fly over the site, species with marginally suitable habitat in the study area, and species previously observed in the study area. Sage grouse and bald eagles are reported to be using the project site, and mule deer were observed on the project site during field surveys. Results of field surveys for special-status species are presented below.

Owens tui chub, a state- and federally listed species, is not included in this analysis because this species occurs in Hot Creek approximately 0.6 mile from the project site. No project-related effects on this species are foreseen.

Species That May Forage at the Project Site

Northern harrier, golden eagle, American peregrine falcon, prairie falcon, loggerhead shrike, spotted bat, and Townsend's western big-eared bat are special-status wildlife species that have not been previously reported to occur at the project site but that may occasionally forage or roost there.

Avian Species with Potential to Fly Over the Project Site

Osprey, sharp-shinned hawk, Cooper's hawk, and California gull may occasionally fly over the study area. However, these birds do not nest or roost in the study area.

Species with Marginally Suitable Habitat

The project site provides marginally suitable habitat for white-tailed hare, pygmy rabbit, and wolverine. White-tailed hare is a species generally associated with treeline elevations in the vicinity of the project site but apparently migrates to lower sagebrush scrub elevations during winter months (Harris 1982). This species is extremely uncommon and seriously declining on a statewide basis (Harris 1982, Williams 1986), but it is commonly encountered in the Mono Basin (Harris pers. comm.). Pygmy rabbit is associated with dense sagebrush scrub, greasewood scrub, and riparian thickets and has been reported to occur near Mono Lake (Harris 1982, Williams 1986). Wolverine is a rare mustelid generally associated with higher-elevation mixed conifer and lodgepole forest areas in the Sierra Nevada (Schempf and White 1977).

White-tailed hare has historically been reported to occur in Long Valley and along U.S. 395, about 10 miles north of Lake Crowley. Although recent sightings have not been made near the study area, white-tailed hares could use the area during winter. White-tailed hares prefer open habitats with a mixture of scrub, woodland, and meadow habitats. The dry meadow at the eastern portion of the study area may provide habitat for this species; therefore, it could conceivably forage onsite or use the study area as a migration corridor. The October 30, 1994, survey was conducted too early to detect wintering white-tailed hares, if present, and the spring 2000 survey was probably conducted after white-tailed hares had migrated upslope.

Field surveys conducted by Mr. Taylor on October 30, 1994, and subsequent surveys conducted in June 2000 by Mr. Avery and Mr. Taylor failed to locate evidence of use of the study area by wolverines and pygmy rabbits. Survey results indicate that the project site is only marginally suitable for pygmy rabbits because of the absence of the dense shrub thickets preferred by this species. Habitat suitability surveys indicate that the project site does not provide optimal habitat for white-tailed hare. Wolverines are unlikely to occur at the project site because of the marginal quality of the habitat and because of human disturbance in the study area. The lack of suitable habitat, the presence of human disturbance in the study area, and the lack of recent sightings near the study area indicate low potential for these three species to occur within the study area.

Species Observed Previously in the Study Area

Three species have been reported previously in the study area: bald eagle, sage grouse, and mule deer. These species are discussed below.

Bald Eagle. A pair of wintering bald eagles has been observed by DFG personnel to roost on telephone poles near the study area at the Hot Creek Fish Hatchery. Six to seven bald eagles have been observed by the USFS biologist using the Convict Creek, Hot Creek, and the alkali ponds and flats east of the project area (Perloff pers. comm.). No nesting by bald eagles are known to occur in the project area (Perloff pers. comm.).

Sage Grouse. Sage grouse is a DFG species of special concern, a USFS management indicator species, and a harvest species. This grouse is the largest species of grouse in North

America and occurs scattered throughout the sagebrush-dominated rangelands of the western United States. Locally, sage grouse is known to occur in Long Valley and the surrounding region.

Sage grouse is entirely dependent on forms of sagebrush, primarily big sagebrush, for food from October through May and for cover throughout the year. Sagebrush accounts for 95% of the grouse diet during fall and winter; forbs and insects are important items in spring and summer. Sage grouse is generally most abundant where sagebrush provides 15–50% groundcover. Breeding occurs in March and April on strutting grounds called "mating leks", which are generally isolated areas in open sagebrush. Nesting occurs in May and June, generally within a 2-mile radius of lekking sites.

Sage grouse was once abundant throughout its range. However, overhunting, drought, and competing land uses such as livestock grazing have greatly reduced their numbers (U.S. Forest Service 1990).

Forty-three sage grouse were observed on and immediately next to the project site in 1994. No sage grouse were observed at the project site during June 2000 surveys; however, sage grouse sign (fecal droppings) were noted on the western boundary of the study area near Hot Creek Hatchery Road during June 2000 surveys. In addition to providing a feeding area for grouse, the project site may be used as nesting and brood-rearing habitat. The open dry meadow areas east of the runway near Benton Crossing Road are suitable as lekking areas; however, there are no documented reports of use by grouse at this site. The closest reported lek to the study area is located approximately 1 mile to the north (U.S. Forest Service 1990). One of the largest lek sites in Long Valley is located approximately 3 miles east of the airport along the flight path of landing aircraft (Thomas per. comm.).

Based on the 1994 survey results, the observed distribution of sage grouse sign (tracks and droppings) indicates use levels are considerably less to the south of Airport Road (Jones & Stokes Associates 1995).

Mule Deer. Mule deer are considered an important harvest species in California, and the health of each migratory herd is monitored by the DFG. Mule deer that inhabit the study area and surrounding vicinity are primarily from the Round Valley herd (Kucera 1988, Taylor 1988, U.S. Forest Service 1990). The Round Valley herd is a migratory mule deer herd that winters at lower elevations in Round Valley, approximately 20 miles south of the study area.

Beginning in early April, approximately 75% of the Round Valley herd migrates north from the Round Valley winter range to a holding area near Mammoth Lakes (Kucera 1988). The holding area used by the Round Valley herd is a bulbous expansion of the migration corridor where deer congregate for 8 weeks (early April–late May) in the spring and for a shorter period in the fall. The holding area comprises approximately 11,300 acres at elevations ranging from 7,200–8,000 feet. Approximate boundaries of the holding area are State Route (SR) 203 on the north, U.S. 395 on the east, Convict Creek on the south, and Mammoth Lakes on the west (U.S. Forest Service 1991).

During the spring holding period, mule deer feed on herbaceous growth and regain condition lost over the winter, after which they migrate to summer range located primarily on the western slope

of the Sierra Nevada (Kucera 1988). The migration corridor between the winter range in Round Valley and the holding area near Mammoth Lakes follows the base of the Sierra Nevada escarpment and passes immediately south of the Mammoth Lakes Airport (Kucera 1988).

Past studies of mule deer (U.S. Forest Service 1990, Kucera 1988) indicate that the study area and vicinity is used by both holdover and summer resident mule deer. A study of mule deer was conducted on Doe Ridge, a resurgent dome located immediately east of the study area (U.S. Forest Service 1990). This study estimated that as many as 200 deer from the Round Valley herd used the Doe Ridge area. The study also determined that a small number of deer from the Casa Diablo deer herd summered on Doe Ridge. Deer from the Casa Diablo herd winter at lower elevations near Benton, California, some 20 miles east of the study area (Taylor 1988).

The number of deer counted on the Round Valley winter range declined from 5,877 in 1985 to 939 in 1991. In 1993, however, the number of deer in winter range counts increased to 1,334 (California Department of Fish and Game unpublished data), and deer numbers since 1993 have increased to approximately 2,350 (Bleich pers. comm.).

The recent decline in the Round Valley deer herd has been attributed to poor forage conditions on the winter range because of drought-induced changes in habitat quality. In addition, intensive livestock grazing, plant succession, predation, road kills, and residential development on the winter range and in the migration corridor have reduced deer numbers (Thomas 1985).

Field pellet-group counts confirmed past survey investigations that deer frequent the project site during spring, summer, and fall. Fifty-two pellet groups (0.105 pellet groups per plot) were recorded on 494 plots established on the study area (Table 3). Because the study area is used as a spring holding area, animals may spend 1 or more days at the project site, making an estimate of the number of deer impossible. Instead, use by these animals was calculated as deer-use days (i.e., the amount of use by one deer over a 24-hour period) based on pellet counts.

Table 3. Deer Use Measured by Fecal Pellet-Group Counts on Eight Transects Located in the Mammoth Lakes Airport Study Area, June 2, 2000

Transect Number	Number of Plots	Total Number Pellet-Group	Mean Number of Pellet Groups Per Plot	Percent of Overall Mean Use
1	50	3	0.060	57
2	49	2	0.041	39
3	52	0	0.000	0
4	30	0	0.000	0
7	83	14	0.1687	160
8	83	13	0.1566	149
9	75	17	0.2266	215
10	72	3	0.0417	40

Calculations revealed that the study area supports an estimated 1,025 deer-use days during the spring migration period (early April–early June). The following steps were used to calculate the number of deer-use days during spring migration:

1. The total number of pellet groups observed (52) was divided by the calculated correction factor for the 100 square-foot plot (1.134) to derive the average number of pellet groups per acre (46).

2. Next, the average number of pellet groups per acre (46) was divided by the assumed rate of deposition of pellet groups per day by an individual deer (12.7) to derive the total number of deer-use days per acre; the result was 3.6 deer-use days.

3. The number of deer use days per acre (3.6) was then multiplied by the total number of acres surveyed (280) to derive the total number of deer-use days on the study area (1,008). The variability of the estimate, based on 10% sampling error and 70% confidence limits, was ± 160 deer-use days.

Pellet-group densities in the western half of the study area ranged from 40–215% of the overall mean number of pellet groups per plot (Table 3). In comparison, pellet-group densities in the eastern half of the study area ranged from 39–57% of the overall mean. Mean pellet-group densities on Transects 7–9 in the western half of the project area were significantly greater ($p<0.05$) than the overall mean number of pellet groups per plot, but pellet group densities on Transects 1 and 2 in the eastern half of the study area were significantly less ($p<0.05$) than the overall mean.

The mean number of pellet groups per plot recorded along individual transects varied considerably (Table 3). There were no pellet groups recorded on Transects 3 and 4 in the eastern half of the survey area. Mean pellet-group densities ranged from 0.04 pellet-groups per plot on Transects 2 and 10 to 0.22 pellet-groups per plot on Transect 9. Pellet-group density measured on Transects 7–10 in the western half of the study area averaged 0.15 pellet-groups per plot. By comparison, pellet-group density on Transects 1–4 in the eastern half of the project area averaged 0.028 pellet-groups per plot (Table 4). Further analysis of pellet-group data revealed that 95% of all pellet-groups were counted on plots located in the western half of the project area.

Table 4. Deer Use Measured by Fecal Pellet-Group Counts in the Eastern and Western Halves of the Mammoth Lakes Airport Study Area, June 2, 2000

		Eastern Half		Western Half	
Transect Number	Total Plots	Pellet Groups	Mean Groups Per Plot	Pellet Groups	Mean Groups Per Plot
1	50	3	0.060	N/A	N/A
2	49	2	0.041	N/A	N/A
3	52	0	0.000	N/A	N/A
4	30	0	0.000	N/A	N/A

Transect Number	Total Plots	Eastern Half		Western Half	
		Pellet Groups	Mean Groups Per Plot	Pellet Groups	Mean Groups Per Plot
7	83	N/A	N/A	14	0.161
8	83	N/A	N/A	13	0.157
9	75	N/A	N/A	17	0.227
10	72	N/A	N/A	3	0.048
Total	494	5	0.028	47	0.150

Variation in pellet group density between the eastern and western portions of the study area were related to differences in habitat quality. The western half of the study area was characterized by dense patches of antelope bitterbrush and most deer use was associated with these areas. Greater bitterbrush cover provides increased foraging opportunities and greater visual concealment for deer. Foraging opportunities for mule deer in the eastern half of the study area and the area between the runway and US 395 were greatly reduced due to lower amounts of antelope bitterbrush and higher levels of habitat disturbance from roads, airport facilities, and livestock grazing. Other factors, such as noise, night lighting, and human activity associated with the Mammoth Lakes Airport, likely account for the disproportionate levels of deer use between eastern and western portions of the study area. Based on an assessment of the habitat quality for mule deer, including the pellet group transect data, high quality habitat within the proposed project area was mapped (Figure 1).

WETLAND ASSESSMENT

No jurisdictional waters of the United States (including wetlands) were identified in the project area. Although the dry meadow in the eastern portion of the project study area supports a prevalence of hydrophytic species and exhibited a primary hydric soil indicator (a low chroma of 1), primary and secondary hydrological indicators were not observed.

Chapter 5. Project Effects

Seven preliminary alternatives addressing various runway extensions are reviewed in this report. Figure 2 illustrates the location of the proposed fencing for each alternative. No special-status plants or jurisdictional wetlands were identified in the study area; therefore, there are no effects identified for these resources. Effects on wildlife species are discussed below. Recommendations to avoid, minimize, or compensate for effects are discussed in Chapter 7, "Recommendations", of this report.

Effect on Northern Harrier, Golden Eagle, American Peregrine Falcon, Loggerhead Shrike, Spotted Bat, and Townsend's Western Big-Eared Bat That May Forage at the Project Site

These special-status wildlife species have not been reported previously to occur at the project site, but they may occasionally forage or roost at the site. Based on the regional abundance of this habitat, the minor loss in extent of sagebrush scrub habitat associated with the project does not represent a significant loss of foraging habitat for these bird and mammal species.

Effect on Osprey, Sharp-Shinned Hawk, Cooper's Hawk, and California Gull with Potential to Fly Over the Project Site

These species may occasionally fly over the project site. However, the minor loss in extent of sagebrush scrub habitat associated with the project does not represent a significant loss of foraging habitat for these bird species.

Effect on White-Tailed Hare, Pygmy Rabbit, and Wolverine

The project site provides marginally suitable habitat for white-tailed hare, pygmy rabbit, and wolverine. The lack of suitable habitat, local and regionally scarcity of suitable habitat, and lack of past sightings in the vicinity of the project area indicate there is no potential for significant adverse effects on the species at the project site.

Effect on Roosting Bald Eagles

Although the project would remove big sagebrush scrub habitat, which may eliminate foraging habitat and disrupt roosting in the vicinity of the study area, the local abundance of the same habitat type indicates the loss of roosting habitat would have a negligible effect on the bald eagles.

Noise levels under Alternatives 2–6 would be slightly greater then existing conditions. The level of airport traffic is not expected to increase significantly (Manning pers. comm.). The slight change in noise levels at the airport are not expected to substantially disrupt foraging or roosting activity by bald eagles because the high-quality foraging habitats for this species are located along drainages and wetlands outside the project area.

Effects on Migratory Mule Deer and Sage Grouse

Alternative 1a: No Action (Retain Runway 9-27 at its Existing Length of 7,000 Feet and Do Not Make Any Further Improvements to the Airport Except for Maintenance). Alternative 1a would not result in project-related impacts to migratory mule deer or sage grouse or their habitats within the study area. Vegetation and wildlife habitat would remain virtually unchanged in the study area, and project construction access would not be required. Noise conditions in the project area would remain at current levels. In addition, no growth-inducing effects would result that could potentially increase levels of human disturbance in the project area.

Alternative 1b: No Action (with Replacement of Existing Fence).

Deer Effects. Alternative 1b would involve constructing a 6- to 8-foot-high chain-link fence to directly eliminate deer use of approximately 9.5 acres of high-quality big sagebrush scrub habitat located between the west end of the proposed runway and the chain-link fence. Eliminating 9.5 acres of this habitat would reduce deer use in the project area by an estimated 51 deer-use days. The deer-proof fence would create a 1.9-mile east-west barrier to deer movement through the study area during migration. The fence could cause increased mortality to deer from vehicle collisions on U.S. 395 as deer attempt to circumnavigate the barrier.

Sage Grouse Effects. Constructing a 1.9-mile, 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. The transition area west of the dry meadow on the eastern portion of the study area, which is suitable as a lek site, could partially be removed by construction activities. Potential use of the transition area could be reduced or eliminated because of disturbance associated with the placement of the deer-proof fence.

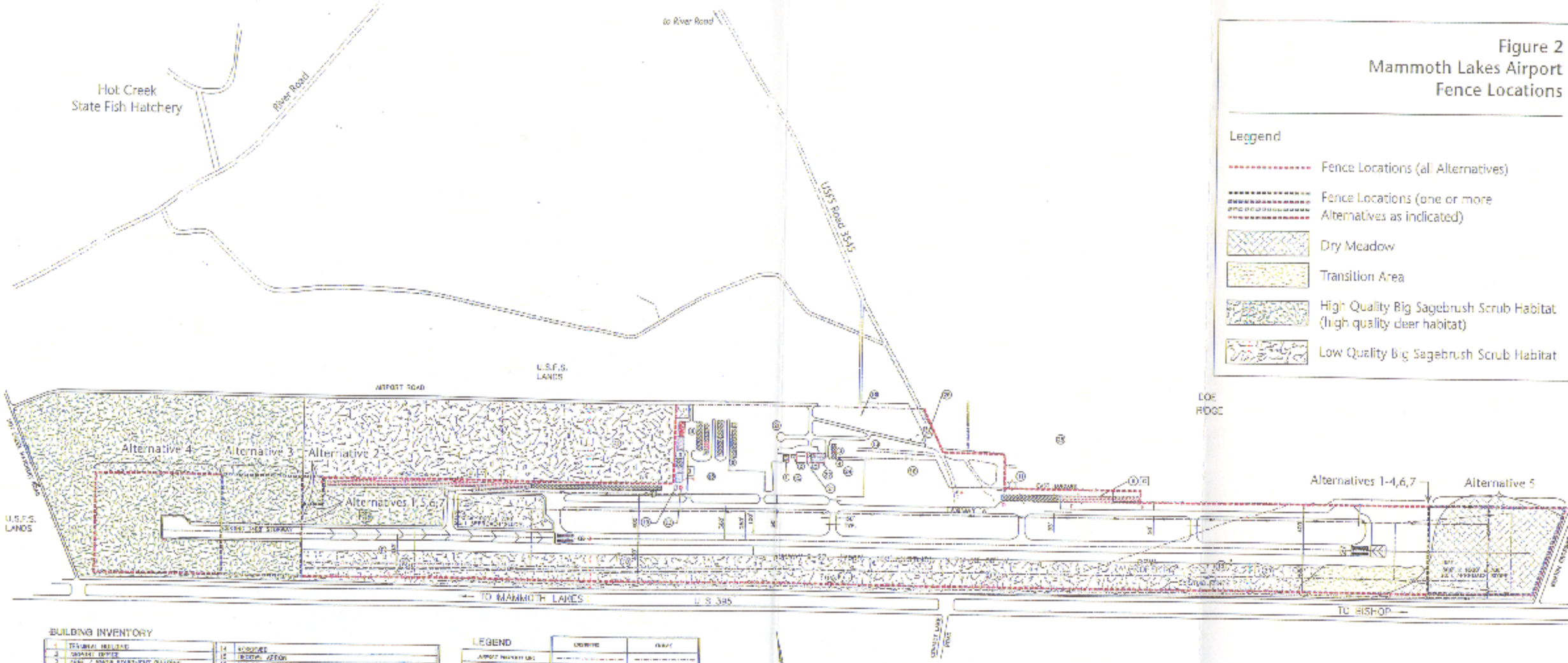
Alternative 2: Proposed Action—8,200-Foot Runway.

Deer Effects. Alternative 2 would involve constructing a 6- to 8-foot-high chain-link fence that would directly eliminate deer use of approximately 10.5 acres of high-quality big sagebrush scrub habitat located between the west end of the proposed runway and the chain-link fence. Eliminating this acreage would reduce deer use in the project area by an estimated 56 deer-use days. The deer-proof fence would create a 1.9-mile east-west barrier to deer movement through the study area during migration. The fence could cause increased mortality to deer from vehicle collisions on U.S. 395 as deer attempt to circumnavigate the barrier.

Figure 2
Mammoth Lakes Airport
Fence Locations

Legend

- Fence Locations (all Alternatives)
- Fence Locations (one or more Alternatives as indicated)
- Dry Meadow
- Transition Area
- High Quality Big Sagebrush Scrub Habitat (high quality deer habitat)
- Low Quality Big Sagebrush Scrub Habitat



BUILDING INVENTORY

1	TERMINAL BUILDING	14	HANGARS
2	GRANITE OFFICES	15	EXISTING APRON
3	FIRE / SNOW EQUIPMENT BUILDING	16	FUTURE AUTO/RV PARKING
4	ELECTRICAL VAULT	17	STORAGE AREA
5	FBO OFFICE (TO BE DEMOLISHED)	18	FUTURE CONVENTIONAL APRON
6	HANGARS	19	FUEL BUILDING
7	HANGARS	20	SURPLUS RENTAL WWII BARNS
8	AIRCRAFT HANGARS	21	COMMERCIAL DEVELOPMENT AREA
9	HANGARS	22	AVIATION DEVELOPMENT AREA (HANGARS & FBO BUILDING)
10	FBO HANGARS AND SEGMENTED CIRCLE	23	NEW AVGAS STORAGE - PHASE I
11	ARFF TOWER	24	CORPORATE APRON
12	[illegible]	25	CONVEN. AVIATION APRON EXPANSION
13	FUTURE TECHNICAL BUILDING SITE	26	WATER STORAGE FACILITY

LEGEND

	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
RUNWAY SAFETY AREA (RSA)		
RUNWAY OBJECT FREE AREA (ROFA)		
FENCING		
ROAD (PAVED)		
DEVELOPABLE AREA		
TAXILANE		
CONCRETE HOUSEKEEPING		

Base map provided by:

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER

Indirect effects from human intrusion associated with the runway extension could occur in the form of construction and operation activities, visual stimulus, and noise. Constructing and operating the runway extension could temporarily displace spring migrants that use the site as a holding area. In addition, these activities could diminish the suitability of adjacent, undisturbed habitat located to the immediate west of the proposed RSA. Animals displaced by human disturbance would likely locate new forage and cover resources on adjacent, undisturbed natural areas. However, this would create overcrowding and increased competition among individuals and would eventually result in overuse of these areas. Under this effect, the amount of holdover deer use in the area would be expected to decline because of a net loss of spring holding-area habitat. There would also be a shift in the habitat-use patterns of holdover deer to include undisturbed areas beyond the project's disturbance area.

Bormann (1976) and Smith and Conner (1989) reported that human intrusion effects associated with developments on deer range could extend well beyond the actual boundaries of the area developed. Human intrusion effects associated with the construction and operation phases of the project could indirectly affect deer use of travel routes located at the project site and on adjacent natural areas. Under this effect, deer could abandon use of traditional travel routes in favor of routes located in undisturbed areas.

Sage Grouse Effects. Effects on sage grouse would be same as those described under Alternative 1b. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. The use of larger planes, including jets, is not likely to increase the disturbance to the local population of grouse in the area because noise levels will be similar to existing conditions at the airport.

Alternative 3: Extend Runway to 9,000 Feet.

Deer Effects. Alternative 3 would involve constructing a 6- to 8-foot-high chain-link fence that would directly eliminate deer use of approximately 21.9 acres of high-quality big sagebrush scrub habitat. Eliminating this acreage would reduce spring deer use on the project area by an estimated 124 deer-use days. The deer-proof fence would create a 2.1-mile east-west barrier to deer movement through the study area during migration. The fence could cause increased mortality to deer from vehicle collisions on U.S. 395 as deer attempt to circumnavigate the barrier.

Indirect effects to mule deer resulting from human intrusion effects associated with Alternative 3 would be similar to those described for Alternative 2.

Sage Grouse Effects. Constructing a 2.1-mile, 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. The increased air traffic and use of larger planes, including jets, at the airport is unlikely to increase the disturbance as described for Alternative 2.

Alternative 4: Extend Runway Beyond 9,000 Feet.

Deer Effects. Alternative 4 would involve constructing a 6- to 8-foot-high chain-link fence that would directly eliminate deer use of approximately 41.9 acres of high-quality big sagebrush scrub habitat. Eliminating this acreage would reduce spring deer use on the project area estimated at 230 deer-use days. It is estimated that the deer-proof fence would create a 2.3-mile barrier to deer movement through the study area during migration.

Indirect effects to mule deer resulting from human intrusion effects associated with Alternative 4 would be similar to those described for the previous alternatives.

Sage Grouse Effects. Constructing a 2.3-mile, 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. The effects on sage grouse from the use of larger planes would be similar to those described for Alternative 2.

Alternative 5: Extend Runway to the East.

Deer Effects. Based on pellet-group counts, extending the runway to the east would have relatively minor effects to spring holding-area habitat. However, the fencing of the existing runway area would result in effects similar to those described for Alternative 1b. The runway extension and associated fence could potentially block any north-south migration activity that occurs between the end of the existing runway and Benton Crossing Road, which could force some animals to unnecessarily cross Benton Crossing Road or U.S. 395, thereby increasing the risk of deer-vehicle collisions. The deer-proof fence would create a 2.1-mile east-west barrier to deer movement through the study area during migration. The fence could cause increased mortality to deer from vehicle collisions on U.S. 395 as deer attempt to circumnavigate the barrier.

Indirect effects to mule deer resulting from human intrusion associated with Alternative 5 would be similar to those described for the previous alternatives.

Sage Grouse Effects. Constructing a 2.1-mile, 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. The potential lek site identified at the east end of the runway would be eliminated. Extending the runway would cause aircraft and noise associated with the aircraft to be closer to the large lek at the east of the project site (BLM Lek #2) within the airport's flight path. Noise associated with aircraft landing at the airport has the potential to disturb grouse on the lekking site during spring.

Alternative 6: Widen Runway but Retain Existing Length of 7,000 Feet.

Deer Effects. The proposed fence line associated with this alternative would eliminate deer use of approximately 9.5 acres of high-quality big sagebrush scrub habitat. Eliminating this acreage would reduce spring deer use on the project area by an estimated 51 deer-use days. The deer-proof fence would also create a 1.9-mile east-west barrier to deer

movement through the study area during migration. The fence could cause increased mortality to deer from vehicle collisions on U.S. 395 as deer attempt to circumnavigate the barrier.

Indirect effects to mule deer resulting from human intrusion associated with Alternative 6 would be similar to those described for the previous alternatives.

Sage Grouse Effects. Constructing a 1.9-mile, 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. Effects on sage grouse would be similar to those described for Alternative 2.

Alternative 7: Widen the Runway Without Shifting the Runway 25 Feet to the South.

Deer Effects. The proposed fence line associated with this alternative would eliminate deer use of approximately 9.5 acres of high-quality big sagebrush scrub habitat. Eliminating this acreage would reduce deer use on the project area by an estimated 51 deer-use days. The east-west barrier created by construction of a deer-proof fence around the runway would be the same as described for Alternative 6.

Indirect effects to mule deer resulting from human intrusion associated with Alternative 7 would be similar to those described for the previous alternatives.

Sage Grouse Effects. Construction of 1.9 miles of 6- to 8-foot-high chain-link fence could cause direct mortality to low-flying adult birds. While the fence could cause direct mortality, it is unlikely to affect the local population substantially. Effects on sage grouse would be similar to those described for Alternative 2.

Chapter 6. Cumulative Effects

Effect: Cumulative Loss and Fragmentation of Important Biological Habitat

Constructing the proposed project would result in cumulative effects on wildlife species. As Mammoth Lakes continues to grow, effects (including habitat loss and human disturbance) on wildlife species such as mule deer and sage grouse will increase. Increased noise and human disturbance from increased use of the airport would decrease the value of the area for wildlife species. Recommendations outlined in Chapter 7, "Recommendations", would only partially compensate for local losses of these resources. The measures would reduce the magnitude of effects but would not fully reduce cumulative effects related to fragmentation and human disturbances, particularly noise disturbance and the inhibition of migratory movement by deer because of deer-proof fencing.

Chapter 7. Recommendations

If the following recommendations are implemented appropriately, they would reduce the magnitude of most effects. Also, resource agencies that would issue permits for the project (e.g. the DFG) would require compliance with specific permit conditions. Therefore, the recommendations described below may need to be modified to ensure consistency with permit conditions.

These recommendations were developed in coordination with resource agencies (i.e., the DFG and USFS). The recommendations differ from those in Jones & Stokes Associates' 1995 report because of changes to the project, including fencing the site with deer-proof fencing.

MULE DEER RECOMMENDATIONS

To reduce the potential effects on migrating deer, construction activities to extend the western portion of the runway or to construct the deer-proof fence should be conducted between May 15 and September 30. Construction to widen Runway 9-27 along its southern portion does not need to be restricted to a particular season.

Based on the alternative chosen, the acreage of high-quality big sage scrub habitat at the western portion of the runway eliminated from mule-deer use , which is identified in the Chapter 5, "Project Effects", for each alternative, should be replaced by restoring degraded deer holding-area habitat at or near the study area (Thomas pers. comm.). Alternatives 1b, 2, 5, 6, and 7 would reduce high-quality big sagebrush scrub habitat within the project area; they would reduce the availability of big sagebrush scrub by 10–25 acres. The acreage estimates of project effects on deer assume that the cattle-proof fence would remain in place after the selected alternative is completed. Removing or changing the position of the existing cattle-proof fence would change the acreage of recommended compensation for project effects on deer.

As a part of Alternative 2, the 4.5 acres of the existing stopway located west of the proposed security fence would be restored (Taylor pers. comm.). The stopway is located within the area of the highest identified proportion of deer use; therefore, mule deer would benefit from the increase in high-quality big sagebrush scrub forage availability. Offsite habitat enhancement is recommended for the remaining 6 acres of big sagebrush scrub habitat eliminated by Alternative 2.

Alternatives 3 and 4 would eliminate 21.9 and 41.9 acres, respectively, of high-quality mule-deer big sage scrub habitat. Enhancing degraded habitat onsite would not be practical because

of the construction of the deer-proof fence through most or all of the existing stopway. Therefore, offsite restoration is recommended.

Compensation for the impacts from each alternative should occur at a 1:1 ratio (i.e., 1 acre restored for each acre removed). The ratio is based on the high quality of habitat present at the site and the unknown effectiveness restoration would have in compensating for the removal of habitat within the study area. Cattle should be excluded from all restoration sites (Thomas pers. comm.).

Potential enhancement sites include part of USFS Road 3S45, portions of the gravel pit north of the airport, the mule-deer holding area southwest of the project site near Mammoth Lakes, and the area of the 1987 Laurel fire southwest of the project site. Enhancement of areas on USFS property may require additional National Environmental Policy Act compliance.

USFS Road 3S45 runs north of the airport and connects to Owens River Road (Murray pers. comm.). The road is blocked at the airport property. Ripping and seeding with native vegetation the portion of the road from the airport to the intersection with the gravel pit road would benefit mule deer and sage grouse by reducing human disturbance and increasing forage availability in the area.

The area of the 1987 Laurel fire (which burned extremely hot) was colonized by cheet grass (*Bromus tectorium*), which has minimal forage value to deer, following the fire. The USFS has initiated some restoration of the site, but the survival rate of native grasses and trees planted onsite as part of the restoration has been low. Restoration activities at the Laurel fire area would not benefit sage grouse.

SAGE GROUSE RECOMMENDATIONS

A survey should be conducted in the spring lekking season (April--May) by a qualified biologist to determine if sage grouse are using the dry meadow on the eastern portion of the study area as a lek site. This study should be conducted before any ground-disturbing activities begin within the dry meadow habitat. The known lekking site approximately 2 miles east of the project area (BLM Lek #2) should also be monitored if Alternative 5 is selected because this site is within the flight path of aircraft that would be landing closer to the known lek site.

The dry meadow adjacent to the airport should be surveyed a minimum of three mornings to determine if grouse are using the site. If Alternative 5 is selected, this known lek site (BLM Lek #2) should be monitored over a 2-year period to determine bird abundance. A minimum of three visits should be conducted each year to obtain an estimate of bird use. The data should be compared with existing information to determine if any negative effects on birds could result from increased disturbance at the airport (Thomas pers. comm.). Funding for the sage-grouse lek monitoring study should be determined before expansion activities begin. The results of the study should be submitted to the DFG for review and coordination to determine appropriate actions.

GENERAL RECOMMENDATIONS

Sensitive biological resources adjacent to the construction corridor should be protected by placing orange construction-barrier fencing or stakes and flags. Adjacent resources that would require protection include dry meadow and high-quality migratory-deer foraging habitat on the west end of the runway. The locations of these resources should be clearly identified on the construction drawings and marked in the field. Fencing (of a type that would not create a barrier to deer movement) should remain in place until all construction and restoration work involving heavy equipment is complete.

To minimize short-term and long-term runoff into Convict Creek, which is located west of Benton Crossing Road, temporary toe-ditches with sedimentation fencing should be created to contain project runoff. Permanent ditches should be constructed along the paved road to contain future road runoff and to avoid contamination of Convict Creek.

Chapter 8. Citations

PRINTED REFERENCES

Bormann, F. H. 1976. An inseparable linkage: Conservation of natural ecosystems and the conservation of fossil energy. Bioscience 26:754-60.

Eberhardt, L. E., and G. C. White. 1980. Statistical analysis of deer and elk pellet-group data. Journal of Wildlife Management 44:121-131.

Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. (Technical Report Y-87-1.) U.S. Army Corps of Engineers Experiment Station. Vicksburg, MS.

Harris, J. H. 1982. Mammals of the Mono Lake-Tioga Pass region. Kutsavi Books. Lee Vining, CA.

Hickman, J. (ed.). 1993. The Jepson manual: higher plants of California. University of California Press. Berkeley, CA.

Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final report. California Department of Fish and Game, Inland Fisheries Division. Rancho Cordova, CA.

Jones & Stokes Associates. 1995. Special-status and wetlands survey for the Mammoth-June Lakes expansion project. March. Sacramento, CA. Prepared for Consulting Airport Engineers. Loomis, CA.

Kucera, T. E. 1988. Ecology and population dynamics of mule deer in the Eastern Sierra Nevada, California. Ph.D. dissertation. University of California, Berkeley, CA.

McCain, R. 1948. A method of measuring deer range use. Transatlantic North American Wildlife Conference 13:431-440.

Natural Diversity Data Base. 2000. Records search for Convict Lake and Whitmore Hot Springs 7.5-minute U.S. Geological Survey quadrangles. California Department of Fish and Game. Sacramento, CA.

Neff, D. J. 1968. The pellet-group count technique for big game tend, census, and distribution: a review. Journal of Wildlife Management 32:597-614.

Reed, P. 1988. National list of plant species that occur in wetlands. U.S. Fish and Wildlife Service Biological Report 88(26.10).

Remsen, J. V. 1978. Bird species of special concern in California: an annotated list of declining or vulnerable bird species. (Wildlife Management Branch Administrative Report No. 78-1.) California Department of Fish and Game, Nongame Wildlife Investigations. Sacramento, CA.

Skinner, M. W., and B. M. Pavlik. 1994. Inventory of rare and endangered vascular plants in California. 5th edition. (Special Publication No. 1.) California Native Plant Society. Sacramento, CA.

Smith, D. O., and M. Conner. 1989. The distribution of winter mule deer use around homesites. Draft report. Presented at the Transactions of the Western Section of the Wildlife Society.

Taylor, T. J. 1988. Migration and seasonal habitats of the Casa Diablo deer herd. California Department of Fish and Game. Bishop, CA.

Thomas, R. 1985. Management plan for the Sherwin Grade deer herd. Unpublished report. California Department of Fish and Game. Bishop, CA.

U.S. Forest Service. 1990. Final environmental impact statement for the Doe Ridge Golf Course. Bishop, CA.

Williams, D. F. 1986 Mammalian species of special concern. California Department of Fish and Game. Sacramento, CA.

PERSONAL COMMUNICATIONS

Manning, Bill. Airport Manager. Mammoth Lakes Airport. August 23, 2000—meeting.

Murray, Ron. Lands Department. Inyo National Forest, Mammoth Ranger District, Mammoth, CA. June 6 and July 11, 2000—telephone conversation.

Perloff, Richard. Biologist. U.S. Forest Service (Inyo Region). Bishop, CA. September 1, 2000—telephone conversation.

Rossi, Terry. Biologist. Bureau of Land Management. Bishop, CA. June 6, 2000—telephone conversation.

Taylor, Bill. Senior Planner. Town of Mammoth Lakes. August 23, 2000—meeting.

Thomas, Ron. Biologist. California Department of Fish and Game. Ranch Cordova, CA. June 6 and July 12, 2000—telephone conversation.

Appendix H - Level I Environmental Site Assessment

Level I Environmental Site Assessment of the Hot Creek Hangar Development located at 85 Airport Road, Mammoth Lakes, CA 93546

LEVEL I ENVIRONMENTAL SITE ASSESSMENT OF THE HOT CREEK HANGAR DEVELOPMENT LOCATED AT 85 AIRPORT ROAD MAMMOTH LAKE, CA 93546

Prepared For:

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BATCHELOR ENVIRONMENTAL SERVICES PROJECT #990153

MAY 17, 1999

Prepared By:

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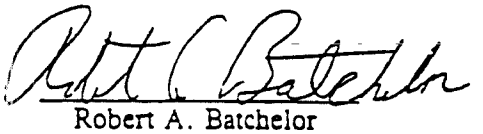
LEVEL I ENVIRONMENTAL
SITE ASSESSMENT
OF THE
HOT CREEK HANGAR DEVELOPMENT
LOCATED AT
85 AIRPORT ROAD
MAMMOTH LAKE, CA 93506

This Level I Environmental Site Assessment was prepared for the sole use of Santa Monica Bank. Any use by others is not supported by the Authors.

Report Prepared By



Robert A. Batchelor
President
CA. REA #06089

1.0 OBJECTIVES

1.1 PURPOSE

The purpose of this report is to determine whether or not there has been or presently is any contamination on the subject property; or whether the subject property is likely to incur or contribute to contamination in the future by way of on-site activity and/or activities from adjacent and/or nearby properties. This includes the presence, handling, treatment and/or disposal of hazardous substances.

1.2 SCOPE OF WORK

The scope of the investigation consisted of:

* A detailed visual inspection of the site. This included identification of any locations on the site likely to contain hazardous materials including, but not limited to, chemical solvents, petroleum hydrocarbons, and Polychlorinated Biphenyls (PCBs). This site study and identification process will not include sampling and laboratory analyses to determine the presence/non-presence of Asbestos Containing Materials (ACMs) at the subject site. The location of any ground water wells, if they exist, were identified.

* An inspection of adjacent and surrounding land uses that might affect the subject property. This included a discussion of prior uses of the property and surrounding area, as well as any of the surrounding properties within a one-eighth, one-quarter, one-half and one-mile radius which are on any of the applicable regulatory agencies' lists of contaminated sites.

* Interviews with persons knowledgeable of present and prior usages of the property, if such persons were identified. Typically, these persons are facility managers, maintenance personnel, and building engineers or managers. Also, previous owners may have been contacted if warranted. If there were any tenants at the property, they may have been likewise interviewed.

* A records check of information at regulatory agencies and other sources publicly available or reasonably ascertainable. This phase of work included research of potential sources of contamination in the vicinity. The records check assisted us in determining whether there has been any reporting of an official or unofficial incident involving hazardous materials, spillage, or leakage from storage tanks, trucking, or other means in, on, or about the property.

* Preparation of this final report summarizing results of the above elements as well as other applicable factors in the lender's guidelines. For example, documentation of all sources of information, copies of support documents, conclusions, and recommendations. Should there be need for further investigative work, every effort will be made to provide an estimated range of costs associated with remediating or managing the identified environmental problem.

2.0 EXECUTIVE SUMMARY

This report was commissioned by Ms. Renee Kaplan, Vice President, Appraisal Review Officer, Santa Monica Bank, Santa Monica, California, to perform a Level I Environmental Site Assessment (ESA) of a new development of ninety-one (91) airplane hangers (subject site) located at the Mammoth Lakes Airport situated at 85 Airport Boulevard, Mammoth Lakes, Mono County, California. The proposed facilities, to be constructed on land leased from the Town of Mammoth Lakes, consists primarily of vacant (undeveloped) land scheduled for the development of ninety-one (91) executive and corporate type airplane hangers. The development of the airplane hangers will include the construction of the executive type hangers to the west of airport terminal and the corporate hangers to the east of the airport terminal. The subject property is situated along the northern exposure of U.S. Route 395 which runs through the Owens Valley situated along the eastern Sierra Nevada Mountains. The Mammoth Lakes Airport is situated approximately 140 miles south of Reno, Nevada and 39 miles north of Bishop, Mono County, California.

An inspection of the subject site and subsequent review of files/records maintained by regulatory agencies revealed that environmental hazards do exist at the subject site. Aviation gasoline and jet fuel are presently stored in Aboveground Storage Tanks (ASTs) situated at the subject site. One (1) of the ASTs is scheduled for removal to accommodate the construction of the executive airplane hangers and one (1) AST, utilized for the storage of aviation gasoline, is surrounded by a modern secondary containment system and would pose only a very minimal threat of contamination to the subject site. No other hazards were noted at the subject site.

Based upon the vacant nature of the subject property, Asbestos Containing Materials (ACMs) were not suspected to be present or a concern at the subject site. The site investigation performed on Monday, May 10, 1999, by Batchelor Environmental Services revealed no building materials and/or debris at the subject site suspected to contain Asbestos Containing Material (ACM)..

Hazardous materials in the form of aviation gasoline and jet fuel were noted on a portion of the land planned for the development of the executive type hangers at the subject site. The jet fuel is stored in one (1) Aboveground Storage Tank (AST) @ 10,000 gallons situated to the west of the six (6) existing hangers located to the west of the terminal area. The AST is of single wall design/construction, surrounded by a secondary containment system and is equipment with a tertiary overspill collection system. The AST is scheduled for removal to accommodate the construction of the executive type hangers at the subject site. A new AST @ 12,000 gallons and utilized for the storage of aviation gasoline is situated on a concrete pad located to the east of the six (6) existing hangers at the subject site. This AST is of double wall design/construction, is surrounded by a secondary containment system and a spill prevention system and exceeds all permit requirements. One (1) additional AST @ 12,000 gallon capacity and scheduled for the storage of jet fuel is planned for the subject site. This additional AST is scheduled to be placed alongside the presently situated 12,000 gallon capacity AST utilized for the storage of aviation gasoline. Additionally, Aboveground Storage Tanks (ASTs) for propane are planned for the subject site.

Hazardous materials in the form of propane and jet fuel are maintained and/or utilized off-site at the Mammoth Lakes Airport property. The jet fuel is maintained in one (1) Aboveground Storage Tank (AST) of approximately 5,000 gallons which is situated at the south end of Hanger F at the airport property. The AST is of double wall design/construction and is surrounded by a secondary containment system. The AST poses only a minimal threat of contamination to the subject site. Propane is maintained at the airport property in three (3) Aboveground Storage Tanks of approximately 500 gallons each. The ASTs are properly maintained and do not pose a risk of contamination to the subject site.

No hazardous wastes were noted to be generated or stored at the subject site or at the airport property.

The presence and/or former presence of Underground Storage Tanks (USTs) were not noted at the subject site during the site investigation performed by Batchelor Environmental Services on Monday, May 10, 1999. Two (2) Aboveground Storage Tanks (ASTs) @ 10,000 gallons utilized for the storage of jet fuel and one (1) AST @ 12,000 gallons utilized for the storage of aviation gasoline are maintained and utilized at the subject site. The AST maintained and utilized for the storage of jet fuel is scheduled for removal to accommodate the construction of the executive type hangers at the west end of the airport property. The AST maintained and utilized for the storage of aviation gasoline will be joined by a similar AST which will be utilized for the storage of jet fuel. The AST are equipped with secondary containment and spill prevention equipment/catch sumps and pose only a minimal risk of contamination to the subject site.

The present location of one (1) Underground Storage Tank (UST) @ 10,000 gallons and the former locations of nine (9) Underground Storage Tanks (USTs) were noted at the adjoining airport facility. Batchelor Environmental Services was informed by Mr. John Sweeney, Captain at the Lone Valley Fire Department, and by a representative of the Mammoth Lakes Airport maintenance staff that one (1) UST @ 10,000 gallon capacity utilized for the storage of jet fuel is situated under the southern end of hanger F at the airport. According to Captain Sweeny, the UST is empty and is to be closed in place by its current owner. Batchelor Environmental Services was also informed by the above-referenced site representatives that two (2) USTs @ 10,000 and 2,000 gallons respectively for jet fuel and unleaded gasoline were removed from the area of hanger F in November 1998. The UST removal was performed under the direction of the Mono County Environmental Health Department. Seven (7) additional USTs have been recently removed at the airport facility. Two (2) USTs @ 10,000 gallons and one (1) UST @ 6,000 gallons were removed from the west side of the airport terminal building. Soil beneath and in the immediate area of these three (3) USTs was determined to have been contaminated with petroleum hydrocarbons and volatile organic compounds including Methyl-Tertiary-Butyl-Ether (MTBE). Contaminated soil has been excavated from the area of the former USTs and a further site investigation is to be performed to determine the horizontal extent of contamination. The contamination has not impacted groundwater at the subject site and the measured concentrations do not pose a risk of contamination to the areas of planned development for the new hangers. Three (3) USTs @ 12,000 gallons each and one (1) UST @ 8,000 gallon capacity were removed in accordance to regulatory procedures at the east side of the airport terminal building. This former UST area is awaiting closure by the County of Mono

Environmental Health Department but no further investigation is required. The present and/or former presence of the Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs) pose only a minimal risk of contamination to the subject site. Additionally, the Town of Mammoth Lakes, which owns the land at the airport, has provided the developer/owner of the proposed new hangers at the subject site a written indemnification on all presently known contamination at the site.

No fluorescent lighting fixtures, pole or surface-mounted electrical transformers were noted to be situated at the subject property. Surface-mounted electrical transformers were noted to be situated off-site and in the vicinity of the subject site. The transformers, situated at the Mammoth Lakes Airport property, are owned and maintained by the Southern California Edison Company and appeared to be in good condition. No leaks, spills and/or stains were noted in the area of the transformers.

There are no off-site businesses/facilities noted for the storage of hazardous materials and/or for the unauthorized release of hazardous wastes in a one mile radius of the subject site other than the previously described Mammoth Lakes airport facilities which poses only a minimal risk of contamination to the subject site.

Although a geophysical inspection is beyond the scope of this Level I Environmental Site Assessment (ESA), the subject site areas did not exhibit major cracks or physical defects.

3.0 ENVIRONMENTAL ASSESSMENT REPORT

3.1 SITE USE, HISTORY, AND NEIGHBORHOOD

3.1.1 Site Description

Site Location:	Hot Creek Hangar Development 85 Airport Road Mammoth Lake, CA 93546 Mono County, CA
United States Dept. of Geological Survey:	Whitmore Hot Springs Quadrangle Map Mono County, CA
Site Tenants:	The subject site is presently vacant (undeveloped) land with the exception of one (1) 10,000 gallon AST utilized for jet fuel and one (1) AST at 12,000 gallons utilized for the storage of aviation gasoline. The 10,000 gallon is independently owned and operated and scheduled for removal.
Site Owner:	Town of Mammoth Lakes owns the land at the subject site which is planned for the development of the Hot Creek Hangers. Terrence E. Ballas is the developer of the Hot Creek Hanger project (subject site) under the ownership name of Hot Creek Hangers LLC
APNs:	37-130-(12 & 13)
Site Representatives:	Terrence Ballas, Developer John Sweeney, Capitan-Lone Valley Fire Dept. Larry Gagnier, Sr. V.P. Hot Creek Aviation Andy Zdon, Geologist-Team Eng.& Mgmt. Co.
Lot Size:	Approximately 433,400 square feet or 9.85 acres
Improvements:	Presently vacant (undeveloped) land with the exception of two (2) ASTs. The land is scheduled for phased development of ninety-one (91) airplane hangers containing approximately 176,044 square feet of total building area.
Age:	New-under development

Usage:	The land at the subject site is to be developed with a total of ninety-one (91) airplane hangers divided into executive hangers to the west and corporate hangers to the east of the terminal facilities situated at the Mammoth Lakes Airport.
Nearest Cross Streets:	The subject property is located along the northern exposure of State Highway 395, east of Owens River Road and west of Benton Crossing Road Mammoth Lakes, Mono County, California

The subject site is situated within the borders of the Mammoth Lakes Airport facility. The subject site as well as the airport facility is fairly isolated with no structures situated in the immediate vicinity. The Hot Creek state fish hatchery is located to the northwest of the subject site and the United States Geological Survey (USGS) Maps of the Whitmore Hot Springs 7.5 Minute Series Quandrangle exhibits several gravel pits situated to the north and southwest of subject site. (See Figure Pages 1 and 2 - Site Vicinity and Site Location Maps and Appendix 5.4, USGS Quadrangle map of the subject site area).

3.1.2 Site History

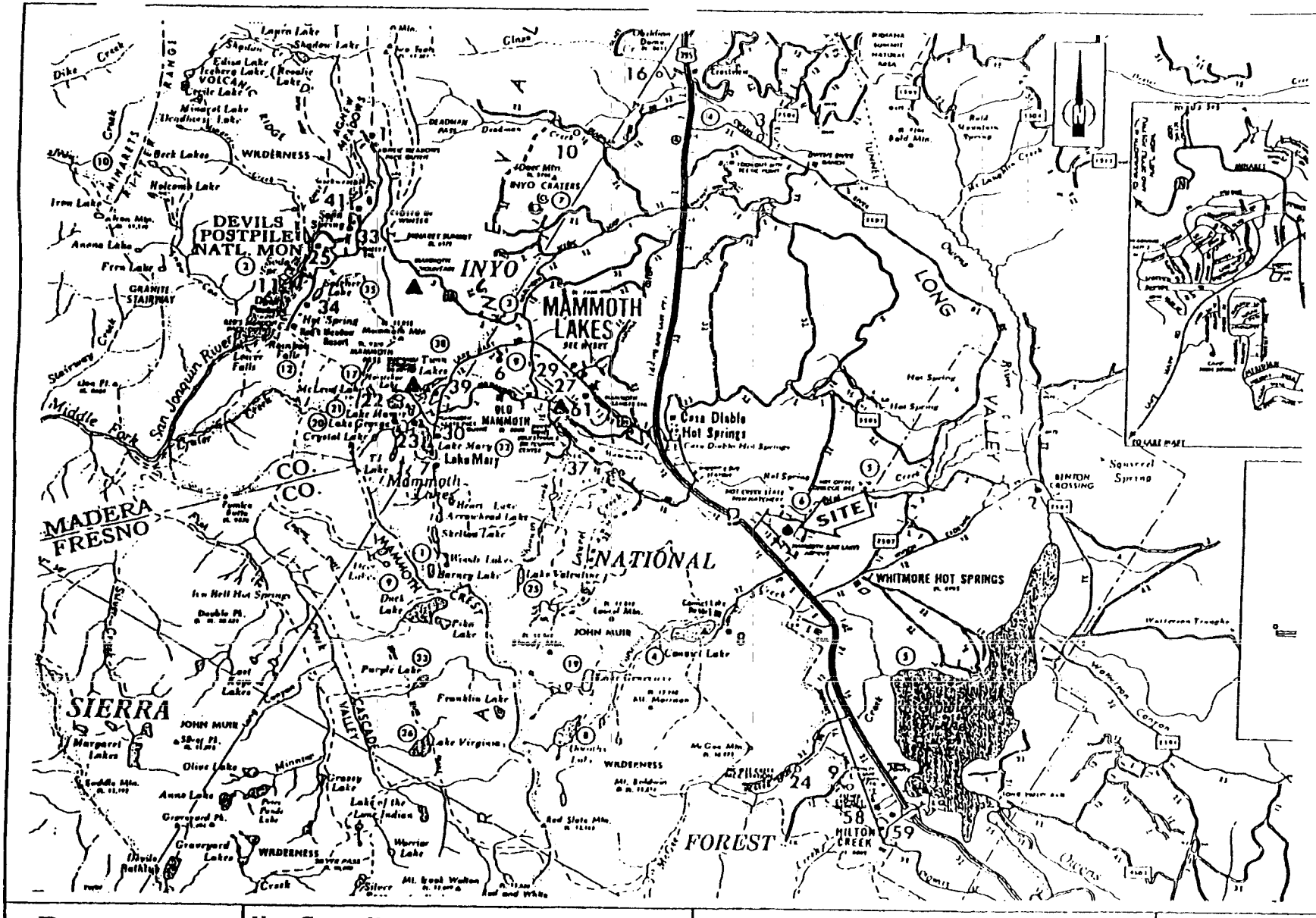
A review of city directories, public records, and an aerial photograph was conducted by Robert A. Batchelor, a California Registered Environmental Assessor and President of Batchelor Environmental Services. The site history described below is based on a review of the following:

- Records from the Mono County Environmental Health Department
- Records from the County of Mono, Lone Valley Fire Department, UST Department
- Records from the Town of Mammoth Lakes, Building Department
- One (1) aerial photograph taken in 1987 (only one available, copy of print included as Appendix 5.6) available from the EDR Aerial Photograph Collection
- Records from the Lahontan and Victorville offices of the California Regional Water Quality Control Board
- Records from the Great Basin Air Quality Management District (GBAQMD)

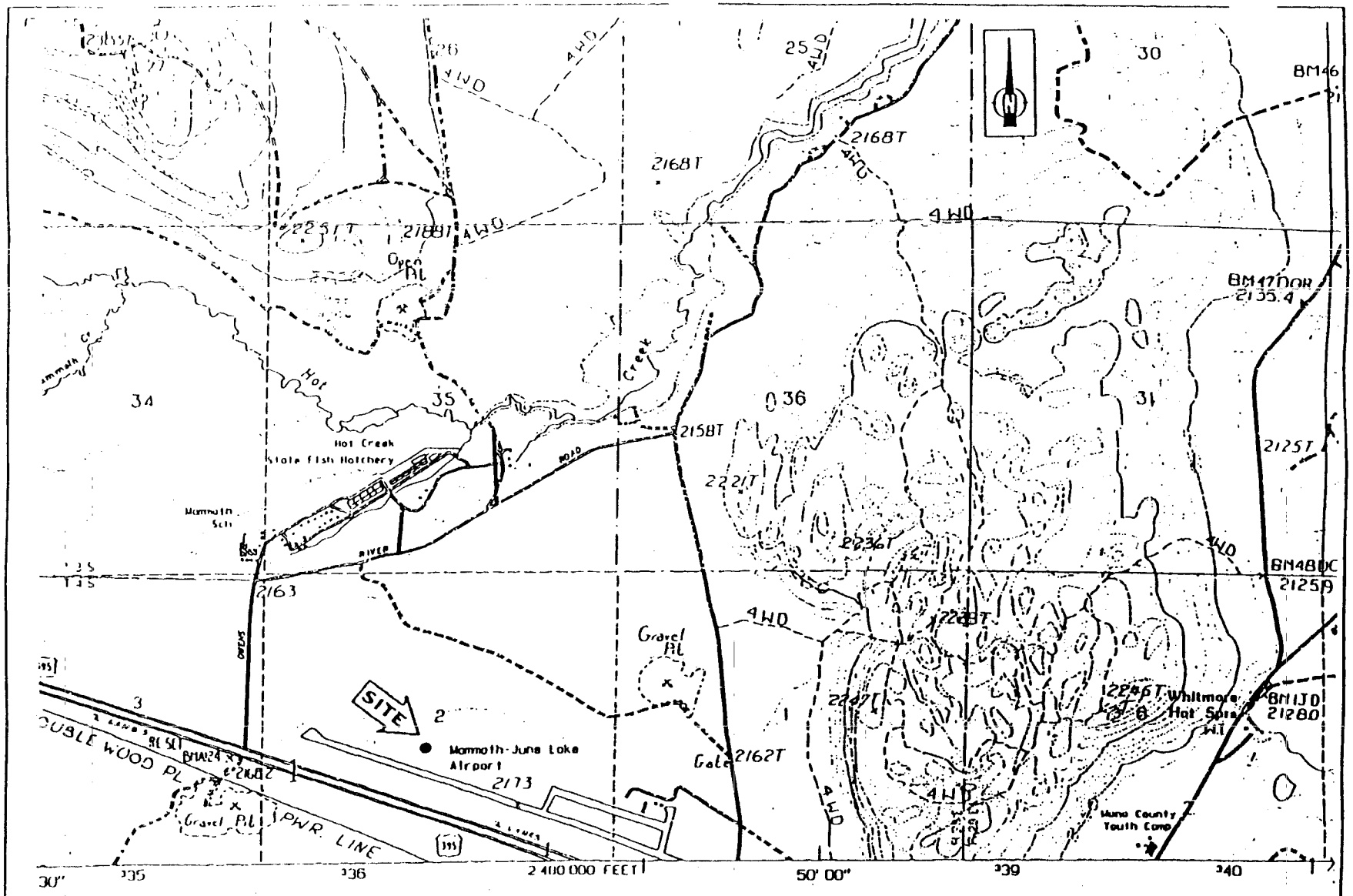
3.1.3 Aerial Photograph Review

A review of one (1) historical aerial photograph purchased from the Environmental Data Resources Aerial Collection was the only photograph readily available which covered the subject site and surrounding Mammoth Lakes Airport.

A 6X hand magnifier provided adequate resolution to distinguish the presence of commercial versus residential buildings, parks, cultivated agricultural land, and bodies of water. The following review describes development in the area of the subject property in 1987.



BATCHELOR ENVIRONMENTAL SERVICES, INC.	HOT CREEK HANGAR DEVELOPMENT MAMMOTH LAKES, CA 93546	SITE VICINITY MAP	FIGURE 1



BATCHELOR ENVIRONMENTAL SERVICES, INC.	HOT CREEK HANGAR DEVELOPMENT MAMMOTH LAKES, CA 93546	SITE LOCATION MAP	FIGURE 2

DATE FLOWN

1987:

The subject site areas situated along the northern border of the tarmac and located to the east and west of the airport facilities exhibit vacant (undeveloped) land. The Mammoth Lakes Airport exhibits a terminal facility, a number of hangers and rows of planes parked in the tie-down areas of the airport.

Batchelor Environmental Services has included a copy of the photograph in Appendix 5.6 and a copy of the same photograph with site locations (long rectangular shapes with Xs) noted with site arrows.

3.1.4 Area Description and Adjacent Land Use

The subject property is located on a portion of land owned by the Town of Mammoth Lakes and operated as the Mammoth Lakes Airport. The airport property, including the subject site, is situated in an isolated area with no other development within a one mile radius and is located in an area zoned for its current use. (See Figure 3; Site Plan with Adjacent Facility and Property Map).

3.1.5 Building Permit History - Subject Site

The Town of Mammoth Lakes has entered into a Development Agreement with Mr. Terrence E. Ballas, Developer of the Hot Creek Hanger Development Project. Permits for the construction of various hanger and storage structures at the subject property are in process with the Town of Mammoth Lakes. An air emissions permit for the operation of the Aboveground Storage Tanks (ASTs) has been issued to the Hot Creek Hanger LLC by the Great Basin Air Quality Management District (GBAQMD) which oversees the air quality in the Mono County area.

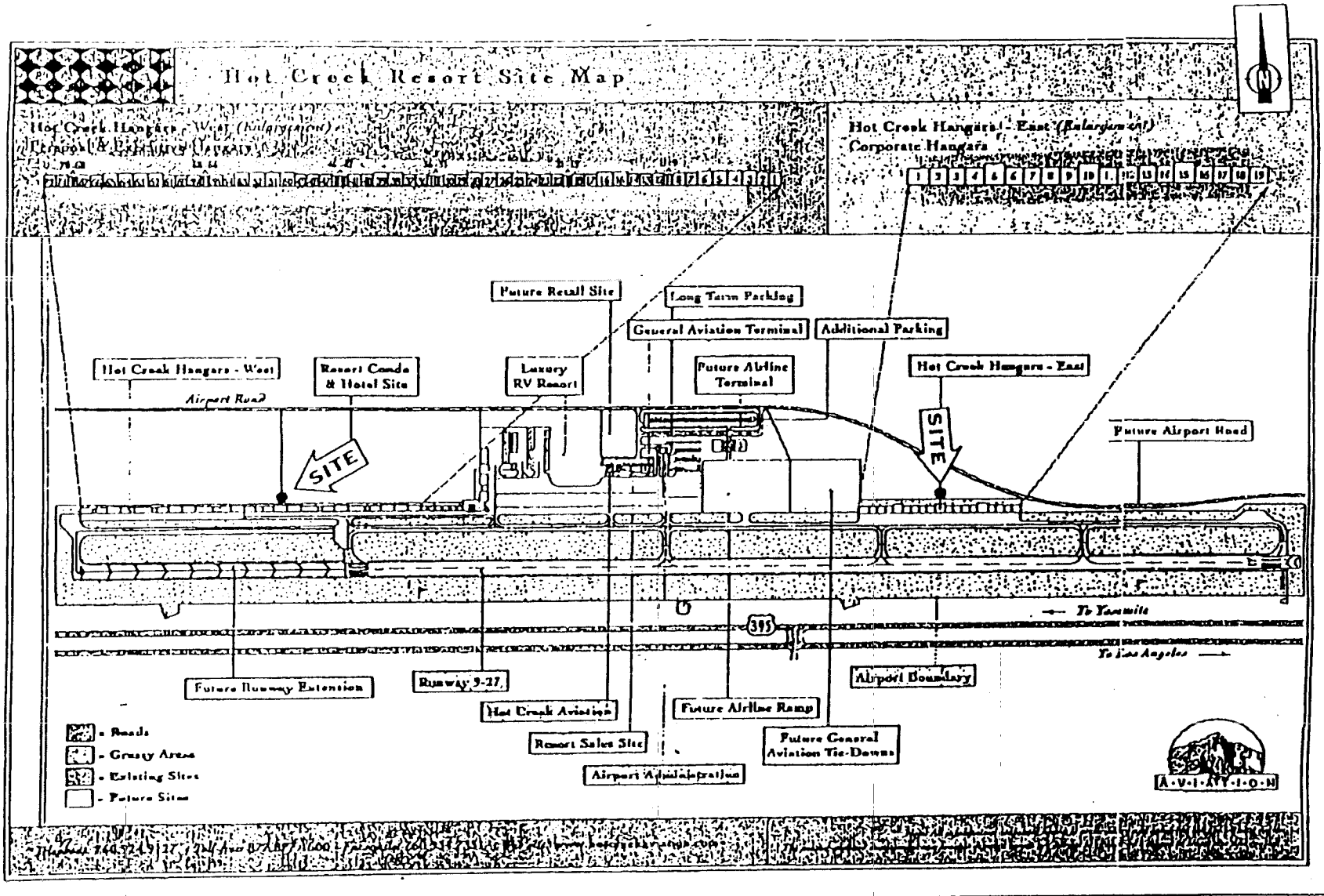
3.1.6 Environmental Database Report - Subject Site

Vista Environmental Solutions, Inc. (Vista) performed research of governmental database lists for the subject site as well as the site area. The subject site was not identified on any of the databases searched.

3.2 ENVIRONMENTAL SETTING

3.2.1 Topography

The subject site is located on a flat/level portion of land situated at the Mammoth Lakes Airport property. The Mammoth Lakes Airport property is situated in a valley to the north of the Sierra Mountains and east of Mammoth Mountain, Mono County, California.



BATCHELOR ENVIRONMENTAL SERVICES, INC.	HOT CREEK HANGAR DEVELOPMENT MAMMOTH LAKES, CA 93546	SITE PLAN WITH ADJACENT FACILITY AND PROPERTY MAP	FIGURE 3

3.2.2 Groundwater

Groundwater in the area of the subject site is considered to range from a medium depth to deep. Water wells situated in the area of the subject site range in depth from seventy-five (75') to one-hundred (100') feet below ground surface. Wells recently drilled at the subject site exhibited shallow zone water at a depth of eighty-five (85') feet below ground surface with production at approximately three-hundred (300') feet below ground surface. Groundwater is estimated to flow in an easterly direction at the subject site as it flows from the Mammoth Mountain down through the Owens Valley.

3.3 SITE INSPECTION

A site inspection was conducted at the subject property on Monday, May 10, 1999, by Robert A. Batchelor, President of Batchelor Environmental Services and a California Registered Environmental Assessor (REA), to determine the environmental condition of the subject site and review current environmental issues. Access to the subject site and the surrounding Mammoth Lakes Airport property was provided by Mr. Larry Gagnier, Senior Vice President, Hot Creek Aviation. Accompanying Mr. Gagnier and Batchelor Environmental Services on the tour of the subject site and Mammoth Lakes Airport property was Mr. Andy Zdon, Project Manager for Team Engineering and Management Company who was managing the remediation of contaminated soil situated beneath the former seven (7) removed Underground Storage Tanks (USTs) and the one (1) presently remaining UST at the airport property. Mr. Gagnier provided Batchelor Environmental Services a history of the development of the subject site as well as the Mammoth Lakes Airport property.

Prior use of the subject site was in vacant (undeveloped) land as was that of the Mammoth Lakes Airport property.

Building Area

The only improvements at the subject site consist of one (1) Aboveground Storage Tank (AST) @ 10,000 gallon capacity located in the western portion of the subject site and at the area where the executive hangers are to be constructed and one (1) AST @ 12,000 gallons utilized for the storage of aviation gasoline. The AST @ 10,000 gallon capacity utilized for the storage of jet fuel is owned by others and is to be removed prior to the construction of the executive hangers at the subject site. The AST @ 12,000 gallon capacity will remain as an integral part of the fueling service for airplanes utilizing the Mammoth Lakes Airport facilities. (See Photo Logs 4 and 5; Descriptions G-J).

GROUNDS AREA

The land areas of the subject site consists primarily of vacant (undeveloped) land covered in native grasses and scrub plants with asphalt paved tarmac portions of the airport property situated at the south of the proposed hangers at the subject site. (See Photo Logs 1, 2, 3 and 6; Descriptions A-D, F, K-L).

Other than noted above, no evidence of discolored vegetation or stains on the subject grounds, which may indicate hazardous waste spills, was noted during the site inspection.

3.3.1 Underground Storage Tanks (USTs)/Aboveground Storage Tanks (ASTs)

During the site investigation performed by Batchelor Environmental Services, no visible signs of Underground Storage Tanks (USTs) were noted at the subject site. Two (2) Aboveground Storage Tanks (ASTs) were observed at the subject site. Both of the ASTs are situated at the western end of the airport and in a location planned for the development of the new executive hangers at the subject site. One (1) AST @ 10,000 gallon capacity (see Photo Log 4; Description 6) and utilized for the storage of jet fuel is owned by others and is scheduled for removal to accommodate the construction of the first phase of the executive hangers at the subject site. The AST @ 12,000 gallon capacity (see Photo Logs 4 and 5; Descriptions H-J) and utilized for the storage of aviation gasoline is a newly constructed double walled AST with secondary containment and a spill prevention system. This AST is situated to the east of the six (6) existing hangers at the airport property and is to be joined by an adjacent AST @ 12,000 gallon capacity and utilized for the storage of jet fuel.

3.3.2 Hazardous Materials and Wastes

Hazardous materials/chemicals in the form of petroleum products (aviation gasoline and jet fuel) are maintained and utilized at the subject site. The jet fuel is presently maintained in one (1) AST @ 10,000 gallon capacity which is situated at the western section of the subject site. The AST is owned by others and is scheduled for removal to accommodate the construction of the first phase of the executive hangers at the subject site. No leaks, spills and/or stains were noted in the area utilized for the storage of the jet fuel and this AST poses only a minimal risk of contamination to the subject site. Aviation gasoline is presently maintained in one (1) AST @ 12,000 gallon capacity which is situated to the east of the existing six (6) hangers at the airport property. This AST is of double walled design/construction and is surrounded by a secondary containment and spill prevention system. A second AST, to be utilized for the storage of jet fuel, is to be placed within this same secondary containment system. The operation of the present AST @ 12,000 gallons for aviation gasoline and the projected operation of the new AST @ 12,000 gallons for jet fuel posses only a minimal risk of contamination to the subject site.

No hazardous wastes were noted to be generated or stored at the subject site.

The subject site has not been cited by a regulatory agency for any unauthorized releases of hazardous materials to the soil or groundwater.

3.3.3 Agricultural Pesticides/Herbicides

There has been no known application of any agricultural pesticides or herbicides to the subject property based upon reasonably available documentation and information.

3.3.4 Radon

A review for radon is not within the scope of this investigation/assessment. However, radon gas is not considered to be of concern in this area of California.

3.3.5. Asbestos Containing Material (ACM) Sampling

Based upon the primarily vacant (undeveloped) nature of the subject site, no Asbestos Containing Materials (ACMs) were suspected to be present at the subject site. Based upon the site investigation performed by Batchelor Environmental Services on May 10, 1999, no debris or building materials were noted at the subject site and therefore no ACMs were suspected to be present.

3.3.6 Polychlorinated Biphenyls (PCBs)

Based upon the vacant (undeveloped) nature of the subject site, no fluorescent lighting fixtures ballasts, pole and/or surface-mounted electrical transformers suspected to contain Polychlorinated Biphenyls (PCBs) were noted at the subject site. Surface-mounted electrical transformers were noted to be located in the vicinity of the subject site (see Photo Log 9; Description Q). These transformers, situated at the airport property, are owned and maintained by the Southern California Edison Company and appeared to be in good condition. No leaks, spills and/or stains were noted in the area of these transformers.

3.4 OFF-SITE SOURCES OF POTENTIAL HAZARDOUS MATERIALS

All the facilities described herein are located at an elevation that is either lower, equal to or higher than the subject property. These facilities are documented as being either downgradient from, on a crossgradient or upgradient to the subject property, respectively.

3.4.1 Electrical Transformers

Several surface-mounted transformers were noted in the vicinity of the subject site. The transformers are owned and maintained by the Southern California Edison Company and appeared to be in good condition. No leaks, spills and/or stains were noted in the area of the transformers.

3.4.2 Underground Storage Tanks (USTs)/Aboveground Storage Tanks (ASTs)

No facilities were noted in the database report to be located within less than a one-eighth mile radius of the subject site.

UNDERGROUND STORAGE TANKS (USTs)

Although not listed in the database report, the Mammoth Lakes Airport facility was determined to currently maintain one (1) Underground Storage Tank (UST) @ 10,000 gallon capacity utilized for the storage of jet fuel and seven (7) previously operated (now removed) USTs @ the

following capacities and product designations: One (1) UST @ 10,000 gallon capacity utilized for the storage of jet fuel and one (1) UST @ 2,000 gallon capacity utilized for the storage of unleaded gasoline situated beneath Hanger F at the airport property; two (2) USTs @ 10,000 gallons each and one (1) UST @ 6,000 gallon capacity utilized for storage of petroleum products situated to the west of the airport terminal facility (see Photo Log 7; Descriptions M and N) and three (3) USTs @ 12,000 gallon capacities and one (1) UST @ 8,000 gallon capacity utilized for the storage of petroleum products and situated to the east of the airport terminal facility (see Photo Log 8; Description O).

The removal of the nine (9) former USTs at the airport property was conducted in accordance to the direction of the Mono County Environmental Health Department, the lead agency for the remediation projects at the airport property. Site characterizations have been performed to determine the presence/nonpresence of contamination in the soil under and around the present and removed USTs. Copies of the soil investigations at the sites where the three (3) USTs at Hanger F are/were located and the three (3) USTs west of the airport terminal have been enclosed in Appendices 5.2 and 5.3 in this report. Although the subsurface investigations are still in progress at the airport UST sites, the levels of known contamination, the distance to the subject property and the depth of groundwater at the subject site area have all led to the conclusion that these present and former UST sites do no pose a risk of contamination to the subject site. Additionally, the Town of Mammoth Lakes has provided indemnification to the developer of the subject site for all present contamination at the airport property (see Appendix 5.5). The subject site would not be held liable for any costs associated with the remediation of contaminated soil/groundwater (if any) at the airport facility.

ABOVEGROUND STORAGE TANKS

One (1) Aboveground Storage Tank (AST) is situated at the south end of Hanger F at the airport property. This AST @ 5,000 gallon capacity and utilized for the storage of jet fuel is of double walled design/construction and was recently installed to take the place of the remaining one (1) UST @ 10,000 gallon capacity situated beneath the south end of Hanger F at the airport facility. Three (3) ASTs at 500 gallon each utilized for the storage of propane are located at the airport facility. No leaks, spills and/or stains were noted around these ASTs and they would pose only a minimal risk of contamination to the subject site.

3.4.3 Leaking Underground Storage Tanks (LUSTs)

No facilities in the database report were noted to be located within less than a one-eighth to a one-half mile radius of the subject site. One (1) UST presently situated at the airport facility and three (3) former USTs situated at the airport facility were noted to have contaminated the soil under and/or around the USTs. Remediation of the contaminated soil has been accomplished or is ongoing at these UST sites at the airport. In an interview conducted with Mar Schleich of the Mono County Environmental Health Department and project engineer overseeing the closure for the county, it was determined by Batchelor Environmental Services that closure on the three (3) UST sites would most likely be granted in the next several weeks. Sit characterization and remedial investigation documentation reviewed by Batchelor Environmental Services see Appendix 5.3) exhibited Total Petroleum Hydrocarbon (TPH)

ranging from Non-detect to 4,100 parts per million (ppm) in the areas of the USTs. Groundwater was not impacted and the relatively low concentrations of TPH do not pose a risk of contamination to the subject site areas.

3.4.4 National Priority List (NPL) Superfund Sites

No facilities located within the one-mile radius are listed in the National Priority List (NPL) or State Equivalent Priority List (SPL) Database.

3.4.5 United States Environmental Protection Agency (US-EPA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites and State Equivalent CERCLIS List (SCL) Sites

United States Environmental Protection Agency (US-EPA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites

No United States Environmental Protection Agency (US-EPA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites were noted to be within a one-quarter to a one-half mile radius of the subject site.

State Equivalent CERCLIS List (SCL) Sites

No facilities were noted to be located within the one-mile radius are listed in the CERCLIS List (SCL) Database.

3.4.6 Other Locations

CAL-Sites (Known and Potential Hazardous Substances Sites)

No facilities were noted to be located within a one-eighth to one-mile radius of the subject site and are listed as follows:

CHMIRS (California Hazardous Material Incident Report System

No facilities were noted to be located within a one-eighth to a one-mile radius to the subject site.

Resource Conservation and Recovery Act (RCRA) Corrective Action Requests Tracking System (CORRACTS) and Treatment, Storage, and Disposal (TSD) Sites

No facilities were noted to be located within a one-eighth to a one-mile radius to the subject site.

Resource Conservation and Recovery Act (RCRA) Registered Small*- and Large**-Quantity Generators of Hazardous Waste

No facilities were noted to be located within a one-eighth mile radius of the subject property.

* Small Quantity Generator: A generator which generates 100 kg/month but less than 1,000 kg/month of nonacutely hazardous waste.

** Large Quantity Generator: Generators which generate at least 1,000 kg/month of nonacutely hazardous waste or 1 kg/month of acutely hazardous waste.

Emergency Response Notification System (ERNS) of Spills

No facilities were noted to be located within a one-eighth mile radius of the subject site.

Sites with Deed Restrictions (DEED RSTS)

No facilities were noted to be Sites with Deed Restrictions (DEED RSTS) located within a one-half mile radius of the subject site.

Toxic Pits

No facilities were noted to be within a one-eight to one-half mile radius of the subject site.

Toxic Release Inventory Database (TRIS) Sites

No facilities were noted to be located within a one-eighth to a one-quarter mile radius of the subject site.

State Index of Properties with Hazardous Waste (CORTESE Sites)

No facilities were noted to be within less than a one-eight to a one-half mile radius of the subject site.

CA FID

No facilities were noted to be within a one-eighth mile to a one-half mile radius of the subject site.

Solid Waste Landfill Facilities (SWLF)

No facilities were noted to be located within a one-eighth to a one-half mile radius of the subject site.

HAZNET (Hazardous Waste Manifest Information from the Department of Toxic Substances Control (DTSC)

No facilities were noted to be within a one-eighth to a one-half mile radius of the subject site.

3.5 DISCUSSION OF FINDINGS

3.5.1 Site Operations

The subject property has been in vacant (undeveloped) land except for the two (2) presently operating Aboveground Storage Tanks (ASTs) situated at the western exposure of the subject site.

3.5.2 Asbestos-Containing Materials (ACMs)

Based upon the primarily vacant (undeveloped) nature of the subject site, no Asbestos Containing Materials (ACMs) were suspected to be present at the subject site. Based upon the site investigation performed by Batchelor Environmental Services on May 10, 1999, no debris or building materials were noted at the subject site and therefore no ACMs were suspected to be present.

3.5.3 Polychlorinated Biphenyls (PCBs)

Based upon the vacant (undeveloped) nature of the subject site, no fluorescent lighting fixtures ballasts, pole and/or surface-mounted electrical transformers suspected to contain Polychlorinated Biphenyls (PCBs) were noted at the subject site. Surface-mounted electrical transformers were noted to be located in the vicinity of the subject site. These transformers, situated at the airport property are owned and maintained by the Southern California Edison Company and appeared to be in good condition. No leaks, spills and/or stains were noted in the area of these transformers.

3.5.4 Hazardous Materials and Waste

Hazardous materials/chemicals in the form of petroleum products (aviation gasoline and jet fuel) are maintained and utilized at the subject site. The jet fuel is presently maintained in one (1) AST @ 10,000 gallon capacity which is situated at the western section of the subject site. The AST is owned by others and is scheduled for removal to accommodate the construction of the first phase of the executive hangers at the subject site. No leaks, spills and/or stains were noted in the area utilized for the storage of the jet fuel and this AST poses only a minimal risk of contamination to the subject site. Aviation gasoline is presently maintained in one (1) AST @ 12,000 gallon capacity which is situated to the east of the existing six (6) hangers at the airport property. This AST is of double walled design/construction and is surrounded by a secondary containment and spill prevention system. A second AST, to be utilized for the storage of jet fuel is to be placed within this same secondary containment system. The operation of the present AST @ 12,000 gallons for aviation gasoline and the projected operation of the new AST @ 12,000 gallons for jet fuel posses only a minimal risk of contamination to the subject site.

No hazardous wastes were noted to be generated or stored at the subject site.

The subject site has not been cited by a regulatory agency for any unauthorized releases of hazardous materials to the soil or groundwater.

3.5.5 Underground Storage Tanks (USTs)/Aboveground Storage Tanks (ASTs)

During the site investigation performed by Batchelor Environmental Services, no visible signs of Underground Storage Tanks (USTs) were noted at the subject site. Two (2) Aboveground Storage Tanks (ASTs) were observed at the subject site. Both of the ASTs are situated at the western end of the airport and in a location planned for the development of the new executive hangers at the subject site. One (1) AST @ 10,000 gallon capacity and utilized for the storage of jet fuel is owned by others and is scheduled for removal to accommodate the construction of the first phase of the executive hangers at the subject site. The AST @ 12,000 gallon capacity and utilized for the storage of aviation gasoline is a newly constructed double walled AST with secondary containment and a spill prevention system. This AST is situated to the east of the six (6) existing hangers at the airport property and is to be joined by an adjacent AST @ 12,000 gallon capacity and utilized for the storage of jet fuel.

3.5.6 Biomedical Waste

Based upon the vacant (undeveloped) nature of the subject site, no biomedical wastes were suspected to be present at the subject site.

3.5.7 Wood Exposure

No wood was exhibited at the subject site.

3.5.8 Regulatory/Review

A government records search was conducted by Vista Information Solutions, Inc. (Vista). The records search was performed to aid in the identification of facilities located within a one-mile radius of the subject property that were potential threats of hazardous waste. The facilities were identified for their potential impact to surface, subsurface, or air quality contamination. A representation of the lists reviewed is contained in Appendix 5.1; Vista Environmental Data Base (VISTA).

Review of database information indicated that the subject site was not noted on any of the database lists. No sites were noted which may have adversely impacted or threaten the subject site.

3.5.9 Regulatory Compliance

Based upon the site investigation performed by Batchelor Environmental Services on May 10, 1999, a review of reasonably available regulatory records and in discussions with representatives of the County of Mono Environmental Health Department and the Lone Valley Fire Department, the subject site is in present compliance to all government regulations and laws.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

- Based on the review of records off-site, a visual inspection, discussions with regulatory agencies, as well as other information contributing to this Level I Environmental Site Assessment, there does not appear to be any adverse environmental impact to the subject property due to the current activities at the subject site.

- Based upon the vacant (undeveloped) nature of the majority of the subject site, no Asbestos Containing Materials (ACMs) were suspected to be present or a concern at the subject site. The site inspection of the subject site as performed by Batchelor Environmental Services revealed no building materials or debris on the subject property suspected to contain ACM.

- The presence and/or former presence of Underground Storage Tanks (USTs) was not noted at the subject site. Two (2) Aboveground Storage Tanks (ASTs) were noted to be situated at the subject site. One (1) AST @ 10,000 gallon capacity and utilized for the storage of jet fuel is situated towards the western end of the Mammoth Lakes Airport facility and at the area of the proposed executive hangers of the Hot Creek Hanger Development. The AST is owned by others and is scheduled for removal to accommodate the construction of the first phase of the executive hangers at the subject site. No leaks, spills and/or stains were noted in the area of this AST. It is the professional judgment of Batchelor Environmental Services that this AST poses only a minimal present risk of contamination to the subject site. One (1) AST @ 12,000 gallon capacity and utilized for the storage of aviation gasoline is situated to the east of the six (6) existing hangers at the airport facility. This new AST is of double walled design/construction and is surrounded by a secondary containment and spill prevention system. A second AST @ 12,000 gallon capacity and planned for the storage of jet fuel is to be placed on the concrete pad alongside the present 12,000 gallon AST. No leaks, spills and/or stains were noted in the area of this AST. Based upon the modern safety and spill prevention systems at this tank farm, it is the professional judgment of Batchelor Environmental Services that this facility poses only a minimal future risk of contamination to the subject site.

- Research into the regulatory records maintained by the Mono County Environmental Health Department and the Lone Valley Fire Department, through discussions with the various site representatives and visual observations at the Mammoth Lakes Airport facility, Batchelor Environmental Services noted a history of Underground and Aboveground Storage Tanks (USTs/ASTs) at the adjacent Mammoth Lakes Airport facility to the subject site. One AST @ 5,000 gallon capacity and one (1) UST at 10,000 gallon capacity presently exist at the southern end of Hanger F at the airport facility. The UST is to be either removed or closed in place and the small quantity (e.g., 100-200 cubic yards) of contaminated soil removed. Additionally, three (3) ASTs @ approximately 500 gallon capacity each are utilized for the storage of propane were

noted at the airport facility. No leaks, spills and/or stains were noted in the area of the ASTs. It is the professional judgment of Batchelor Environmental Services that these present tanks pose only a minimal risk of contamination to the subject site. Seven (7) USTs were removed from the airport facility and site characterizations/remedial investigations performed (by others) on the soil under and around the former USTs. No soil contamination was noted in the former area containing the four (4) USTs situated to the east of the terminal building. Contaminated soil was noted in the area of the three (3) former USTs situated to the west of the terminal building. Contaminated soil was removed from this location and further remedial investigation is underway. According to the representative of the Mono County Environmental Health Department, site closure would be granted on the three (3) separate UST sites at the airport facility as soon as the final investigations/remediations had taken place at two (2) sites under remediation. Based upon the relative low concentrations of contaminants, location, distance, no groundwater contamination and projected closure by the lead regulatory agency, it is the professional judgment of Batchelor Environmental Services that these contaminated off-site facilities do not pose a risk of contamination to the subject site. Additionally, the Town of Mammoth Lakes which owns the contaminated sites has provided an indemnification to the developer of the subject site stating that the Hot Creek Hanger development would not be considered liable for any costs associated with the remediation of the contaminated sites at the airport facility.

- Hazardous materials in the form of aviation gasoline and jet fuel (flammable petroleum products) were noted at the subject site. The petroleum products were maintained in accordance with regulatory requirements and pose only a minimal future risk of contamination to the subject site.

- No hazardous wastes were noted to be stored or generated at the subject site.

- No fluorescent lighting fixtures, pole and/or surface-mounted electrical transformers were observed at the subject site. Therefore no Polychlorinated Biphenyls (PCBs) were suspected to be present at the subject site. Surface-mounted electrical transformers were noted to be situated in the vicinity of the subject site. These transformers are owned and maintained by the Southern California Edison Company and appeared to be in good condition. No leaks, spills and/or stains were noted in the area of these transformers.

- No businesses/facilities, except for the adjacent Mammoth Lakes Airport, were noted for the storage of hazardous materials to be located in the vicinity of the subject site. The Mammoth Lakes Airport facility was noted to maintain Aboveground Storage Tanks (ASTs) for jet fuel and propane, a UST noted for the prior storage of jet fuel and seven (7) former USTs utilized for the storage of petroleum products. The present ASTs and/or UST pose only a minimal risk of contamination to the subject site while the former UST sites do not pose a risk of contamination to the subject site. Additionally, the Town of Mammoth Lakes which owns the former UST sites has provided an indemnification to the owner of the subject site from the remedial cost of all previous contamination at the airport property.

- The subject site appeared to well maintained and in average to good condition.

- The subject site was not reported on any of the database lists for the storage of hazardous materials or for the unauthorized release of hazardous chemicals. The regulatory agencies contacted reported no files maintained on the subject site which would indicate contamination.

- Although a structural/geophysical investigation is not within the scope of this Level I Environmental Site Assessment, the subject property did not exhibit any noticeable cracks or structural defects.

4.2 RECOMMENDATIONS

Inspection of the subject site, the condition of the subject improvements, its surrounding area, and the analysis of pertinent regulatory agency documents/records has led to the recommendation that no further environmental site investigation is necessary or required at the subject site.

4.3 AGENCIES CONTACTED

The following is a list of agencies contacted for the purpose of this report:

Records from the Mono County Environmental Health Department
Records from the County of Mono, Lone Valley Fire Department, UST Department
Records from the Town of Mammoth Lakes, Building Department
One (1) aerial photograph taken in 1987 (only one available, copy of print included as Appendix 5.6) available from the EDR Aerial Photograph Collection
Records from the Lahontan and Victorville offices of the California Regional Water Quality Control Board
Records from the Great Basin Air Quality Management District (GBAQMD)

4.4 LIMITATIONS

This is a Level I Environmental Site Assessment which is based on established methods to assess environmental concerns. The assessment is limited to only nonintrusive, surface investigation and does not address site-specific subsurface conditions, except for such information as is available from property or public records.

The intent of a Level I Environmental Site Assessment is to use all reasonably available records, information, and visual means to discover if further investigations are required. While not all-inclusive, this assessment was conducted using reasonably available information from various sources customarily researched for a Level I Environmental Site Assessment.

The assessment is limited to the extent and reliability of those records, interviews, and visual inspections of the site and the surrounding adjacent area.

4.5 STATEMENT OF LIMITING CONDITIONS

Certification: Batchelor Environmental Services, Inc. certifies to the Client as named in this report and Batchelor Environmental Services, Inc. and the Client agree that:

1. Batchelor Environmental Services, Inc. has no present or contemplated future (a) partnership with the Client nor (b) an interest in the property inspected which could adversely affect Batchelor Environmental Services ability to perform an objective inspection; and neither the employment of Batchelor Environmental Services to conduct the inspection, nor the compensation for it, is contingent on the results of the inspection.

2. Batchelor Environmental Services, Inc. has no personal interest in or bias with respect to the subject matter of this report or any parties who may be part of a transaction involving the subject property.

3. Batchelor Environmental Services representative has personally inspected the property, both inside and out, and has made visual inspection of adjacent properties to the extent possible by readily available access. The inspection does not include the removal of any soil, water, structural material or air samples, the moving of furniture or fixtures, or any type of inspection that would exceed the Scope of Work as stated in this Level I Environmental Site Assessment report.

4. All contingent and limiting conditions are contained herein (imposed by the terms of this assignment or by the undersigned affecting the conclusions and recommendations contained in this report).

5. Batchelor Environmental Services, Inc. cannot and does not warrant and/or guarantee the authenticity, accuracy, and/or timeliness of any and all records researched in connection with this Level I Environmental Site Assessment.

6. This Level I Environmental Site Assessment report has been prepared in conformity with the standards set by the American Society for Testing and Materials (ASTM) and lenders' criteria (if applicable).

7. All opinions, conclusions, and recommendations concerning the inspected property that are set forth in this report were prepared by Batchelor Environmental Services, Inc., whose representative's signature appears on the report. No change of any item in this report shall be made by anyone other than the Inspector. Further, the Inspector and/or Batchelor Environmental Services, Inc. shall have no responsibility for any such unauthorized change.

Contingent and Limiting Conditions: The certification of the Environmental Inspector appearing in this report is subject to the following conditions and to such other specific and limiting conditions as are set forth in this report.

1. Batchelor Environmental Services, Inc. assumes no responsibility or liability for matters of a legal nature affecting the property inspected or the title thereto. The subject property was inspected assuming correct and responsible ownership.

2. Any sketch appearing in or attached to the inspection report, or any statement of dimensions, capacities, quantities, or distances, are approximate and are included to assist the reader in visualizing the subject property. Batchelor Environmental Services, Inc. has made no survey of the property.

3. Batchelor Environmental Services, Inc. or its Inspector is not required to give testimony or appear in court because of having made the inspection with reference to the subject property, unless arrangements have been previously made therefor.

4. This report is not intended to have any direct effect on the value of the subject property inspected but simply to provide a Level I Environmental Site Assessment solely for the benefit of the Client.

5. Batchelor Environmental Services, Inc. assumes that there are no hidden, unapparent or latent conditions, or defects in or of the subject property, subsoil, or structures, other than those noted in this or any addendum to the report which may be included. Batchelor Environmental Services, Inc. assumes no responsibility for such conditions, or for the inspection, engineering, or repair which might be required to discover or correct such factors.

6. Information, estimates and opinions furnished to Batchelor Environmental Services, Inc. and contained in this report were obtained from reasonably available sources considered reliable and believed to be true and correct. However, Batchelor Environmental Services, Inc. has made no independent investigation as to such matters and undertakes no responsibility or liability for the accuracy of such items.

7. The Inspection was conducted and this report was prepared solely for the benefit and use of the Client. No disclosure may be made of the report without the prior written consent of Batchelor Environmental Services, Inc. Batchelor Environmental Services, Inc. undertakes no responsibility for harm or damages to any party other than the Client.

8. Neither this Report, any part thereof, nor any copy of the same (including conclusions or recommendations, the identity of the Inspector, professional designation, reference to any professional organization, or Batchelor Environmental Services, Inc.) shall be used for any purposes by anyone but the Client. This report shall not be conveyed by anyone to the public through advertising, public relations, news, sales, or other media, without the prior written consent and approval of Batchelor Environmental Services, Inc.

APPENDICES 5.0

APPENDIX 5.1

VISTA INFORMATION SOLUTIONS, INC. (VISTA)

SITE ASSESSMENT PLUS REPORT

PROPERTY INFORMATION	CLIENT INFORMATION
Project Name/Ref #: 990153000 Hot Creek Hangar Development Highway 395 & Convict Lake Road Mammoth Lake, CA 93546 Latitude/Longitude: (37.637540, 118.888046)	Renee Kaplan, V.P. Santa Monica Bank 1324 Fifth Street Santa Monica, CA 90406

Site Distribution Summary Agency / Database - Type of Records			within 1/8 mile	1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
A) Databases searched to 1 mile:						
US EPA	NPL	National Priority List	0	0	0	0
US EPA	CORRACTS	RCRA Corrective Actions	0	0	0	0
STATE	SPL	State equivalent priority list	0	0	0	0
B) Databases searched to 1/2 mile:						
STATE	SCL	State equivalent CERCLIS list	0	0	0	-
US EPA	CERCLIS / NFRAP	Sites currently or formerly under review by US EPA	0	0	0	-
US EPA	TSD	RCRA permitted treatment, storage, disposal facilities	0	0	0	-
STATE REG CO	LUST	Leaking Underground Storage Tanks	0	0	0	-
STATE/ REG/CO	SWLF	Permitted as solid waste landfills, incinerators, or transfer stations	0	0	0	-
STATE	DEED RSTR	Sites with deed restrictions	0	0	0	-
STATE	CORTESE	State index of properties with hazardous waste	0	0	0	-
STATE	TOXIC PITS	Toxic Pits cleanup facilities	0	0	0	-
USGS/STATE	WATER WELLS	Federal and State Drinking Water Sources	1	2	1	-
C) Databases searched to 1/4 mile:						
US EPA	RCRA Viol	RCRA violations/enforcement actions	0	0	-	-
US EPA	TRIS	Toxic Release Inventory database	0	0	-	-
STATE	UST/AST	Registered underground or aboveground storage tanks	0	0	-	-

Site Distribution Summary

Agency	Database	Type of Records	within 1/8 mile	1/8 to 1/4 mile	1/4 to 1/2 mile	1/2 to 1 mile
D) Databases searched to 1/8 mile:						
US EPA	ERNS	Emergency Response Notification System of spills	0	-	-	-
US EPA	GNRTR	RCRA registered small or large generators of hazardous waste	0	-	-	-

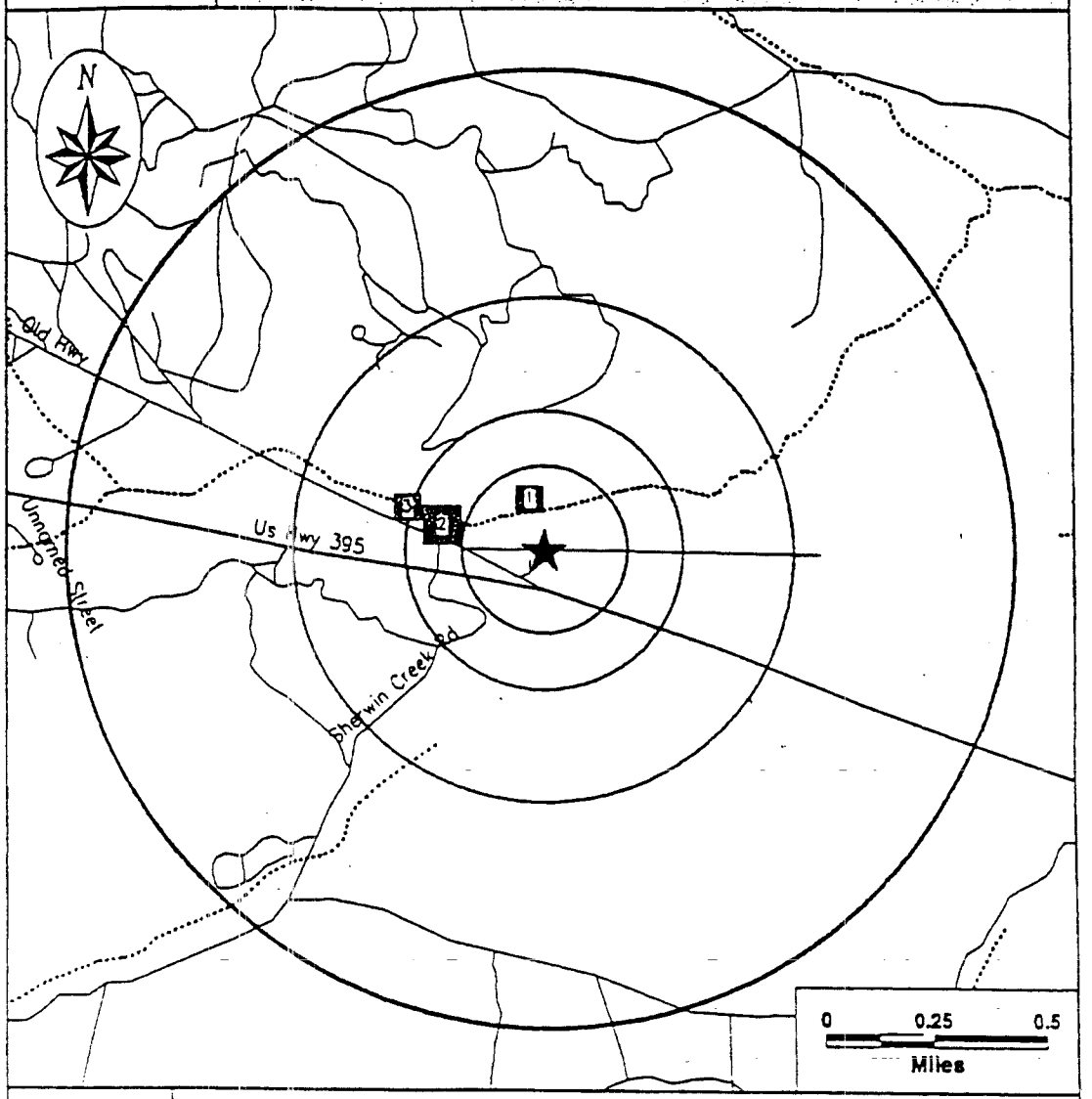
This report meets the ASTM standard E-1527 for standard federal and state government database research in a Phase I environmental site assessment. A (-) indicates a distance not searched because it exceeds these ASTM search parameters.

LIMITATION OF LIABILITY:
Customer proceeds at its own risk in choosing to rely on VISTA services, in whole or in part, prior to proceeding with any transaction. VISTA cannot be an insurer of the accuracy of the information; errors occurring in conversion of data, or for customer's use of data. VISTA and its affiliated companies, officers, agents, employees and independent contractors cannot be held liable for accuracy, storage, delivery, loss or expense suffered by customer resulting directly or indirectly from any information provided by VISTA.

NOTES

SITE ASSESSMENT PLUS REPORT

Map of Sites within One Mile



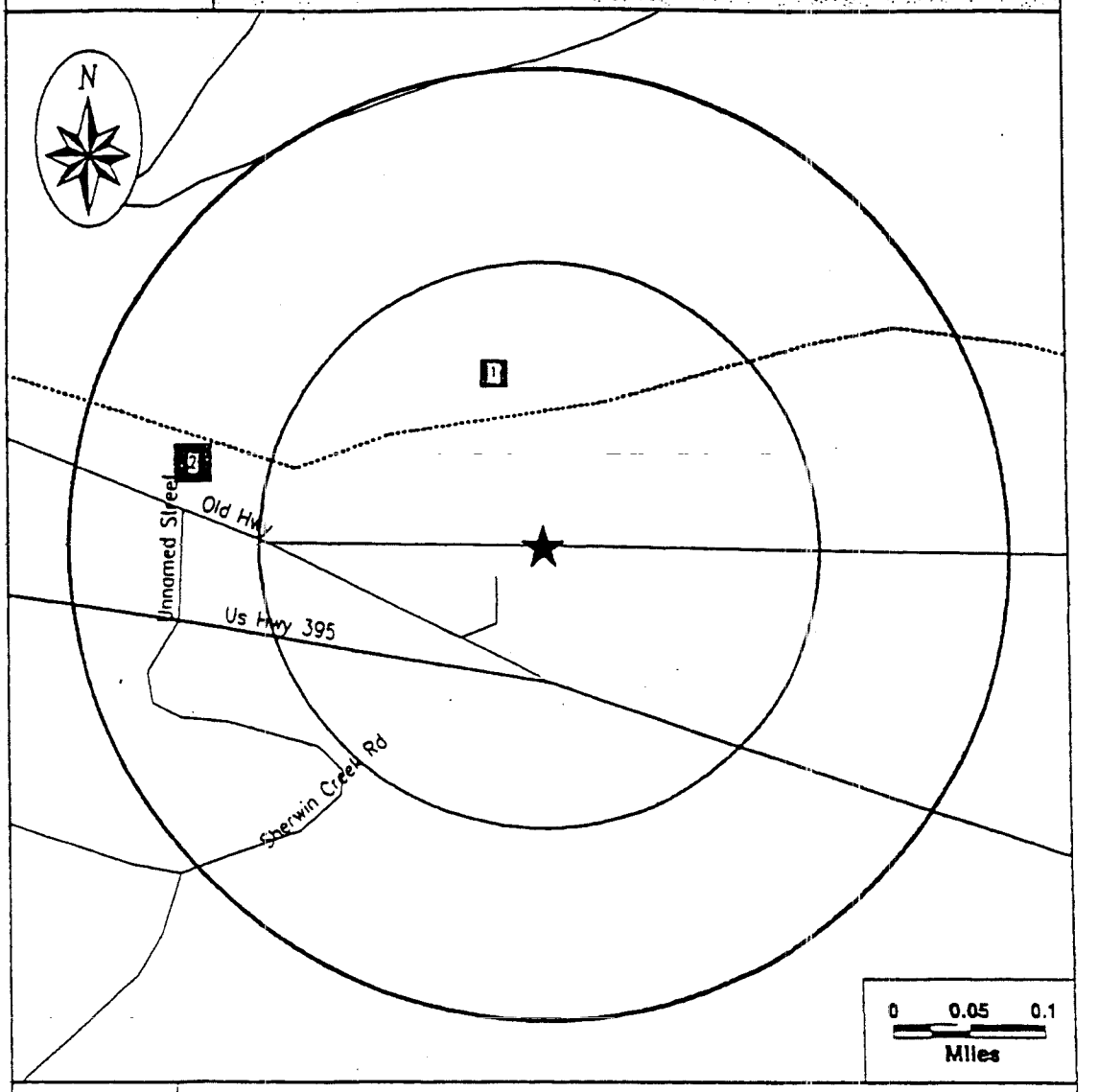
Subject Site	Category:	A	B	C	D
★	Databases Searched to:	1 mi.	1/2 mi.	1/4 mi.	1/8 mi.
	Single Sites	◆	■	△	○
	Multiple Sites	◆	■	△	○
		NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	RCRA VIOL, TRIS, UST	ERNS, GENERATORS

Highways and Major Roads
Roads
Railroads
Rivers or Water Bodies
Utilities

If additional database... e listed in the cover page of the report they are also displayed on this map. The mac... mbol used corresponds to the database category letter A,B,C,D.

SITE ASSESSMENT PLUS REPORT

Map of Sites within Quarter Mile



Subject Site	Category: / Databases Searched to:	A 1 mi.	B 1/2 mi.	C 1/4 mi.	D 1/8 mi.
★	Single Sites	◆	■	△	○
	Multiple Sites	◆	■	△	○
		NPL, SPL, CORRACTS (TSD)	CERCLIS\ NFRAP, TSD, LUST, SWLF, SCL	RCRA VIOL, TRIS, UST	ERNS, GENERATORS

Highways and Major Roads
Roads
Railroads
Rivers or Water Bodies
Utilities

If additional databases are listed in the cover page of the report they are also displayed on this map. The map symbol used corresponds to the database category letter A,B,C,D.

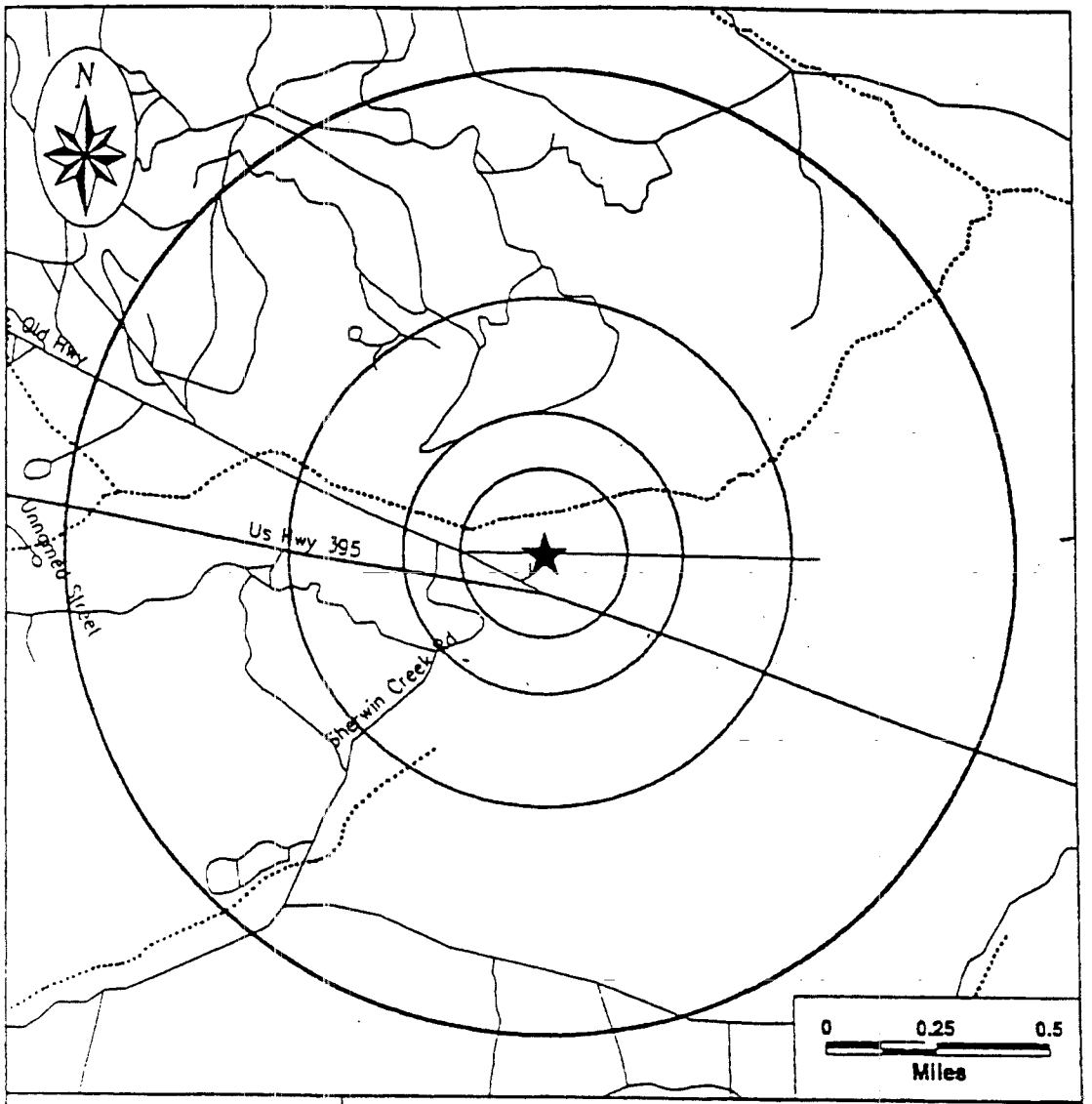
For More Information Call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403

Report ID: 990153000

Date of Report: May 3, 1999

SITE ASSESSMENT PLUS REPORT

Street Map



SITE ASSESSMENT PLUS REPORT

SITE INVENTORY

MAP ID	PROPERTY AND THE ADJACENT AREA (within 1/8 mile)	VISTA ID / DISTANCE / DIRECTION	A: NPL	A: CORRACTS	A: SPL	B: SCL	B: CERCLIS/NFRAP	B: TSD	B: LUST	B: SWL	B: DEED/RSTR	B: CORTESE	B: TOXIC PITS	B: WATER WELLS	C: RCRA VIOL	C: TRIS	C: UST/AST	D: ERNS	D: GNRTR
1	USGS WATER WELL ID #373821118531904, CA	4886678 / 0.06 MI / N												X					

MAP ID	SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)	VISTA ID / DISTANCE / DIRECTION	A: NPL	A: CORRACTS	A: SPL	B: SCL	B: CERCLIS/NFRAP	B: TSD	B: LUST	B: SWL	B: DEED/RSTR	B: CORTESE	B: TOXIC PITS	B: WATER WELLS	C: RCRA VIOL	C: TRIS	C: UST/AST	D: ERNS	D: GNRTR
2	USGS WATER WELL ID #373818118533204, CA	4886663 / 0.17 MI / W												X					
2	USGS WATER WELL ID #373818118533204, CA	4886664 / 0.17 MI / W												X					

MAP ID	SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)	VISTA ID / DISTANCE / DIRECTION	A: NPL	A: CORRACTS	A: SPL	B: SCL	B: CERCLIS/NFRAP	B: TSD	B: LUST	B: SWL	B: DEED/RSTR	B: CORTESE	B: TOXIC PITS	B: WATER WELLS	C: RCRA VIOL	C: TRIS	C: UST/AST	D: ERNS	D: GNRTR
3	USGS WATER WELL ID #373820118533704, CA	4886673 / 0.26 MI / W												X					

MAP ID	SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)	VISTA ID / DISTANCE / DIRECTION	A: NPL	A: CORRACTS	A: SPL	B: SCL	B: CERCLIS/NFRAP	B: TSD	B: LUST	B: SWL	B: DEED/RSTR	B: CORTESE	B: TOXIC PITS	B: WATER WELLS	C: RCRA VIOL	C: TRIS	C: UST/AST	D: ERNS	D: GNRTR

No Records Found

UNMAPPED SITES

	VISTA ID	A			B											C			D	
		NPL	CORRACTS	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED/DISTR	CORTESE	TOXIC PITS	WATERWELLS	RCRA(VIOL)	TRIS	UST/AST	ERNS	GNRTR
MAMMOTH HOT SPRINGS FISH BOX 208 MAMMOTH LAKES, CA 93546	2747470							X			X							
BLUE SKIES TEXACO HWY 395 2ND ST. BOX 326 MAMMOTH LAKES, CA 93546	3190913															X		
CROWLEY LAKE STAR ROUTE #1, BOX 200 MAMMOTH LAKES, CA 93546	1260143															X		
WHITMORE HOT SPRINGS STAR ROUTE #1, BOX 200 MAMMOTH LAKES, CA 93546	1260141															X		
B B MOTOR PARTS JUNIPER DRIVE MAMMOTH LAKES, CA 93546	1259982															X		
LONG VALLEY RESERVOIR UNKNOWN MAMMOTH LAKES, CA 93546	1258796															X		
LONG VALLEY FIRE DEPT CROWLEY LAKE DR. AT HILTON CRE MAMMOTH LAKES, CA 93546	1248603															X		
HOT CREEK HATCHERY STAR RT. 1, BOX 208 MAMMOTH LAKES, CA 93546	1247932															X		
GREGORY P. STARK MCGEE CREEK AND CROWLEY LAKE D MAMMOTH LAKES, CA 93546	1218898															X		
MAMMOTH COUNTY WATER DISTRICT P.O. BOX 597 MAMMOTH LAKES, CA 93546	1198090															X		
MAMMOTH MTN SKI AREA/YODD P.O. BOX 24 MAMMOTH LAKES, CA 93546	5706362							X			X							
LOT #68, SPANNER SUBDIVISION DELTA DR. MAMMOTH LAKES, CA 93546	3995902															X		
CHEVRON #8-1861 PO BOX 27 MAMMOTH LAKES, CA 93546	5594144							X										
SIERRA CONCRETE PUMPING BOX BOX BOX X MAMMOTH LAKES, CA 93546	4021191															X		
ROCK CREEK LODGE RR 1 BOX RR 1 BOX MAMMOTH LAKES, CA 93546	4021190															X		
JUNE MOUNTAIN SKI AREA HWY 158 HWY 158 B MAMMOTH LAKES, CA 93546	4040234															X		

UNMAPPED SITES	VISTA ID	A						B								C			D	
		NPL	CORRACTS	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED/ST	CORTESE	TOXICS	WATERWELLS	RCRAVIOL	TRIS	UST/AST	ERNS	GNRTR
GORDON STRACHAN ASPEN SPGS RNCH 6 GS RNCH 6 MAMMOTH LAKES, CA 93546	4019014															X		
CROWLEY LAKE GENERAL STORE RR 1 BOX 1111 SO LND 11 SO LND MAMMOTH LAKES, CA 93546	4031983															X		
CHAMONIX CONDOMINIUMS P.O. BOX P.O. BOX MAMMOTH LAKES, CA 93546	4037468															X		
SCE MAMMOTH LAKES SVC CENTER 453001 CHATEAU RD RD MAMMOTH LAKES, CA 93546	4497504							X								X		

SITE ASSESSMENT PLUS REPORT

DETAILS

PROPERTY AND THE ADJACENT AREA (within 1/8 mile)

VISTA Address*	USGS WATER WELL ID #373821118531901	VISTA ID#	8886678	Map ID 1
	CA	Distance/Direction:	0.06 Mi N	
		Plotted as:	Point	
		EPA/Agency ID:	N/A	

USGS Wells - Federal Drinking Water Sources / SRC# 5384	
Agency Address:	SAME AS ABOVE
Well ID:	373821118531901
Latitude:	37.6391666666666
Longitude:	-118.8886111111
Quadrangle Name:	OLD MAMMOTH
Surface Elevation:	7200.
County FIPS:	6051
Comments:	SITE TYPE: SPRING

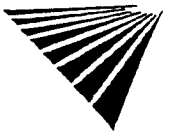
SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile)

VISTA Address*	USGS WATER WELL ID #373818118533201	VISTA ID#	8886663	Map ID 2
	CA	Distance/Direction:	0.17 Mi W	
		Plotted as:	Point	
		EPA/Agency ID:	N/A	

USGS Wells - Federal Drinking Water Sources / SRC# 5384	
Agency Address:	SAME AS ABOVE
Well ID:	373818118533201
Use:	UNUSED
Depth:	75.00
Latitude:	37.6383333333333
Longitude:	-118.8922222222
Quadrangle Name:	OLD MAMMOTH
Surface Elevation:	7180.
Date Well Drilled:	01/01/1961
County FIPS:	6051

VISTA Address*	USGS WATER WELL ID #373818118533202	VISTA ID#	8886664	Map ID 2
	CA	Distance/Direction:	0.17 Mi W	
		Plotted as:	Point	
		EPA/Agency ID:	N/A	

USGS Wells - Federal Drinking Water Sources / SRC# 5384	
Agency Address:	SAME AS ABOVE
Well ID:	373818118533202
Use:	PUBLIC SUPPLY



* VISTA address includes enhanced city and ZIP.
For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

SITES IN THE SURROUNDING AREA (within 1/8 - 1/4 mile) CONT.

Depth:	100.0
Latitude:	37.638333333333
Longitude:	-118.8922222222
Quadrangle Name:	OLD MAMMOTH
Surface Elevation:	7175.
Static Water Level:	7.00
Date Well Drilled:	10/17/1978
County FIPS:	6051

SITES IN THE SURROUNDING AREA (within 1/4 - 1/2 mile)

VISTA* Address: [redacted] CA	USGS WATER WELL ID #373820118533701	VISTA ID#:	8886673	Map ID: 3
		Distance/Direction:	0.26 MI/ W	
		Plotted as:	Point	
USGS Wells - Federal Drinking Water Sources / SRC# 5384		EPA/Agency ID:	N/A	

Agency Address:	SAME AS ABOVE
Well ID:	373820118533701
Latitude:	37.638888888888
Longitude:	-118.8936111111
Quadrangle Name:	OLD MAMMOTH
Section Township Range:	S32 T 3 S R 28 E
Surface Elevation:	7177.
County FIPS:	6051
Comments:	SITE TYPE: SPRING

SITES IN THE SURROUNDING AREA (within 1/2 - 1 mile)

No Records Found

UNMAPPED SITES

VISTA Address:	MAMMOTH HOT SPRINGS FISH BOX 208 MAMMOTH LAKES, CA 93546	VISTA ID#:	2747470

STATE LUST - State Leaking Underground Storage Tank / SRC# 5374	EPA/Agency ID:	N/A

Agency Address:	MAMMOTH HOT SPRINGS FISH HATCH BOX 208 MAMMOTH LAKES, CA 93546
Facility ID:	6826003297
Leak ID#:	329.00000
Leak Report Date:	09/17/91
Who Reported:	MONO COUNTY DHS
Pollution Characterization Date:	09/17/91
Remediation Plan Date:	09/23/96
Remediation Start Date:	04/15/97
Leak Detection Method:	TANK CLOSURE
Leak Cause:	UNKNOWN
Leak Source:	UNKNOWN
Substance:	GASOLINE
Remediation Event:	EXCAVATE AND TREAT
Remediation Event:	HOW STOPPED:CLOSE TANKENFORCEMENT:CONSENT ORDER
Remediation Status:	FURTHER SITE ASSESSMENT UNDERWAY
Media Affected:	AQUIFER (MUNICIPAL USE)
Region / District:	LAHONTAN
Responsible Party:	DEPT OF FISH AND GAME
Funding:	RESPONSIBL
Description / Comment:	PROP65MAIL: NO , EMERGENCY: NO , CONTACT NAME: LEO GILMAN , RESPONSIBLE PARTY PHONE:
Description / Comment:	RESPONSIBLE PARTY ADDRESS: PO BOX 944209 SACAMENTO CA 95814 , FACILITY PHONE: (916)654-8638 , COUNTY: MONO
Description / Comment:	RPSEARCH: SOLVENT , PRIORITY: CURRENT DRINKING WATER SOURCE IMPACTED THROUGH FUTURE MITIGATION

STATE LUST - State Leaking Underground Storage Tank / SRC# 5497	EPA/Agency ID:	N/A

Agency Address:	MAMMOTH HOT SPRINGS FISH HATCH BOX 208 MAMMOTH LAKES, CA 93546
Facility ID:	6826003297
Leak Report Date:	09/17/91
Pollution Characterization Date:	09/17/91
Remediation Plan Date:	09/23/96
Remediation Start Date:	04/15/97
Substance:	GASOLINE
Remediation Event:	EXCAVATE AND TREAT
Remediation Status:	FURTHER SITE ASSESSMENT UNDERWAY
Media Affected:	AQUIFER (MUNICIPAL USE)
Region / District:	LAHONTAN REGION
Description / Comment:	COUNTY: MONO
Description / Comment:	REVIEW DATE:02/17/98

VISTA Address*	MAMMOTH MTN SKI AREA/YODD P O BOX 24 MAMMOTH LAKES, CA 93546	VISTA ID#	5706362

STATE LUST - State Leaking Underground Storage Tank / SRC# 5374	EPA/Agency ID:	N/A

Agency Address:	MAMMOTH MTN SKI AREA/YODDLER PO BOX 24 MAMMOTH LAKES, CA 93546
Facility ID:	6B26006447
Leak ID#:	644.00000
Leak Date:	05/13/94
Leak Report Date:	05/18/94
Who Reported:	LOUIS MOLINA
Remediation Start Date:	05/13/94
Post Remediation Monitoring Began:	10/25/96
Leak Detection Method:	TANK CLOSURE
Leak Cause:	UNKNOWN
Leak Source:	UNKNOWN
Substance:	DIESEL
Remediation Event:	EXCAVATE AND DISPOSE
Remediation Event:	STOP DATE:05/13/94HOW STOPPED:CLOSE TANKENFORCEMENT:NONE TAKEN
Remediation Status:	POST REMEDIAL ACTION UNDERWAY
Media Affected:	AQUIFER (MUNICIPAL USE)
Region / District:	LAHONTAN
Responsible Party:	MAMMOTH LAKES SKI AREA
Funding:	RESPONSIBL
Description / Comment:	PROP65MAIL: NO . EMERGENCY: NO . CONTACT NAME: BENNO NAGER .RESPONSIBLE PARTY PHONE: (619)934-2571
Description / Comment:	RESPONSIBLE PARTY ADDRESS: PO BOX 24 MAMMOTH LAKES CA 93546 . FACILITY PHONE: (619)934-2571 . COUNTY: MONO
Description / Comment:	RPSEARCH: SOLVENT . PRIORITY: CURRENT DRINKING WATER SOURCE IMPACTED THROUGH FUTURE MITIGATION

STATE LUST - State Leaking Underground Storage Tank / SRC# 5497	EPA/Agency ID:	N/A

Agency Address:	MAMMOTH MTN SKI AREA/YODDLER PO BOX 24 MAMMOTH LAKES, CA 93546
Facility ID:	6B26006447
Leak Report Date:	05/18/94
Remediation Start Date:	05/13/94
Post Remediation Monitoring Began:	10/25/96
Substance:	DIESEL
Remediation Event:	EXCAVATE AND DISPOSE
Remediation Status:	POST REMEDIAL ACTION UNDERWAY
Media Affected:	AQUIFER (MUNICIPAL USE)
Region / District:	LAHONTAN REGION
Description / Comment:	COUNTY: MONO
Description / Comment:	REVIEW DATE 10/01/97

VISTA Address*	CHEVRON #8-1861 PO BOX 27 MAMMOTH LAKES, CA 93546	VISTA ID#	5594144

STATE LUST - State Leaking Underground Storage Tank / SRC# 5374		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility ID:	6B26004041		
Leak ID#:	404.00000		
Leak Date:	08/11/95		
Leak Report Date:	08/11/95		
Who Reported:	JEAN CHAVIRA FLORES		
Leak Detection Method:	OTHER MEANS		
Leak Cause:	UNKNOWN		
Leak Source:	UNKNOWN		
Substance:	GASOLINE		
Remediation Event:	HOW STOPPED:REMOVE CONTENTS		
Remediation Status:	PRELIMINARY SITE ASSESSMENT UNDERWAY		
Media Affected:	UNDEFINED		
Region / District:	LAHONTAN		
Responsible Party:	CHEVRON USA PRODUCTS COMPANY		
Description / Comment:	PROP65MAIL: NO . EMERGENCY: NO . CONTACT NAME: JEAN CHAVIRA FLORES . RESPONSIBLE PARTY PHONE: (619)934-8111		
Description / Comment:	RESPONSIBLE PARTY ADDRESS: PO BOX 2233 LA HABRA CA 90632 . FACILITY PHONE: (310)694-7452 . COUNTY: MONO		
Description / Comment:	*CROSS STREET: HWY 203 . RPSEARCH: SOLVENT . PRIORITY: CURRENTDRINKING WATER SOURCE IMPACTED THROUGH FUTURE MITIGATION.		

STATE LUST - State Leaking Underground Storage Tank / SRC# 5497		EPA/Agency ID:	N/A
Agency Address:	SAME AS ABOVE		
Facility ID:	6B26004041		
Leak Report Date:	08/11/95		
Substance:	GASOLINE		
Remediation Status:	PRELIMINARY SITE ASSESSMENT UNDERWAY		
Media Affected:	UNDEFINED		
Region / District:	LAHONTAN REGION		
Description / Comment:	COUNTY: MONO		
Description / Comment:	CROSS STREET: HWY 203		
Description / Comment:	REVIEW DATE:09/08/95		

VISTA Address*	SCE MAMMOTH LAKES SVC CENTER 453001 CHATEAU RD RD MAMMOTH LAKES, CA 93546	VISTA ID#	4497504

STATE LUST - State Leaking Underground Storage Tank / SRC# 5374	EPA/Agency ID:	N/A

Agency Address:	SCE MAMMOTH SERVICE CENTER 453001 CHATEAU RD MAMMOTH LAKES, CA 93546
Facility ID:	6826000281
Leak ID#:	28.00000
Leak Date:	10/12/94
Leak Report Date:	10/12/94
Who Reported:	LOIS MOLINA
Site Assessment Began:	09/01/95
Contamination Confirmed Date:	10/12/94
Post Remediation Monitoring Began:	02/01/96
Case Closed Date:	09/24/97
Leak Detection Method:	TANK CLOSURE
Leak Cause:	UNKNOWN
Leak Source:	UNKNOWN
Substance:	GASOLINE
Remediation Event:	EXCAVATE AND DISPOSE
Remediation Event:	STOP DATE:10/13/94HOW STOPPED:CLOSE TANKENFORCEMENT:NONE TAKEN
Remediation Status:	CASE CLOSED
Media Affected:	AQUIFER (MUNICIPAL USE)
Region / District:	LAHONTAN
Responsible Party:	SOUTHERN CALIFORNIA EDISON
Funding:	RESPONSIBL
Description / Comment:	PROP65MAR. NO . EMERGENCY: NO . CONTACT NAME: HENRY DENNIS .RESPONSIBLE PARTY PHONE:
Description / Comment:	RESPONSIBLE PARTY ADDRESS: PO BOX 800 2244 WALNUT GROVE AVE ROSEMEAD CA 91770 . FACILITY PHONE: (818)302-1321 . COUNTY: MONO
Description / Comment:	RPSEARCH: SOLVENT . PRIORITY: CURRENT DRINKING WATER SOURCE IMPACTED THROUGH FUTURE MITIGATION

STATE LUST - State Leaking Underground Storage Tank / SRC# 5497	EPA/Agency ID:	N/A

Agency Address:	SCE MAMMOTH SERVICE CENTER 453001 CHATEAU RD MAMMOTH LAKES, CA 93546
Facility ID:	6826000281
Leak Report Date:	10/12/94
Site Assessment Began:	09/01/95
Contamination Confirmed Date:	10/12/94
Post Remediation Monitoring Began:	02/01/96
Case Closed Date:	09/24/97
Substance:	GASOLINE
Remediation Event:	EXCAVATE AND DISPOSE
Remediation Status:	CASE CLOSED
Media Affected:	AQUIFER (MUNICIPAL USE)

UNMAPPED SITES CONT.

Region / District:	LAHONTAN REGION
Description / Comment:	COUNTY: MONO
Description / Comment:	REVIEW DATE:02/17/98

SITE ASSESSMENT PLUS REPORT

DESCRIPTION OF DATABASES SEARCHED

A) DATABASES SEARCHED TO 1 MILE

NPL
SRC#: 5593

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for NPL was February, 1999.

The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the US Dept of Health and Human Services and the US EPA in order to become an NPL site.

SPL
SRC#: 5455

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for Calsites Database: Annual Workplan Sites was October, 1998.

The CalSites database contains information on properties (or "sites") in California where hazardous substances have been released, or where the potential for such a release exists. This database is used primarily by the Department of Toxic Substances Control to evaluate and track activities at sites that may have been affected by the release of hazardous substances. Also see SPL/SCL: Annual Work Plan (AWP) sites are cleassified as SPL and all the other sites are classified as SCL.

CORRACTS
SRC#: 5596

VISTA conducts a database search to identify all sites within 1 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA maintains this database of RCRA facilities which are undergoing "corrective action". A "corrective action order" is issued pursuant to RCRA Section 3008 (h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA.

B) DATABASES SEARCHED TO 1/2 MILE

CERCLIS
SRC#: 5594

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for CERCLIS was January, 1999.

The CERCLIS List contains sites which are either proposed to or on the National Priorities List(NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of all pre-remedial, remedial, removal and community relations activities or events at the site, financial funding information for the events, and unrestricted enforcement activities.

Cal Cerclis
SRC#: 2462

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Ca Cerclis w/Regional Utility Description was June, 1995.

This database is provided by the U.S. Environmental Protection Agency, Region 9. The agency may be contacted at: . These are regional utility descriptions for California CERCLIS sites.

NFRAP
SRC#: 5595

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for CERCLIS-NFRAP was January, 1999.

NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

SCL
SRC#: 5454

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Calsites Database: All Sites except Annual Workplan Sites (incl. ASPIS) was October, 1998.

The CalSites database contains information on properties (or "sites") in California where hazardous substances have been released, or where the potential for such a release exists. This database is used primarily by the Department of Toxic Substances Control to evaluate and track activities at sites that may have been affected by the release of hazardous substances. Also see SPL/SCL: Annual Work Plan (AWP) sites are cleassified as SPL and all the other sites are classified as SCL.

The CalSites database includes both known and potential sites. Two- thirds of these sites have been classified, based on available information, as needing "No Further Action" (NFA) by the Department of Toxic Substances Control. The remaining sites are in various stages of review and remediation to determine if a problem exists at the site. Several hundred sites have been remediated and are considered certified. Some of these sites may be in long term operation and maintenance.

RCRA-TSD
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for HWDMS/RCRIS was February, 1999.

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA TSDs are facilities which treat, store and/or dispose of hazardous waste.

SWLF
SRC#: 5689

VISTA conducts a database search to identify all sites within 1/2 mile of your property.
The agency release date for Ca Solid Waste Information System (SWIS) was December, 1998.

This database is provided by the Integrated Waste Management Board. The agency may be contacted at: 916-255-402[illegible].

The California Solid Waste Information System (SWIS) database consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations pursuant to the Solid Waste Management and Resource Recovery Act of 1972, Government Code Section 2.66790(b). Generally, the California Integrated Waste Management Board learns of locations of disposal facilities through permit applications and from local enforcement agencies.

WMUDS
SRC#: 5368

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Waste Management Unit Database System (WMUDS) was October, 1998.**

This database is provided by the State Water Resources Control Board. The agency may be contacted at: 916-892-0323. This is used for program tracking and inventory of waste management units. This system contains information from: Facility, Waste Management Unit, SWAT Program and Report Summary Information, Chapter 15 (formerly Subchapter 15), TPCA and RCRA Program Information, Closure Information; also some information from the WDS (Waste Discharge System).

The WMUDS system also accesses information from the following databases from the Waste Discharger System (WDS): Inspections, Violations, and Enforcements. The sites contained in these databases are subject to the California Code of Regulations - Title 23. Waters.

LUST
SRC#: 5374

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Region #6-Leaking Underground Storage Tank Listing was October, 1998.**

This database is provided by the Regional Water Quality Control Board, Region #6. The agency may be contacted at: 760-241-7365.

LUST
SRC#: 5497

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Lust Information System (LUSTIS) was October, 1998.**

This database is provided by the California Environmental Protection Agency. The agency may be contacted at: 916-445-6532.

LUST
SRC#: 5670

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Lahontan Region LUST List was January, 1999.**

This database is provided by the Lahontan Region Six South Lake Tahoe. The agency may be contacted at: 916-542-5400.

CORTESE
SRC#: 4840

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Cortese List-Hazardous Waste Substance Site List was April, 1998.**

This database is provided by the Office of Environmental Protection, Office of Hazardous Materials. The agency may be contacted at: 916-445-6532.

The California Governor's Office of Planning and Research annually publishes a listing of potential and confirmed hazardous waste sites throughout the State of California under Government Code Section 65962.5. This database (CORTESE) is based on input from the following: (1)CALSITES-Department of Toxic Substances Control, Abandoned Sites Program Information Systems; (2)SARA Title III Section III Toxic Chemicals Release Inventory for 1987, 1988, 1989, and 1990; (3)FINDS; (4)HWIS-Department of Toxic Substances Control, Hazardous Waste Information System. Vista has not included one time generator facilities from Cortese in our database.; (5)SWRCB-State Water Resources Control Board; (6)SWIS-Integrated Waste Management Control Board (solid waste facilities); (7)AGT25-Air Resources Board, dischargers of greater than 25 tons of criteria pollutants to the air; (8)A1025-Air Resources Board, dischargers of greater than 10 and less than 25 tons of criteria pollutants to the air; (9)LTANK-SWRCB Leaking Underground Storage Tanks; (10)UTANK-SWRCB Underground tanks reported to the SWEEPS systems; (11)IUR-Inventory Update Rule (Chemical Manufacturers); (12)WB-LF- Waste Board - Leaking Facility, site has known migration; (13)WDSE-Waste Discharge System - Enforcement Action; (14)DTSCD-Department of Toxic Substance Control Docket.

Deed
Restrictions
SRC#: 1703

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Deed Restriction Properties Report was April, 1994.**

This database is provided by the Department of Health Services-Land Use and Air Assessment. The agency may be contacted at: 916-323-3376. These are voluntary deed restriction agreements with owners of property who propose building residences, schools, hospitals, or day care centers on property that is "on or within 2,000 feet of a significant disposal of hazardous waste".

California has a statutory and administrative procedure under which the California Department of Health Services (DHS) may designate real property as either a "Hazardous Waste Property" or a "Border Zone Property" pursuant to California Health Safety Code Sections 25220-25241. Hazardous Waste Property is land at which hazardous waste has been deposited, creating a significant existing or potential hazard to public health and safety. A Border Zone Property is one within 2,000 feet of a hazardous waste deposit. Property within either category is restricted in use, unless a written variance is obtained from DHS. A Hazardous Waste Property designation results in a prohibition of new uses, other than a modification or expansion of an industrial or manufacturing facility on land previously owned by the facility prior to January 1, 1981. A Border Zone Property designation results in prohibition of a variety of uses involving human habitation, hospitals, schools and day care center.

Toxic Pits
SRC#: 2229

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for Summary of Toxic Pits Cleanup Facilities was February, 1995.**

This database is provided by the Water Quality Control Board, Division of Loans Grants. The agency may be contacted at: 916-227-4396.

Water Wells
SRC#: 5384

VISTA conducts a database search to identify all sites within 1/2 mile of your property. **The agency release date for USGS WATER WELLS was March, 1998.**

The Ground Water Site Inventory (GWSI) database was provided by the United States Geological Survey (USGS). The database contains information for over 1,000,000 wells and other sources of groundwater which the USGS has studied, used, or otherwise had reason to document through the course of research. The agency may be contacted at 703-648-6819.

C) DATABASES SEARCHED TO 1/4 MILE

RCRA-Viols/Enf

VISTA conducts a database search to identify all sites within 1/4 mile of your property. **The agency release date for HWDMS/RCRIS was February, 1999.**

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Violators are facilities which have been cited for RCRA Violations at least once since 1980. RCRA Enforcements are enforcement actions taken against RCRA violators.

USTs
SRC#: 1612

VISTA conducts a database search to identify all sites within 1/4 mile of your property. **The agency release date for Underground Storage Tank Registrations Database was January, 1994.**

This database is provided by the State Water Resources Control Board, Office of Underground Storage Tanks. The agency may be contacted at: 916-227-4337; Caution-Many states do not require registration of heating oil tanks, especially those used for residential purposes.

USTs
SRC#: 5508

VISTA conducts a database search to identify all sites within 1/4 mile of your property. **The agency release date for Mono County's Listing of General Environmental Health Programs by Facility Name was December, 1998.**

This database is provided by the County of Mono. The agency may be contacted at: 760-932-7485; Caution-Many states do not require registration of heating oil tanks, especially those used for residential purposes.

ASTs
SRC#: 5513

VISTA conducts a database search to identify all sites within 1/4 mile of your property. **The agency release date for Aboveground Storage Tank Database was December, 1998.**

This database is provided by the State Water Resources Control Board. The agency may be contacted at: 916-227-4364.

TRIS
SRC#: 4946

VISTA conducts a database search to identify all sites within 1/4 mile of your property. **The agency release date for TRIS was January, 1998.**

Section 313 of the Emergency Planning and Community Right-to-Know Act (also known as SARA Title III) of 1986 requires the EPA to establish an inventory of Toxic Chemicals emissions from certain facilities(Toxic Release Inventory System). Facilities subject to this reporting are required to complete a Toxic Chemical Release Form(Form R) for specified chemicals.

D) DATABASES SEARCHED TO 1/8 MILE

ERNS
SRC#: 4939

VISTA conducts a database search to identify all sites within 1/8 mile of your property. **The agency release date for was July, 1998.**

The Emergency Response Notification System (ERNS) is a national database containing records from October 1986 to the release date above and is used to collect information for reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, the US Coast Guard, the National Response Center and the Department of Transportation. The ERNS hotline number is (202) 260-2342.

RCRA-LgGen
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/8 mile of your property. **The agency release date for HWDMS/RCRIS was February, 1999.**

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Large Generators are facilities which generate at least 1000 kg./month of non-acutely hazardous waste (or 1 kg./month of acutely hazardous waste).

RCRA-SmGen
SRC#: 5596

VISTA conducts a database search to identify all sites within 1/8 mile of your property. **The agency release date for HWDMS/RCRIS was February, 1999.**

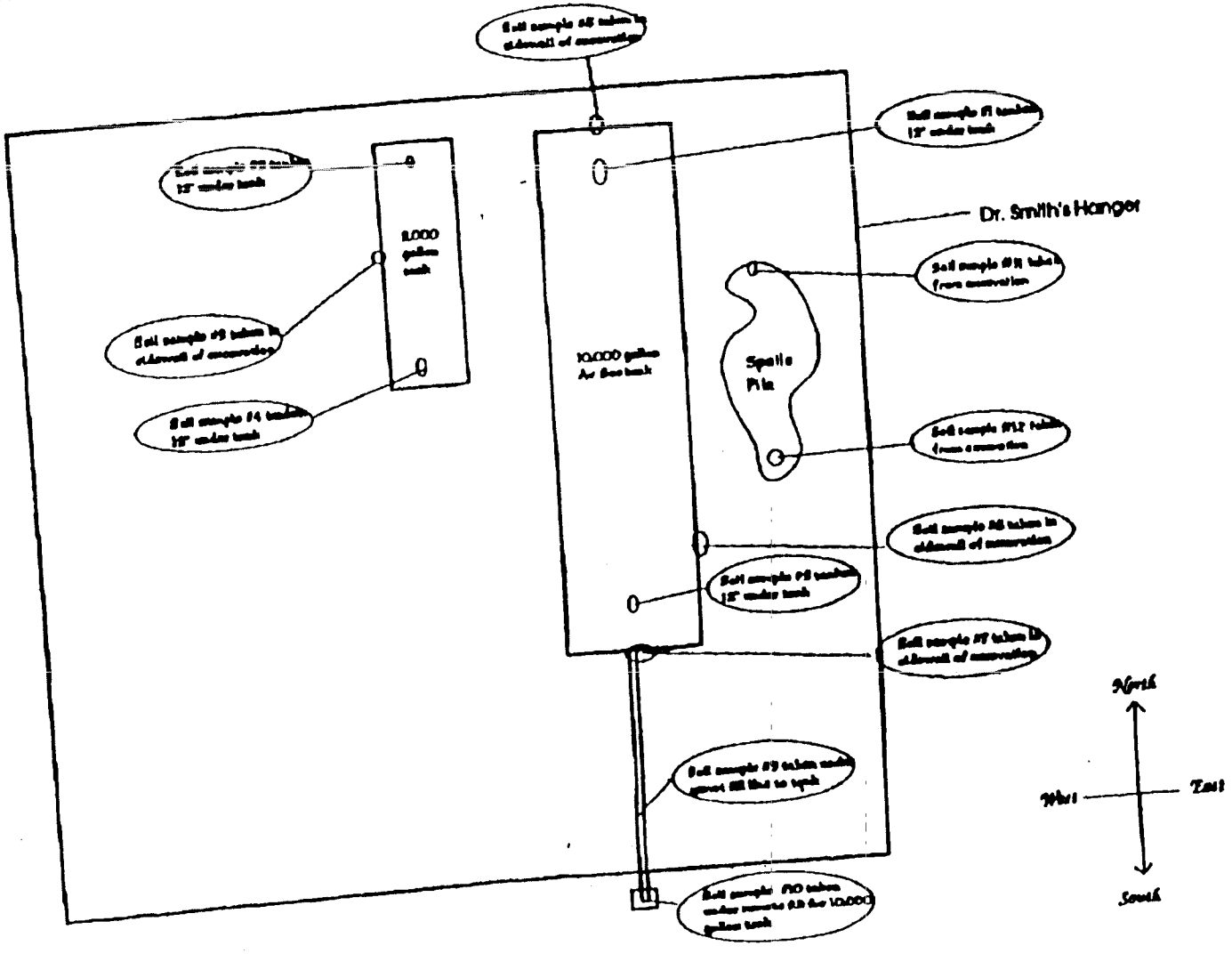
The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities which report generation, storage, transportation, treatment or disposal of hazardous waste. RCRA Small and Very Small generators are facilities which generate less than 1000 kg./month of non-acutely hazardous waste.

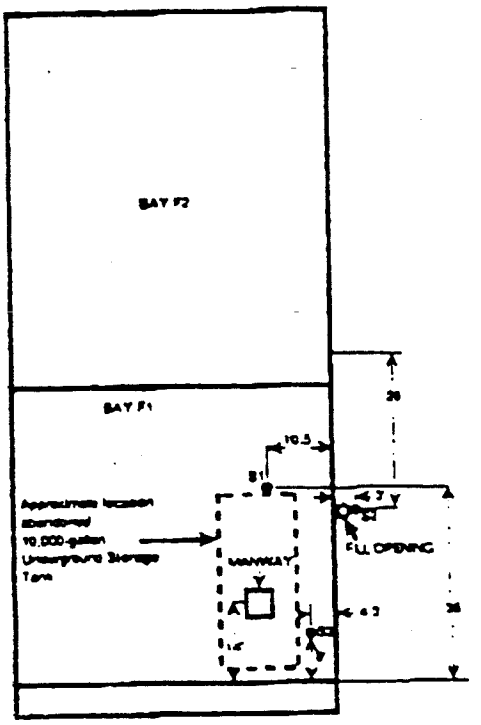
End of Report

APPENDIX 5.2

MONO COUNTY HEALTH DEPARTMENT, ENVIRONMENTAL HEALTH
DIVISION RECORDS ON REMEDIATION PROJECTS
AT THE MAMMOTH LAKES AIRPORT

Herbst Station Repair took soil samples for Dr. Smith located at Mammouth Airport Mammouth, CA on April 20, 1999. All soil samples were tested for MTBE.





RUNWAY CENTERLINE APPROXIMATELY 400 SOUTH OF BAY F 1

0 15 30

1" = 30 feet

SITE MAP

FIGURE 2

Mammoth Airport
Hanger F Bay 1
Mammoth, California
Job No. 1846-98

NORTH

Associated Soils Analysis
1141 Saturn Court • Tulare California 93274
(209) 688-1011 • FAX (209) 688-1195

SUMMIT
LABORATORY

ANALYTICAL RESULTS

CLIENT	: ASSOCIATED SOILS ANALYSIS, INC.	LAB ID NUMBER	: 05985-01
CLIENT CONTACT:	Ken Rank	DATE SAMPLED	: 11/10/98
PROJECT #	: 646	TIME SAMPLED	: 11:20
PROJECT NAME	: MAMMOTH AIRPORT, HANGER F-1	DATE RECEIVED	: 11/12/98
		DATE ANALYZED	: 11/17/98
		DILUTION FACTOR	: 1.
SAMPLE ID	: S-1 NORTH	SAMPLE TYPE	: SOIL

COMPOUNDS	RESULTS mg/Kg	DLR mg/Kg
MTBE	ND	0.02
BENZENE	ND	0.02
TOLUENE	ND	0.02
ETHYLBENZENE	ND	0.02
TOTAL XYLENES	0.03	0.02
TPH GAS	23.0	1.0
TPH DIESEL	3600	1.0

ND = Not Detected
DLR= DETECTION LIMIT FOR REPORTING
State Certificate #1245A
METHOD OF ANALYSIS: BTXE TPH G/D (GCFID)
mg/Kg = Milligrams/Kilogram (ppm)

LAB SUPERVISOR

167 West Poplar Avenue, Porterville, CA 93257-5393
Phone (209) 781-9126 FAX (209) 782-5309

GREAT BASIN
LABORATORIES, INC.

Report to: Herbst Station Repair	Sampled: 4/[illegible]/99
Name:	Submitted: 4/[illegible]/99
Address: 8 Mission Road	Source: MAMMOTH AIRPORT
City: Yerington, Nevada 89447	No. Of Samples: 12
Telephone: 463-2751 F: 463-2308	Sampled By: [X] Client [ ] GBL
Reference No:	GBL Control No. 0419-104
	Project: 8015 MOD TPH

COMP ID	DATE	ANALYSIS	RESULT mg/kg	LARGE
SAMPLE 1	4/20/99	TPH	ND	
SAMPLE 2	4/20/99	TPH	ND	
SAMPLE 3	4/20/99	TPH	121	DIESEL
SAMPLE 4	4/20/99	TPH	201	DIESEL
SAMPLE 5	4/20/99	TPH	170	DIESEL
SAMPLE 6	4/20/99	TPH	ND	
SAMPLE 7	4/20/99	TPH	332	DIESEL
SAMPLE 8	4/20/99	TPH	ND	
SAMPLE 9	4/20/99	TPH	ND	
SAMPLE 10	4/20/99	TPH	212	DIESEL
SAMPLE 11	4/20/99	TPH	41	DIESEL
SAMPLE 12	4/20/99	TPH	114	DIESEL

Remarks: ND = NONE DETECTED TPH Detection Limit = 2.0 mg/kg

Report By: John F. Bakkedahl Date: 4/[illegible]/99

FROM : HERBST STATION REPAIR PHONE NO. : 702 463 2759 Apr. 29 1999 11:58AM P3

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To Martin S	From Kathy Hans
Co. Environmental Health	Co. Constellation Spec.
Dept.	Phone # 647-6346
Fax # Smith Hansen	Fax # 6616

GREAT BASIN LABORATORIES, INC.

Report to: Herbst Station Repair
Name:
Address: 8 Mono Road
City: Yerington, Nevada 89447
Telephone: 463-2787 F: 463-2300
Reference No:

Sample Submitted: 4/20/99 4/21/99
Source: MAMMOTH AIRPORT
No. Of Samples: 12
Sampled By: [X] Client [ ] GBL
GBL Control No. 9499-104
Notes: BTXE/MTBE - 8260/5030

SAMPLE ID:	Benzene	Toluene	Xylenes	Ethylbenzene	MTBE
	ug/Kg				
SAMPLE 1	ND	ND	ND	ND	ND
SAMPLE 2	ND	ND	ND	ND	ND
SAMPLE 3	ND	ND	ND	ND	ND
SAMPLE 4	ND	ND	ND	ND	ND
SAMPLE 5	ND	ND	993.9	330.8	ND
SAMPLE 6	ND	ND	ND	ND	ND
SAMPLE 7	ND	ND	ND	ND	ND
SAMPLE 8	ND	ND	ND	ND	ND
SAMPLE 9	ND	ND	ND	ND	ND
SAMPLE 10	ND	ND	ND	ND	ND
SAMPLE 11	ND	ND	ND	ND	ND
SAMPLE 12	ND	ND	ND	ND	ND

Remarks: ND = None Detected BTXE/MTBE Detection Limit = 0.5 ug/Kg

Report By: John [illegible] Date: 4/28/99

APPENDIX 5.3

REMEDIAL ACTION REPORT ON THE POST UST-REMOVAL SOIL EXCAVATION AND SOIL SAMPLING PERFORMED BY TEAM ENGINEERING AND MANAGEMENT, INC. DATED JANUARY 5, 1999

TEAM
ENGINEERING & MANAGEMENT, INC.
P. O. Box 1265, Bishop, California 93515-1265
(760) 872-1033 Fax (760) 872-2131

Mr. Martin Schleich
Mono County Environmental Health Department
P.O. Box 3329
Mammoth Lakes, CA 93546

January 5, 1999

RE: POST UST-REMOVAL SOIL EXCAVATION AND SOIL SAMPLING AT THE MAMMOTH LAKES AIRPORT, MONO COUNTY, CALIFORNIA

Dear Martin:

TEAM Engineering & Management, Inc. (TEAM) is pleased to provide the following report on behalf of the Town of Mammoth Lakes to describe environmental services employed during further soil excavation at the location of three former underground storage tanks (USTs) at the Mammoth Lakes Airport.

Environmental activities included over-excavation of soil to depths of 18 to 20 feet below ground surface (bgs) in the vicinity of two former gasoline and one former diesel USTs, where excavation to 14 feet bgs was previously performed to the north of the Mammoth Lakes Airport Terminal Building (Figure 1). Analytical results from soil samples collected during UST removal indicated that further soil over excavation was required. TEAM submitted a Work Plan to Mono County documenting methods for removal and associated soil sampling during excavation along with environmental activities to be conducted when the remaining aviation fuel USTs, product piping and dispensers located approximately 150 feet east of the previously mentioned former USTs are to be removed.

TEAM coordinated and performed the field environmental activities, compiled analytical data and prepared this report documenting the over excavation activities. Excavation and associated soil sampling activities was coordinated with and overseen by the Mono County Environmental Health Department. Construction Specialty of Lee Vining, California conducted the excavation activities.

BACKGROUND

During October 1998, three USTs, associated piping and dispensers were removed from a fueling facility to the north of the Mammoth Lakes Airport Terminal Building. Soil in the vicinity of the tanks and dispensers was excavated to a depth of 14 feet bgs. Soil samples were collected during excavation. The analytical results (Table 1) of which, indicated the need for further over excavation. Groundwater was not encountered during UST removal.

FIELD ACTIVITIES

Petroleum hydrocarbon-impacted soils as indicated by photoionizaton detector (PID) readings made in the field (equal to or greater than 100 parts per million (ppm) above background) were excavated

Soil Sample	Location	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	TPHg (mg/kg)
Sample 1	SE Gas UST	ND	7.38	0.79	13.96	1.69	110
Sample 2	SE Dispenser	7.1	140.06	32.67	250.05	59.31	1040
Sample 3	Diesel UST	6.25	123.47	57.77	190.76	56.03	970
Sample 4	Middle Dispenser	ND	ND	0.209	0.071	0.348	45
Sample 5	NW Gas UST	ND	12	0.086	0.034	ND	ND
Sample 6	NW Dispenser	ND	10	0.065	0.043	0.018	ND

Table 1. Analytical results of soil samples collected from UST excavation during UST removal.

to depths of 18 to 20 feet bgs. At the final total depth of the excavation, soil samples were collected for both headspace and fixed-laboratory analyses.

Samples for fixed-laboratory analyses were sent to BC Laboratories of Bakersfield, CA, a state-certified environmental testing laboratory. These soil samples were analyzed for: benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl-tert butyl ether (MtBE) according to EPA Method 8020, total petroleum hydrocarbons as gasoline (TPHg) according to a modified EPA Method 8015 and total petroleum hydrocarbons as diesel (TPHd) according to a modified EPA Method 8015. The work plan had recommended that MtBE in soil samples, if identified by EPA Method 8020, would be confirmed by EPA Method 8260. However, due to holding time constraints, the confirmation analysis could not be completed.

During over excavation, soils were stockpiled on plastic sheeting next to the excavation pending disposition. Background organic vapor levels were monitored with a PID during excavation activities and recorded. PID headspace field measurements were made by collecting a soil sample immediately following the removal of overburden soil at a location and placing the sample in a sealed ziplock bag. The soil in the bag was unaggregated by hand while sealed in the bag and allowed to sit for at least three minutes. The bag was then punctured and the PID sensor was placed through a puncture hole to measure the headspace above the soil.

Soil samples for fixed-laboratory analyses were collected by advancing two-inch diameter brass sample liners into soil removed from the excavation by the excavator bucket. Soil samples for chemical analyses were retained in the brass liners, capped with Teflon sheets and plastic end caps, labeled, placed in sealable plastic bags, and placed in a chilled cooler. The samples were delivered to BC Laboratories under appropriate chain-of-custody protocols. One trip blank was sent with the cooler, and analyzed for BTEX and MtBE.

SOIL SAMPLING RESULTS

Table 2 summarizes the soil analytical results. Figure 2 (on the following page) shows the sample locations and areal distribution of residual petroleum hydrocarbon concentrations based on the soil samples collected during over excavation. Soils at the site generally consist of well-graded sand and gravel, with silt and cobbles.

Sample No.	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	MtBE (mg/kg)	TPHg (mg/kg)	TPHd (mg/kg)
E-11-20	*ND(1)*	*60*	*38*	*410*	*6.5*	*4100*	*3800(2)*
E-12-20	*ND*	*49*	*48*	*420*	*7.6*	*3100*	*2000(2)*
E-13-20	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
E-14-18	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
E-15-18	*ND*	*ND*	*ND*	*ND*	*0.88*	*17(2)*	*92(2)*
E-16-18	*0.57*	*33*	*8.1*	*180*	*2.4*	*1400*	*870(2)*
E-17-18	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*

(1) ND indicates analyte not detected.
(2) Indicates TPHg or TPHd concentration not typical of diesel or gasoline, respectively.

Table 2. Soil Analytical Results from soil samples collected during over excavation.

Benzene was identified at a concentration of 0.57 milligrams per kilogram (mg/kg) in one soil sample (E-16-18) collected at a depth of approximately 18 feet bgs from the southeast corner of the excavation. Benzene was not detected in the remaining soil samples.

Toluene was identified at concentrations ranging from 33 mg/kg to 60 mg/kg in three soil samples (E-11-20, E-12-20, and E-16-18) collected from the southeast corner of the excavation. Toluene was not identified in the remaining soil samples.

Ethylbenzene was identified at concentrations ranging from 8.1 to 48 mg/kg in three soil samples (E-11-20, E-12-20, and E-16-18) collected from the southeast corner of the excavation. Ethylbenzene was not identified in the remaining soil samples.

Xylenes were identified at concentrations ranging from 180 to 420 mg/kg in three soil samples (E-11-20, E-12-20, and E-16-18) collected from the southeast corner of the excavation. Xylenes were not identified in the remaining soil samples.

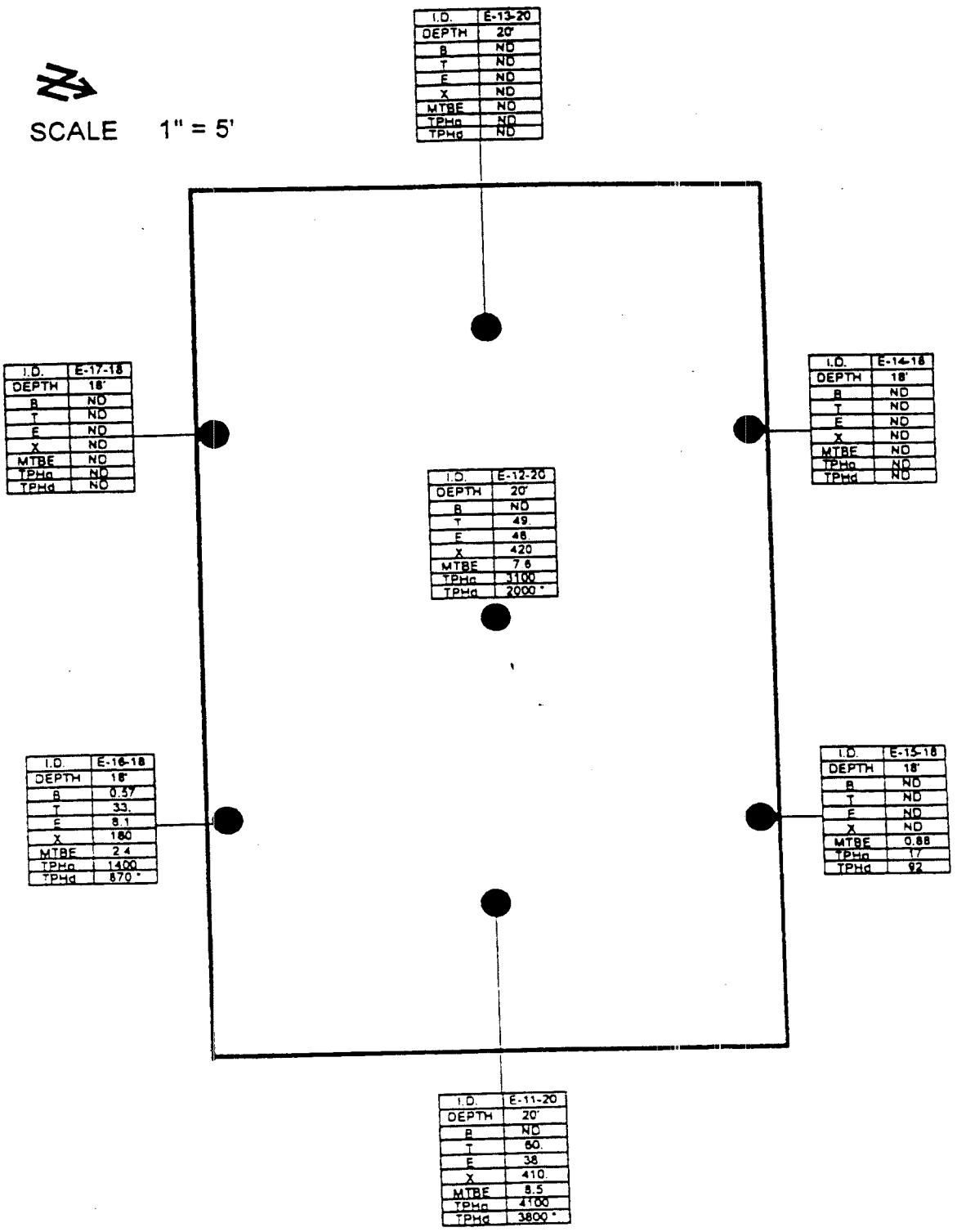


Figure 2. Soil sample locations and areal distribution of petroleum hydrocarbon concentrations (mg/kg) in soil samples collected during over excavation.

MtBE was identified at concentrations ranging from 0.88 mg/kg to 7.6 mg/kg in four soil samples (E-11-20, E-12-20, E-15-18 and E-16-18) collected from the eastern portion of the excavation. MtBE was not identified in the remaining soil samples. The presence of MtBE in E-15-18 combined with non-detectable concentrations of BTEX illustrates the mobility of this compound.

TPHg was identified at concentrations ranging from 17 mg/kg to 4,100 mg/kg in four soil samples (E-11-20, E-12-20, E-15-18 and E-16-18) collected from the eastern portion of the excavation. TPHg was not identified in the remaining soil samples. TPHd was identified in these same samples. However, as shown on the laboratory analytical reports (Attachment A), the TPHd was not typical of diesel and is more likely the result of the carryover of the "heavy-end" of the TPHg signature on the chromatograms.

CONCLUSIONS

The following conclusions are based on the findings of this and previous investigation at the site:

- Soils beneath the site typically consist of well-graded sand and gravel with silt and cobbles. Based on water level data in a well near the site, the anticipated depth to water is approximately 50 feet bgs.

- Confirmations soil samples collected from the furthest limits of the excavation indicate that residual BTEX (benzene in only one soil sample); MTBE and TPHg are present in the eastern portion of the former excavation location.

- Groundwater was not encountered in the excavations (total depth approximately 20 feet)

RECOMMENDATIONS

Based on the results of this investigation, TEAM recommends the following activities be conducted at the site:

- Completion of six soil borings (and three optional borings, if needed) with a hollow-stem auger rig to evaluate the lateral and vertical extent of petroleum hydrocarbon-impacted soils at the site. A map showing the proposed locations of these borings is provided in Attachment B. These soil borings will be completed to refusal, or to groundwater, whichever is shallower.

- Soil samples will be collected at ten-foot intervals from each boring. If groundwater is encountered, a water sample will also be collected from each boring. The samples will be analyzed by a mobile laboratory on site for BTEX according to EPA Method 8020, MTBE according to EPA Method 8260; and TPHg according to a modified EPA Method 8015.

- It is recommended that these additional investigation activities be conducted after removal of the remaining USTs at the Airport. Should impacted soils be identified at the

remaining USTs, the field activities at both locations could be combined resulting in a more cost-effective approach.

A detailed description of proposed sampling techniques, etc., is provided in Attachment B.

Should you have any questions or comments concerning this report, please call us at your earliest convenience.

Sincerely,

Andy Zdon

Andy Zdon
Geologist

REGISTERED GEOLOGIST
ANDREW ZDON
No. 1974
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

cc: Bill Manning, Town of Mammoth Lakes
Larry Gagnier, Hot Creek Aviation

c:\myfiles\vmla r02

ATTACHMENT B

PROPOSED SAMPLING PROCEDURES

A.0 PROPOSED SAMPLING ACTIVITIES

Soil characterization and potentially groundwater sampling activities will be initiated after review of this report by Mono County. TEAM will evaluate the extent of petroleum hydrocarbon-impacted soil and/or groundwater by:

1. Advancing soil borings and collecting soil samples to the depth of groundwater, or to refusal, whichever is shallower.
2. If groundwater is encountered in the borings, groundwater samples will be collected.
3. Analyzing samples on the site with a mobile laboratory.

It is anticipated that the proposed field investigation will require approximately two field days to complete. All field activities will be conducted under TEAM's site-specific Health and Safety Plan.

A.1 SOIL BORINGS AND HYDROPUNCH GROUNDWATER SAMPLES

Six soil borings will be completed at the subject site at the locations shown on Figure A.1. Three optional soil borings may be completed based on the analytical results of the soil samples. The soil borings will be drilled to the depth of the top of the water table (anticipated being approximately 50 feet) or to refusal, whichever is shallower, using a hollow-stem auger rig. Soil samples will be collected at ten-foot intervals from each boring.

Soil samples will be collected using a modified California split-barrel sampler. To collect soil samples using the split-barrel sampler, the sampler will be fitted with three brass liners, and will be driven 18 inches or to refusal by repeatedly dropping a 140-pound hammer 30 inches. The number of blows required to drive the hammer each six inches will be recorded. Refusal will be defined as requiring 50 blows with the hammer to advance the sampler 6 inches or less.

Soil samples will be collected for soil description, measurement of VOC vapor concentration and chemical analysis as appropriate. The soil from the middle and top liners will be placed in a resealable plastic bag and left for approximately 15 minutes to allow volatile organic compounds in the soil to volatilize. The soil vapor will then be measured by inserting an organic vapor analyzer (OVA) or equivalent into the plastic bag. Results of the organic vapor monitoring will be recorded on boring logs.

The soil from the bottom liner will be analyzed by a California-state certified mobile laboratory on site for BTEX and MtBE according to a modified EPA Method 8020; TPHg according to a modified EPA Method 8015 and TPHd according to a modified EPA Method 8015. The bottom liner will be covered at both ends with Teflon (or equivalent) sheets and capped. Labels will be affixed to the liners with the following information: project name, sample number, date, time, sampler's signature, analyses requested, and sample depth. Delivery of the soil samples will be to the mobile laboratory on site for analysis.

A California Registered Geologist experienced in environmental drilling and sampling will perform oversight of the drilling and sampling program. Boring logs will be prepared according to TEAM's standard format for environmental boring logs. At a minimum, boring logs will contain geologic

descriptions of soil strata, depth to groundwater, sample identification numbers, blow counts, and soil headspace readings. During drilling activities, soil cuttings will be placed in 55-gallon drums for later disposal pending soil analytical results.

Decontamination for large soil sampling equipment (drill rig and augers) will be accomplished by steam cleaning using a mobile steam cleaner. Only properly decontaminated equipment approved by TEAM's onsite personnel will be used for drilling and sampling. Decontamination of non-disposable sampling equipment will consist of wiping the equipment of excess soil, performing two washes with non-phosphate detergent, and two rinses with clean water. The equipment will be cleaned before use, between use and before leaving the site.

If groundwater is encountered in a boring, a groundwater sample will be collected using a hydropunch method for the same analyses as described for the soil samples.

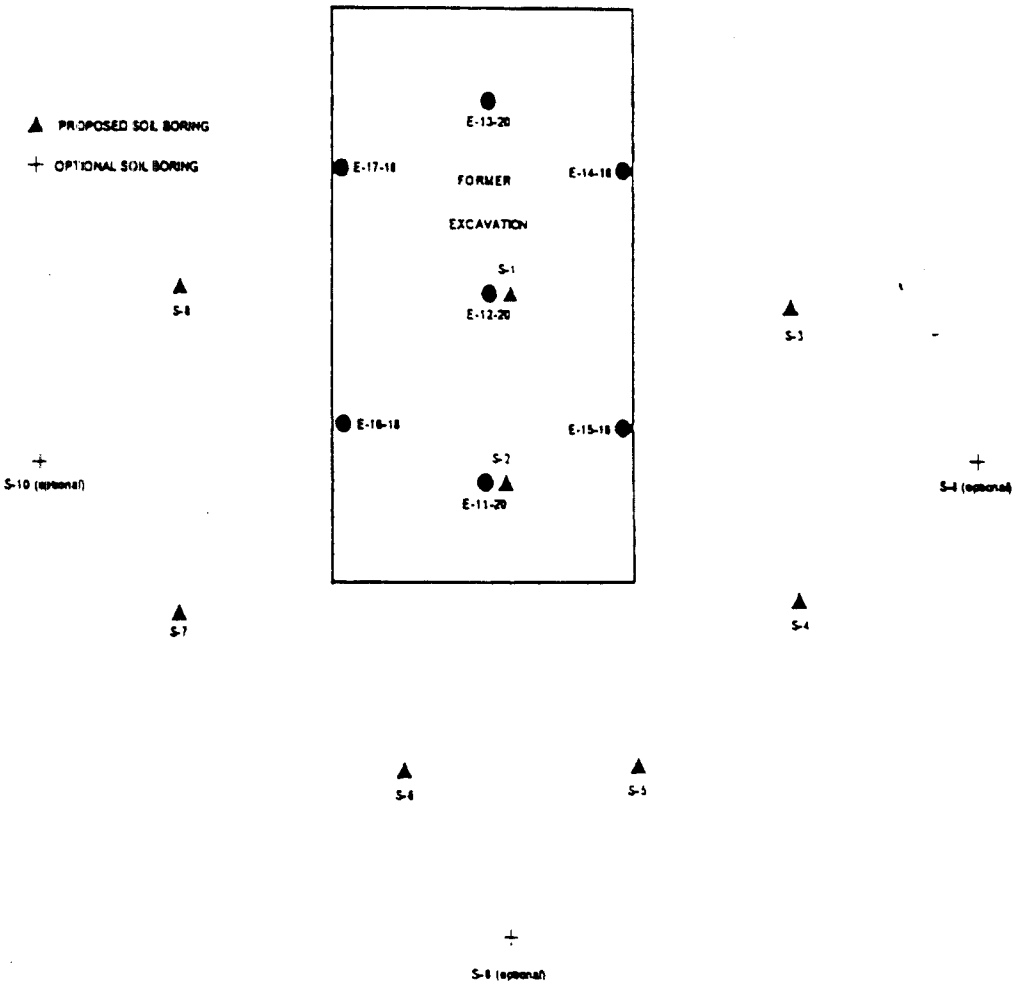


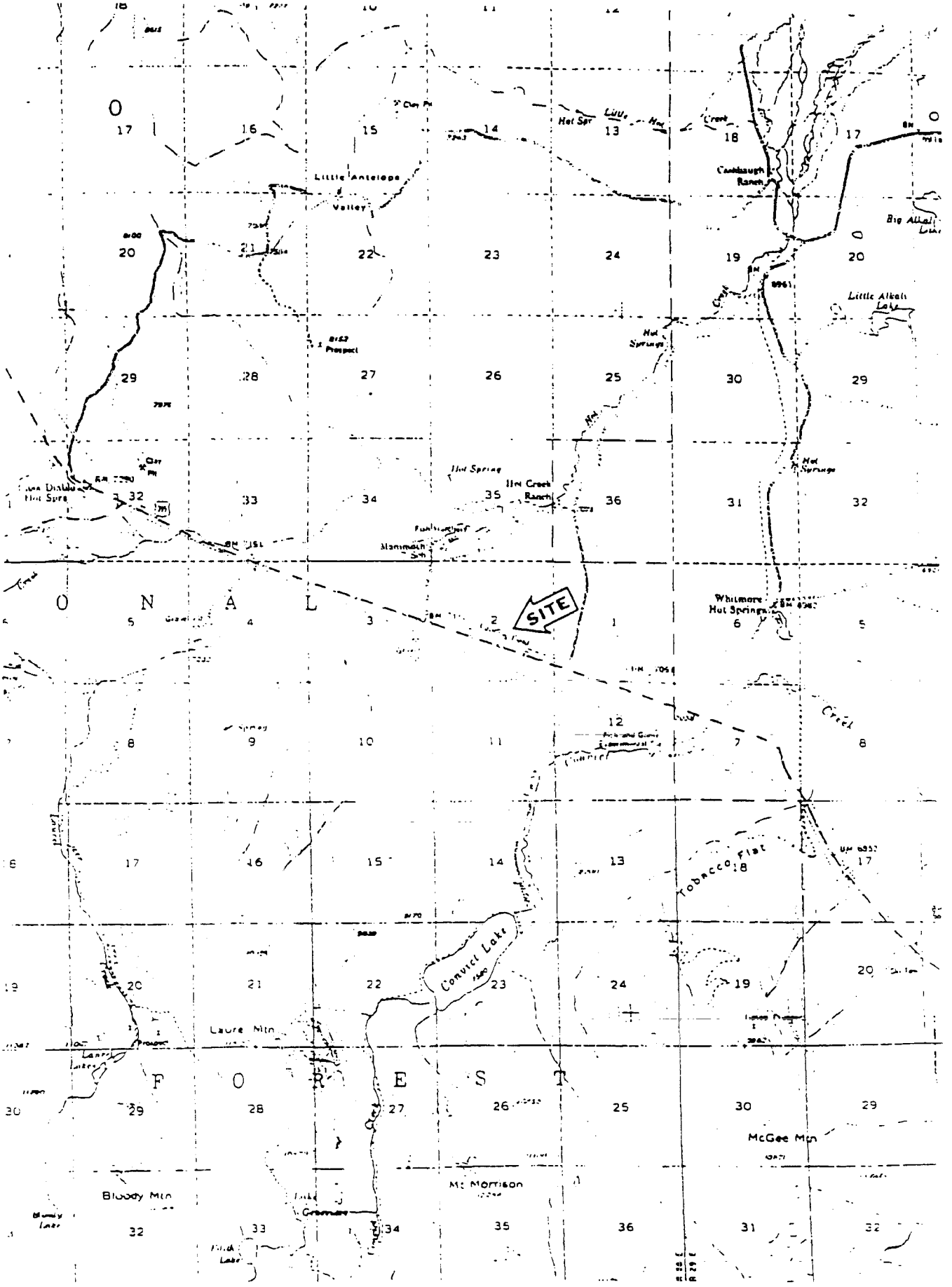
Figure A.1 - Proposed soil boring locations (scale approximately one inch = ten feet).

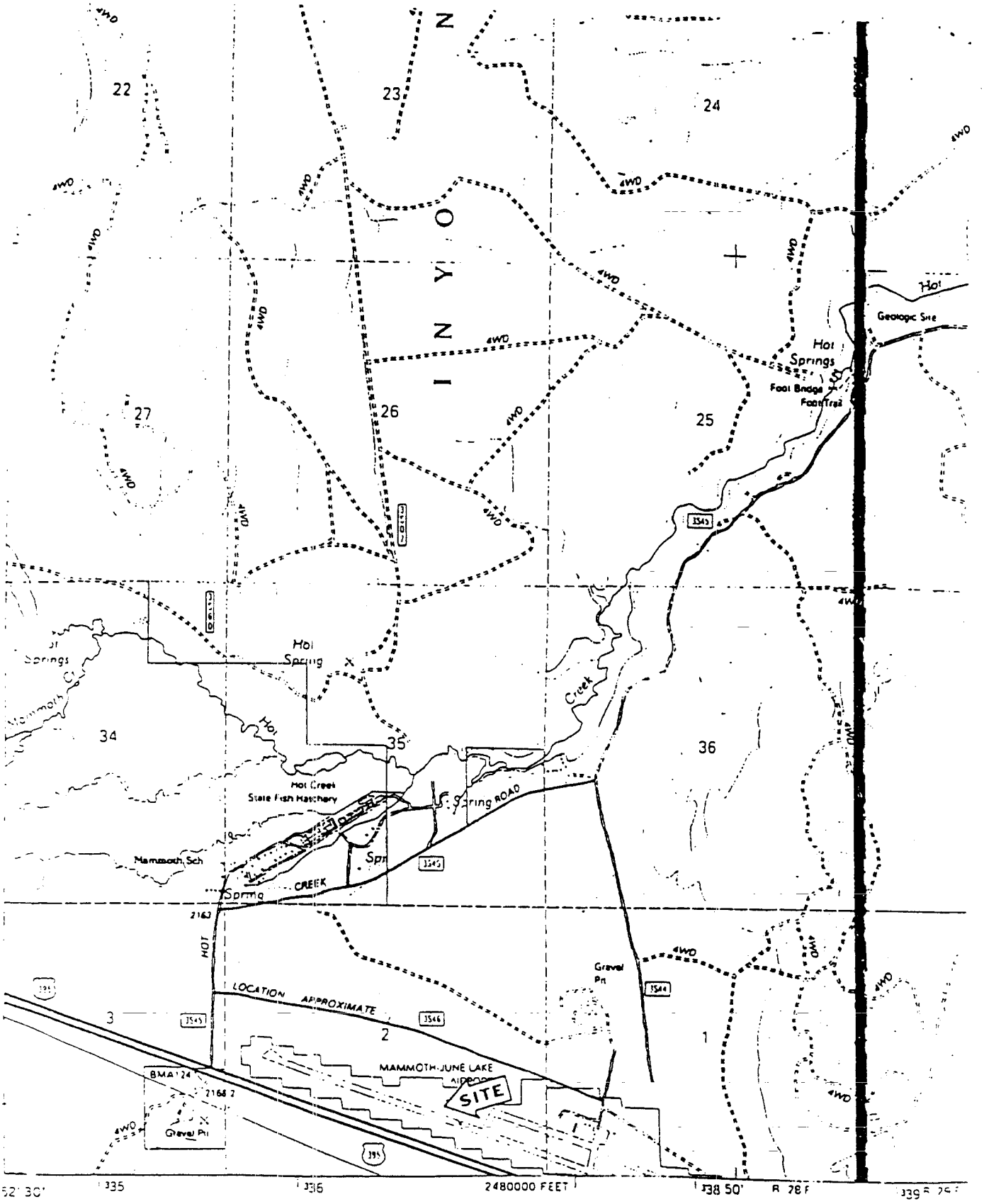
A.2 REPORTING

A report summarizing the results of this investigation will be prepared by TEAM and submitted to Mono County.

APPENDIX 5.4

UNITED STATES GEOLOGICAL SERVICES (USGS) TOPOGRAPHICAL MAPS
OF THE SUBJECT SITE AREA


SITE
Little Antelope Valley
Hot Springs
Hot Spring
Hot Creek Ranch
Whitmore Hot Springs
Tobacco Flat
Convict Lake
Laure Mtn
McGee Mtn
Mt Morrison
Bloody Mtn
Little Alkali Lake
Big Alkali Lake
Crowley Lake
Mammoth Sch
Prospect
Creek
Valley
Ranch
Lake
Mtn
Pass
Spring
Springs
Meadow
Flat
Canyon
Creek
Lakes



ie U.S. Geological Survey
U.S. Forest Service
ational Forest System lands may not have been revised
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al photographs taken 1976 and 1979. Revised from aerial

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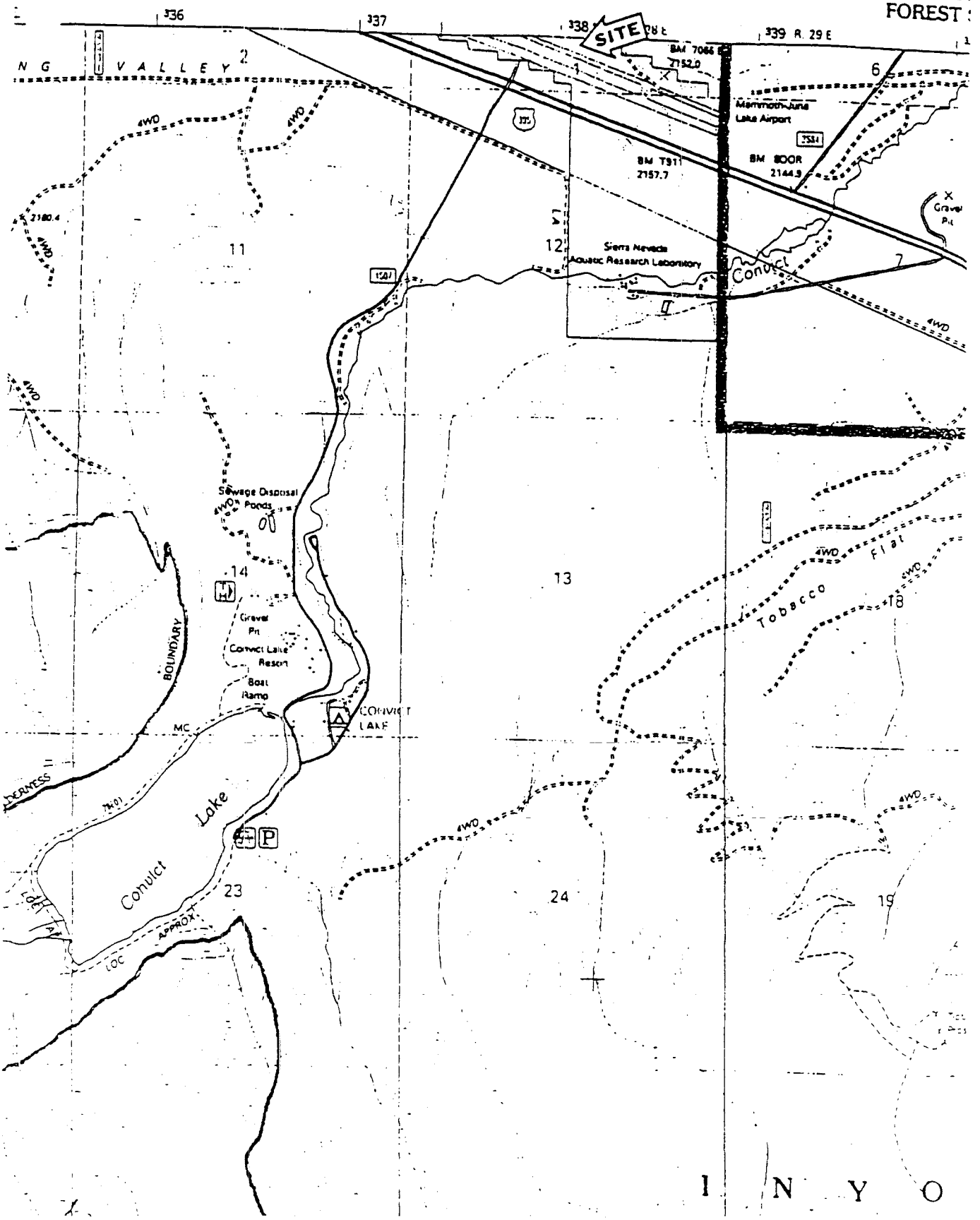
FOREST



APPENDIX 5.5

INDEMNIFICATION SECTIONS OF THE DEVELOPMENT AGREEMENT BETWEEN THE TOWN OF MAMMOTH LAKES AND TERRANCE E. BALLAS, DEVELOPER OF THE HOT CREEK HANGER DEVELOPMENT

DEVELOPMENT AGREEMENT

FOR THE DEVELOPMENT OF THE

MAMMOTH LAKES AIRPORT

PARTIES:

TOWN OF MAMMOTH LAKES

Airport Owner

TERRENCE E. BALLAS

Developer

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AIRPORT DEVELOPMENT AGREEMENT

I. PARTIES.

The parties to this Airport Development Agreement are the TOWN OF MAMMOTH LAKES [Town], a municipal corporation which owns fee title to the properties at the Mammoth Lakes Airport [Airport] which are the subject of this Airport Development Agreement [Agreement], and TERRENCE E. BALLAS [Developer], an individual.

II. RECITALS.

This Agreement is entered into by the parties, and each of them, on the basis of the following facts, understandings and intentions of the parties:

A. Procedural Requirements.

1. Government Code Sections 65864-65869.5 authorize Town to enter into binding development agreements for the development of real property within its jurisdiction with persons having legal or equitable interests in such property.

2. Town has heretofore entered into the leases with Developer which are incorporated into this Agreement by Section III.B.

3. Pursuant to Government Code Section 65865, Town has adopted Chapter 17.48 of its Municipal Code [MC], which establishes procedures for the adoption and implementation of development agreements. Developer has proposed a development Project, as that term is hereinafter defined, which consists in part of this Agreement, a development plan and the leases.

4. The property which will be developed pursuant to this Agreement and the leases is part of the Airport Layout Plan adopted by Town in accordance with applicable general planning laws of the State of California. The proposed developments were generally reviewed in the Subsequent Environmental Impact Report and Updated Environmental Assessment for the Mammoth Lakes Airport Expansion. Prior to its approval of this Agreement, the development plan and the leases, Town took the actions required by the California Environmental Quality Act and its implementing guidelines and ordinances.

5. Prior to the adoption of the Agreement, the Town Planning Commission and the Town Council approved the Airport Layout Plan and Commercial Development Plan for the Project.

6. This Agreement was reviewed by the Planning Commission, which forwarded a recommendation to the Town Council that the Agreement be approved. Prior to its approval of this Agreement, the Town Council made those finding required by MC 17.48.060 and 17.48.070. Prior to its approval of this Agreement, the Town Council further found that the Project, this

I. "Existing Terminal Buildings," which is shown on Exhibit A as "Existing Terminal Building," means (1) the terminal at the Airport as it existed on the effective date of this Agreement, and (2) the existing outbuilding adjacent to the terminal as it existed on the effective date of this Agreement. The Existing Terminal Buildings will be remodeled by Developer as part of Phase 1.

J. "FAA" means Federal Aviation Administration.

K. "Gas Storage Building," which is shown on Exhibit A as "New AV Gas Storage," means above-ground storage tanks and associated structures for the storage and dispensing of low lead fuel, jet "A" fuel and any other fuels, together with the pumps, dispensers and other equipment related thereto. The Gas Storage Building will be constructed and developed as part of Phase 1.

L. "General Aviation Terminal," which is shown on Exhibit D as "General Aviation Building," means the type of buildings and improvements normally associated with the operations of a fixed base operator at airports similar to Airport. It includes those buildings and operations more particularly described in the lease incorporated herein as Exhibit F. The General Aviation Terminal will be constructed and operated by Developer as part of Phase 1.

M. "Hazardous Substance" means "hazardous substance" as that term is defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended from time to time [42 USC Section 9601(14)], and any additional substances or materials which are now or hereafter considered to be hazardous or toxic under applicable federal, state or local laws, regulations or ordinances.

N. "Hotel or Condominium, Phase 1" which is shown on Exhibit D as part of the Commercial Development Area, means time share or similar units, hotel or residential condominium, or a commercial lodging facility for transient guests of a minimum of sixty (60) units to be constructed by Developer. It includes those buildings, uses and operations more particularly described in the lease incorporated herein as Exhibit E.

O. "Hotel or Condominium, Later Phases," which is shown on Exhibit D as part of the Commercial Development Area, means additional time share, hotel or residential condominium or similar units or an additional commercial lodging facility for transient guests consisting of up to one hundred ninety (190) units which may be constructed in phases by Developer adjacent to and for operations similar to those described in Hotel or Condominium, Phase 1. Developer shall have the right to decide how many units to construct in each of Phases 2, 3 and 4. Developer i not obligated to develop any part of Hotel or Condominium, Later Phases, including Phase 2 Phase 3 or Phase 4. The maximum number of Hotel or Condominium units at build-out shall be two hundred fifty (250).

P. "Leases" means the leases and summary of the terms of later leases attached hereto as Exhibits E through L, inclusive, and incorporated herein.

limitation, the pitch of the roof.

C. Prior to the expiration of one (1) year after the Phase 1 Completion Date, Developer shall spend a minimum of one hundred thousand dollars ($100,000.00), not including expenses for staff and office, in marketing Phase 1 of the Project, or the Airport generally, to the general public. Such marketing may include specialized target markets, such as aircraft owners and operators. Within ninety (90) days after such one (1) year period, Developer shall provide to Town an accounting evidencing the expenditure of such amounts.

D. In addition to the foregoing responsibilities and the responsibilities otherwise imposed by this Agreement, the development plan and the leases, as part of Phase 1 of the Project Developer shall have the following responsibilities regarding the operation of the Airport, to be undertaken at his own expense:

1. To provide to Town an area containing a minimum of three hundred (300) square feet of space within the Retail Building for a Visitors' Center for the purpose of promoting tourism and recreation in the Mammoth Lakes area.

2. Except for water as specified in Section VIII of this Agreement, to pay for all other utilities supplying the Project.

3. As part of Phase 1, to install the new Gas Storage Building identified in Exhibit A together with an above ground storage tank with a capacity of approximately ten thousand (10,000) gallons of aviation fuel.

4. To remove or abandon in place in accordance with all applicable laws, the approximately six (6) underground storage tanks at the Airport. Developer shall not be required to clean up any hazardous substance in connection with the storage tanks which may exist prior to Developer's removal or abandonment of the storage tanks.

E.1. Immediately upon the issuance of a certificate of occupancy to Developer for various units in the Hotel or Condominium, Developer shall place into an escrow account the sum of two thousand dollars ($2,000.00) for each Hotel or Condominium unit covered by the certificate of occupancy. Like sums shall be placed in the escrow account upon the issuance of a certificate of occupancy for subsequent units. The funds placed in the account shall be used for employee housing as herein specified.

E.2. The account shall be opened with a substantial financial institution selected by the Developer and approved by the Town. The account shall be interest bearing and all accrued interest shall remain in the account and be used for the purposes here specified.

E.3. (First Alternative).

a. Within five (5) years after the issuance of the first certificate of occupancy, and using the aforesaid funds from the escrow account, Developer shall construct twelve (12) 3-bedroom apartments or similar units which shall be rented by Developer, with rental rates

D. Prior to the approval of this Agreement, the Airport Layout Plan, Commercial Development Plan and the leases, Town conducted the appropriate environmental review, made the appropriate findings, and took the appropriate actions in connection therewith. Developer shall therefore not be required to pay fees or costs for any further environmental review in connection with the Project as described in those documents. If there are changes in the Project which are not consistent with those documents and which changes are caused or requested by Developer, Developer shall pay the costs of any environmental review which may be required as a result of such changes.

XV. HAZARDOUS SUBSTANCE.

A. Town agrees to clean up any release or discharge of any hazardous substance or toxic materials located on or under the Project lands which are on or under such lands prior to or on the effective date of this Agreement and to indemnify Developer as to the same as specified in the indemnification provisions of this Agreement. Town further agrees to clean up any release or discharge of any hazardous substance which occurs after such effective date which are caused by the Town or its agents, employees or contractors and to indemnify Developer as to the same as specified in the indemnification provisions of this Agreement.

B. Developer agrees to clean up any release or discharge of any hazardous substances located on or under Project lands as a result of Developer's use of the premises after the effective date of this Agreement and to indemnify Town as to the same as specified in the indemnification provisions of this Agreement. The parties agree that normal sewage effluent is not a hazardous substance.

C. Except as to any such matters which have heretofore been disclosed to Developer by written reports of Town, Town represents and warrants to Developer (1) that there are no claims or actions pending or threatened against the Town regarding any hazardous substance located at or near the Airport, (2) that Town has not been notified that the Airport is not in compliance with any laws relating to any hazardous substance, and (3) that Town is not aware of the presence of any hazardous substance on or under the Airport.

D. The Town or the Developer, as the case may be, who is responsible for the clean-up or any hazardous substance pursuant to this section shall be obligated upon notice by the other party or the agency with enforcement authority to undertake or cause to be undertaken, at the responsible party's expense, all treatment, removal, storage, decontamination, clean-up, transport, disposal or other remedial actions required by any relevant laws or by orders of any governmental authority having jurisdiction.

E. Time periods or limitations set forth in this Agreement shall be extended to the extent activities to which they apply may be halted in order to allow a party to comply with obligations under this Section XV.

given by mail, such shall be conclusively deemed given forty-eight (48) hours after deposit in the United States mail addressed to the party to whom such notice, demand or other communication is to be given as follows:

To Town:

Airport Manager
Route 1
Box 209
Mammoth Lakes, CA 93546

To Developer:

Terrence E. Ballas
P. O. Box 877
Mammoth Lakes, CA 93546

Either party may change its address for the purpose of receiving notices, demands and other communications as herein provided by a written notice given in the aforesaid manner to the other party.

P. Recordation of Agreement. No later than ten (10) days after its effective date, Town shall record an executed original of this Agreement in the Official Records of Mono County.

IN WITNESS WHEREOF, this Agreement has been executed by the parties and shall be effective as hereinabove set forth.

Town:

TOWN OF MAMMOTH LAKES

By: _____

Mayor Pro Tem

Date: 8-21-97

Developer:

TERRENCE E. BALLAS

By: _____

Developer

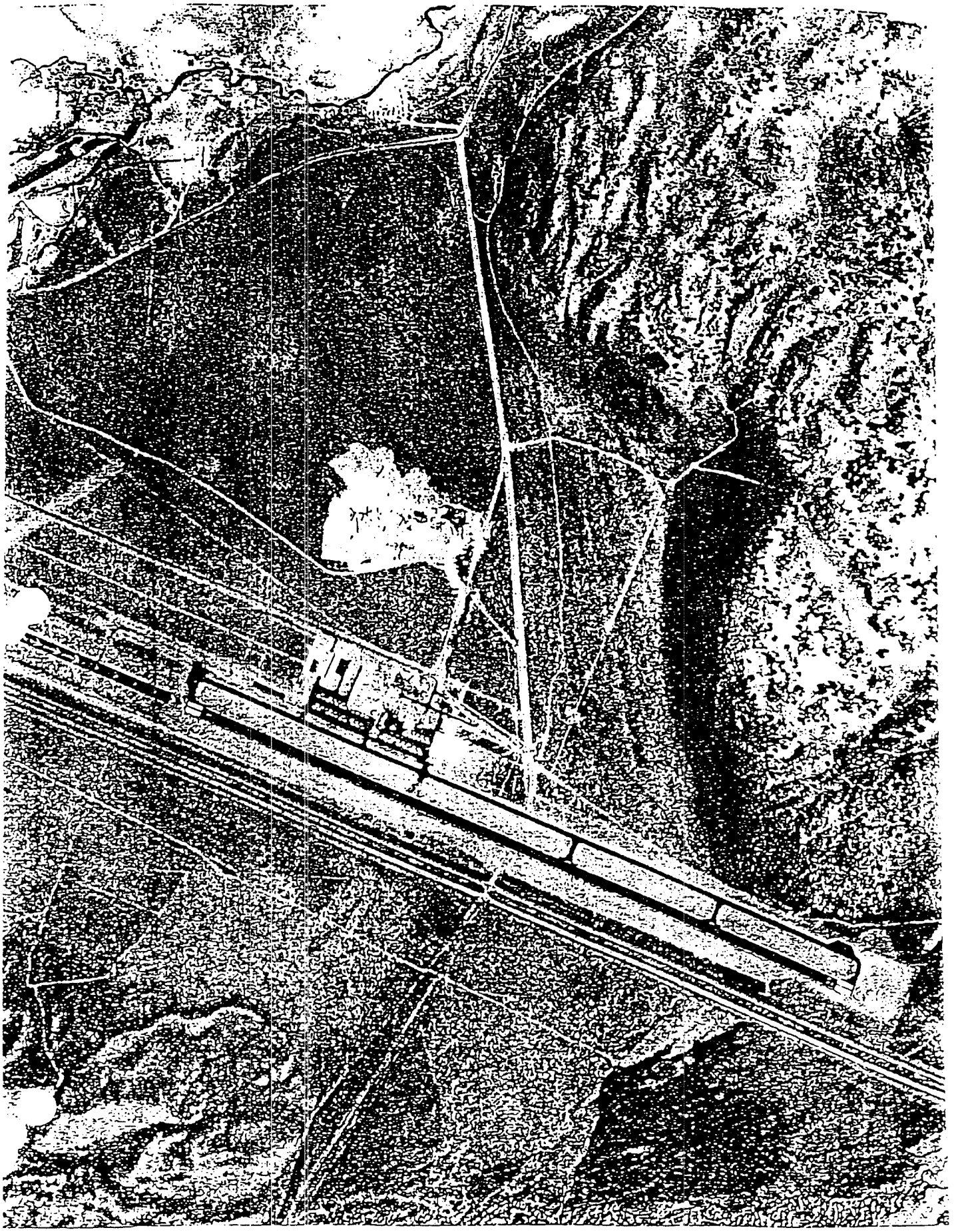
Date: 8-21-97

Attest:

_____
Anita Hatter, Town Clerk

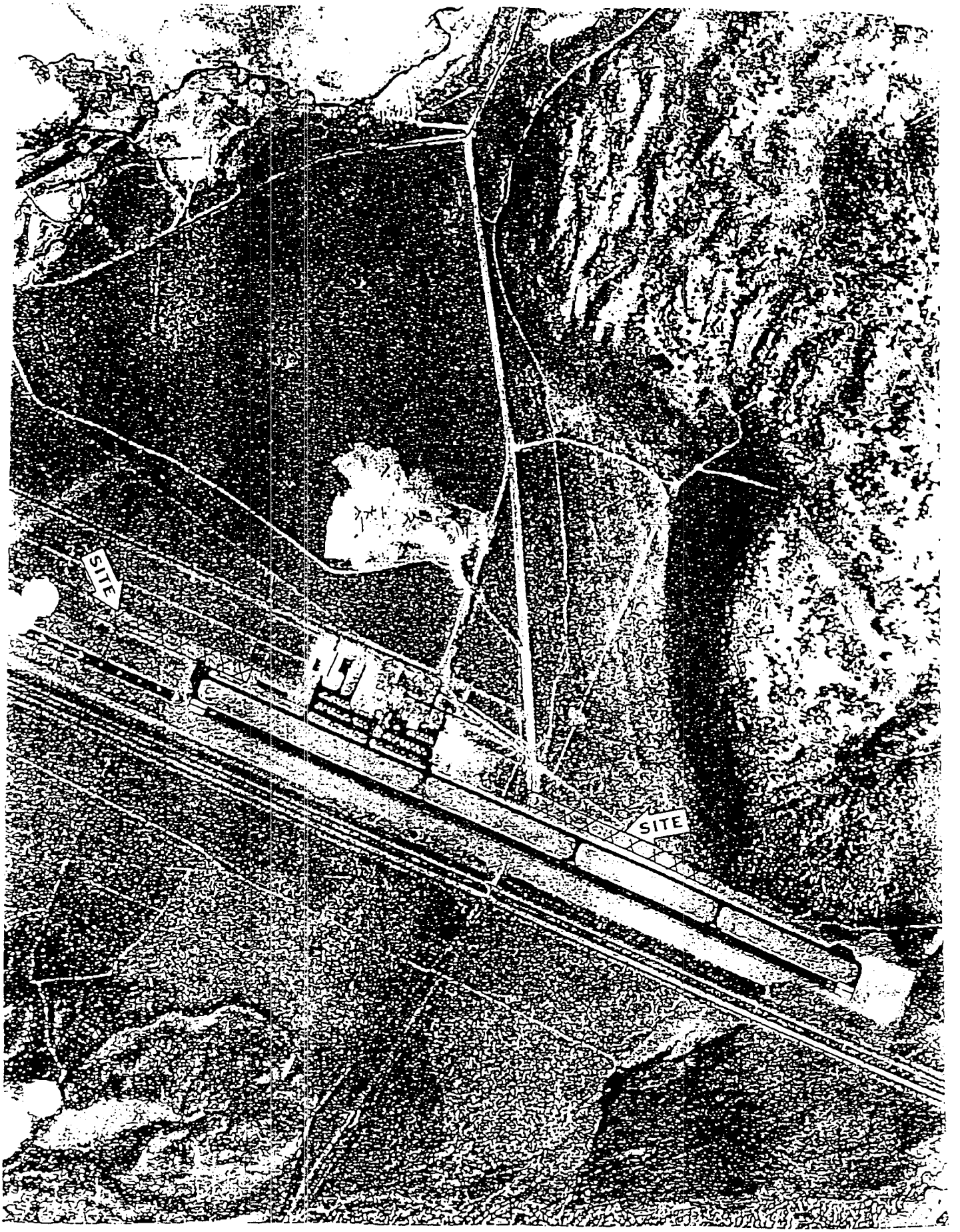
APPENDIX 5.6

1987 AERIAL PHOTOGRAPH COVERING THE MAMMOTH LAKES AIRPORT INCLUDING THE SUBJECT SITE AREAS



APPENDIX 5.7

AERIAL PHOTOGRAPH AS NOTED IN 5.6 BUT EXHIBITING THE AREAS OF THE PROPOSED HOT CREEK HANGER DEVELOPMENT NOTED WITH SITE ARROWS

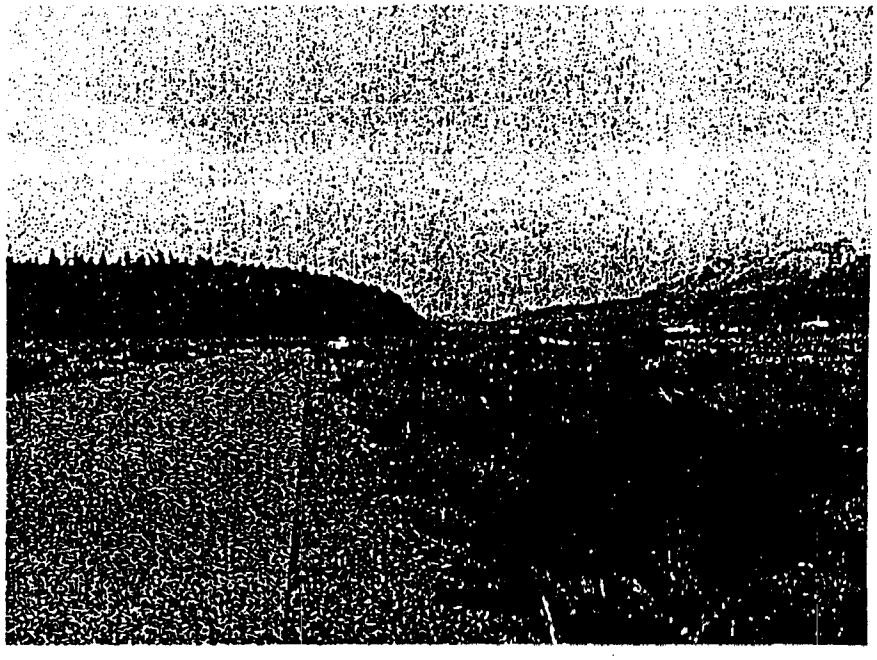

SITE
SITE

APPENDIX 5.8

GROUND LEVEL PHOTO LOG
HOT CREEK HANGAR DEVELOPMENT
85 AIRPORT ROAD
MAMMOTH LAKES, CA 93546

A.

B.



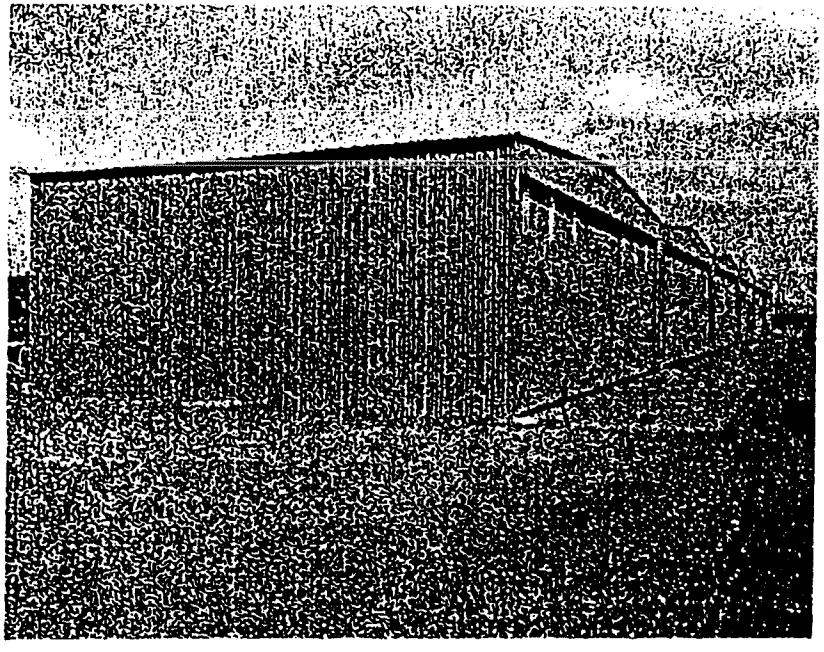
BATCHELOR ENVIRONMENTAL SERVICES, INC.	**PHOTO DESCRIPTION** **A. Asphalt Paved Entry Road Leading to the Mammoth Lakes Airport - Facing West.**	**PHOTO DESCRIPTION** **B. Airport Entry Road - Facing East.**	PHOTO LOG 1

C.

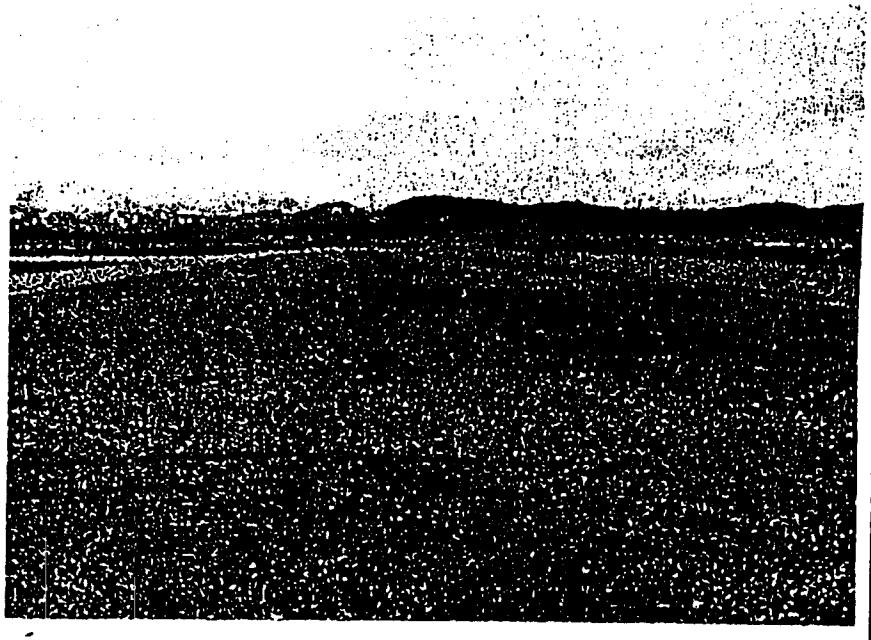
D.

BATCHELOR ENVIRONMENTAL SERVICES, INC.	**PHOTO DESCRIPTION** **C. Main Terminal Area, Airport Sign Facing South Towards the Mountains.**	**PHOTO DESCRIPTION** **D. Facing West Towards the Mammoth Lakes Airport - Mammoth Mountain is Located in the Background.**	PHOTO LOG 2

E.

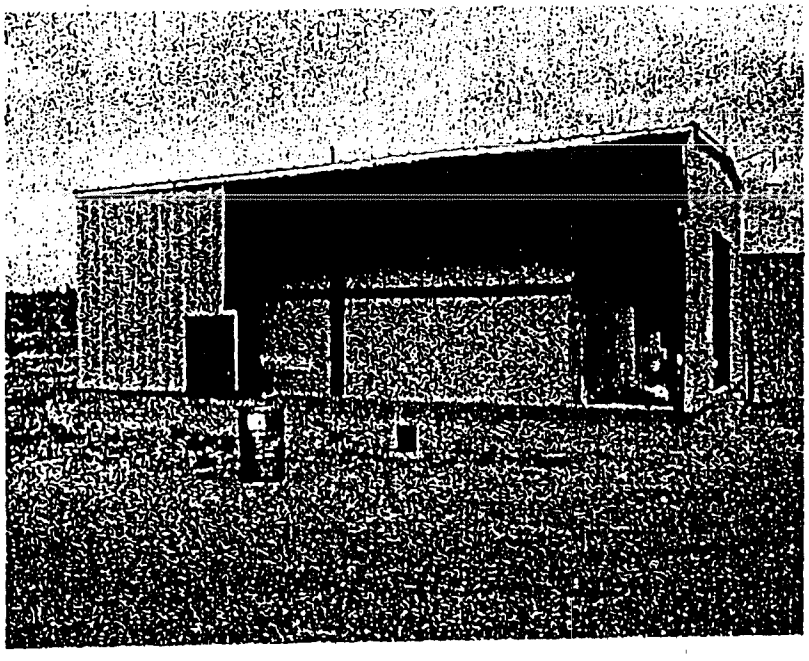


F.

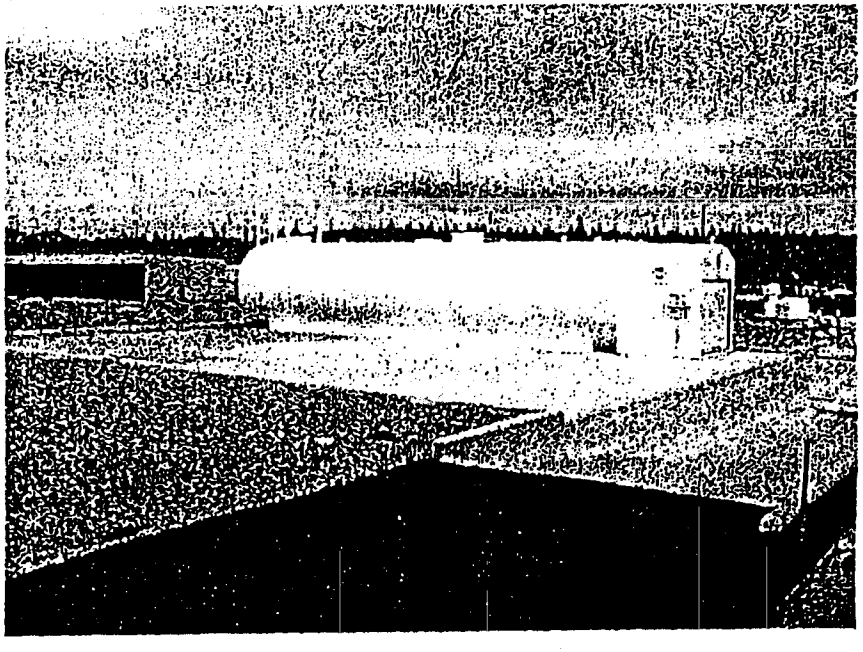


BATCHELOR ENVIRONMENTAL SERVICES, INC.	**PHOTO DESCRIPTION** **E. The Six (6) "Existing" Hangers Located at the Western Portion of the Airport Facility. The Hot Creek Executive Hangers are to be Constructed to the West.**	**PHOTO DESCRIPTION** **F. Facing West Over the Portion of the Subject Site to be Utilized for the Executive Hangers.**	PHOTO LOG 3

G.



H.



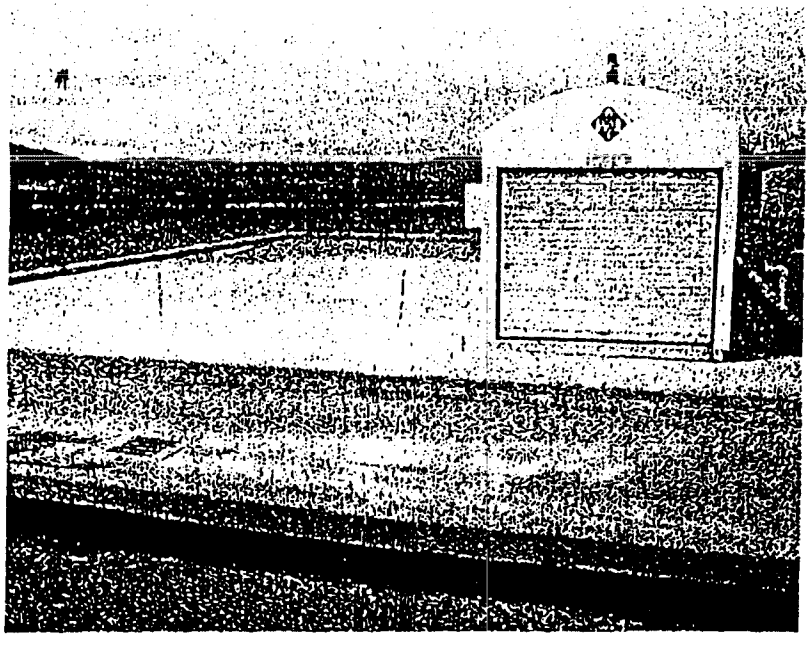
BATCHELOR
ENVIRONMENTAL SERVICES, INC.

PHOTO DESCRIPTION
G. One (1) 10,000 Gallon AST for Jet Fuel Situated on Land to be Utilized for the New Executive Hangers. Tank to be Removed.

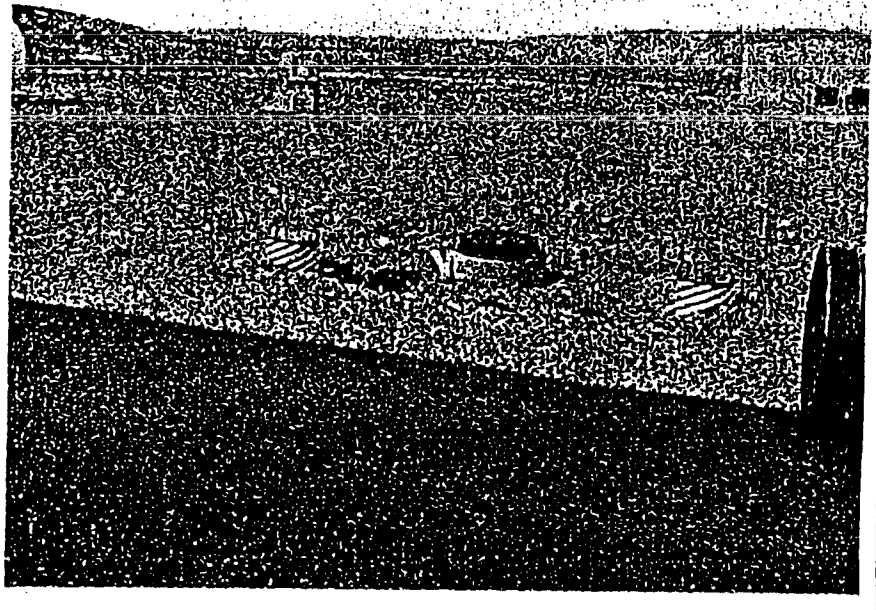
PHOTO DESCRIPTION
H. New 12,000 Gallon AST for Aviation Gasoline at the Subject Site.

PHOTO LOG
4

I.



J.



BATCHELOR
ENVIRONMENTAL SERVICES, INC.

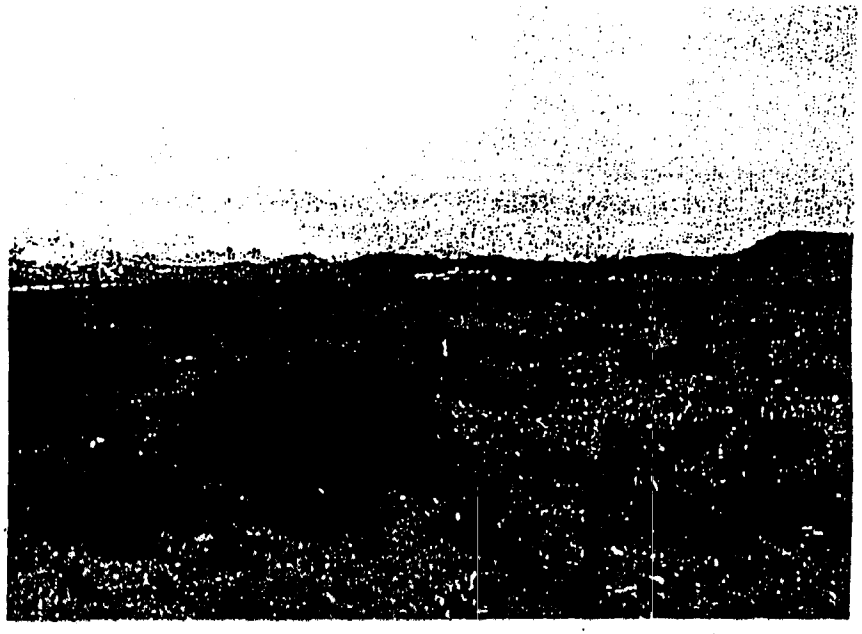
PHOTO DESCRIPTION
I. Spill Control and Secondary Containment at the 12,000 Gallon AST. A Second 12,000 Gallon AST is to be Placed on the Adjacent Concrete Slab.

PHOTO DESCRIPTION
J. Sumps Utilized as Part of the Containment System for the 12,000 Gallon AST.

PHOTO LOG
5

K.

L.



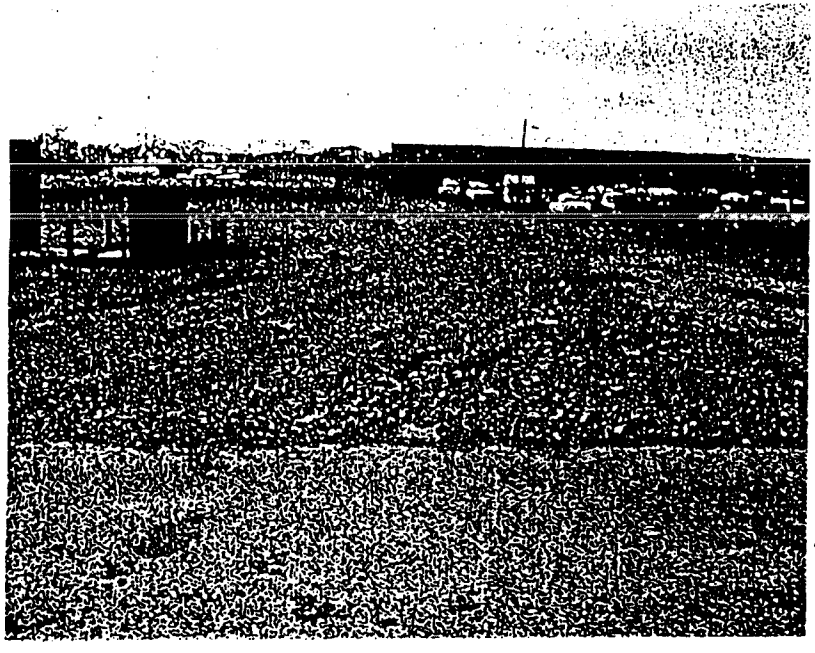
BATCHELOR
ENVIRONMENTAL SERVICES, INC.

PHOTO DESCRIPTIONS
K. Facing East Along the Portion of Land at the Subject Site to be Used for the Hot Creek Corporate Hangers.

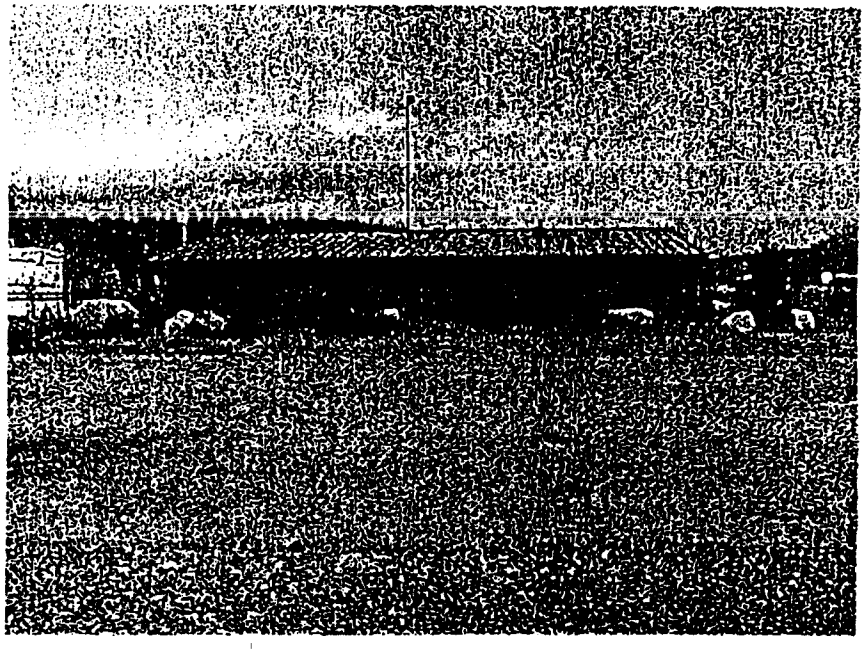
PHOTO DESCRIPTION
L. Facing West Over the Land at the Subject Site for the Corporate Hangers.

PHOTO LOG
6

M.

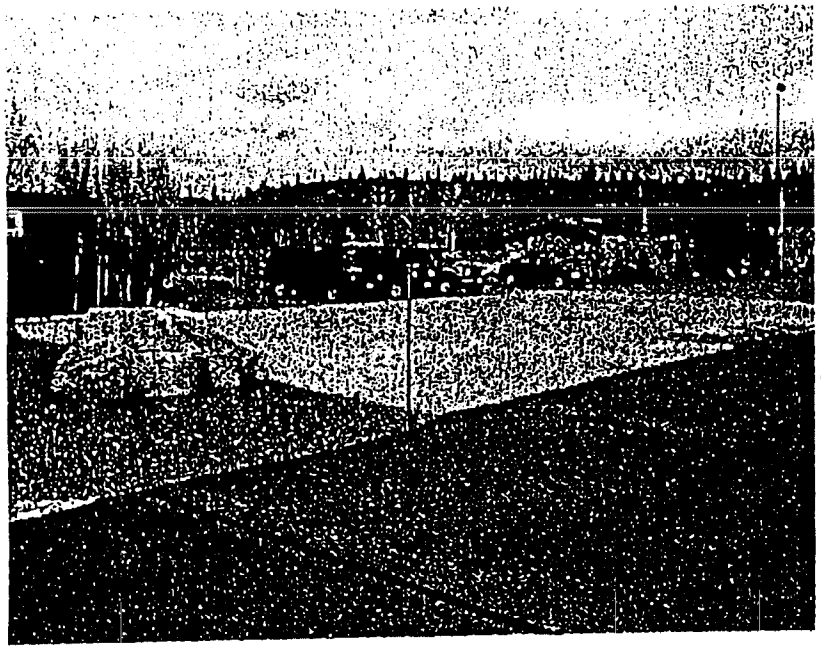


N.

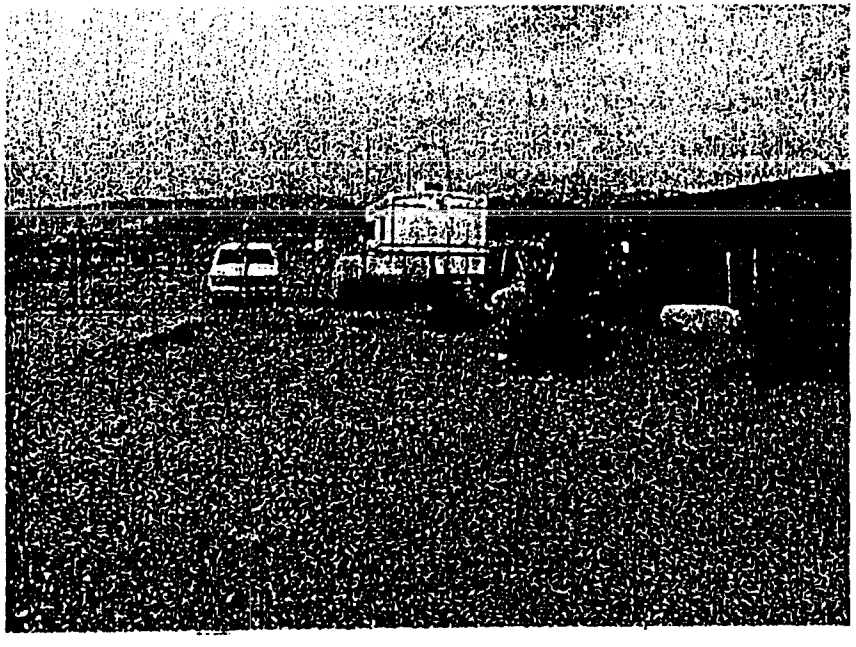


BATCHELOR Environmental Services, Inc.	**PHOTO DESCRIPTION** **M. Facing West Over the Area of Three (3) UST Removals. Remediation and Further Investigation Is Ongoing. Area Is Off-Site.**	**PHOTO DESCRIPTION** **N. Facing East Towards the Terminal Building from the Three (3) USTs Removal Site.**	PHOTO LOG 7

O.

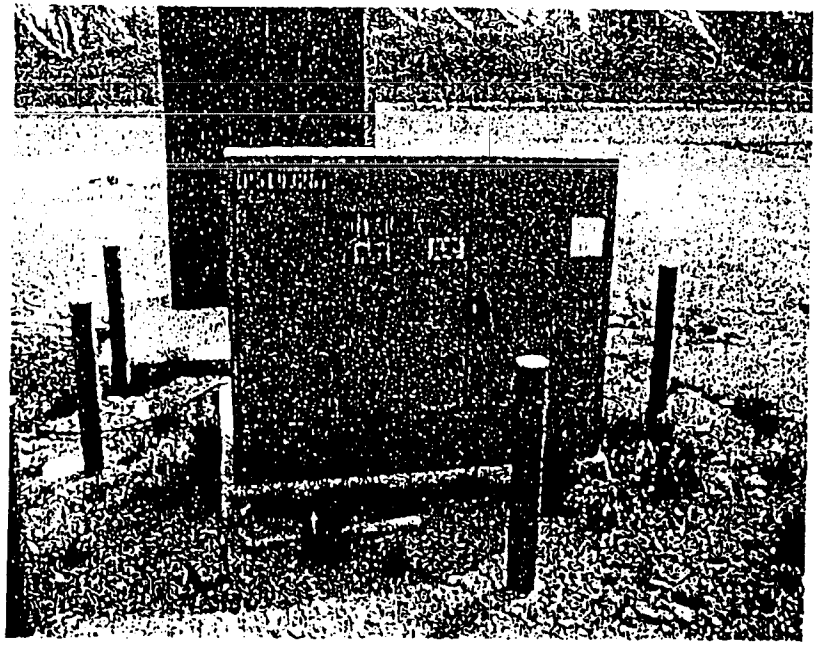


P.

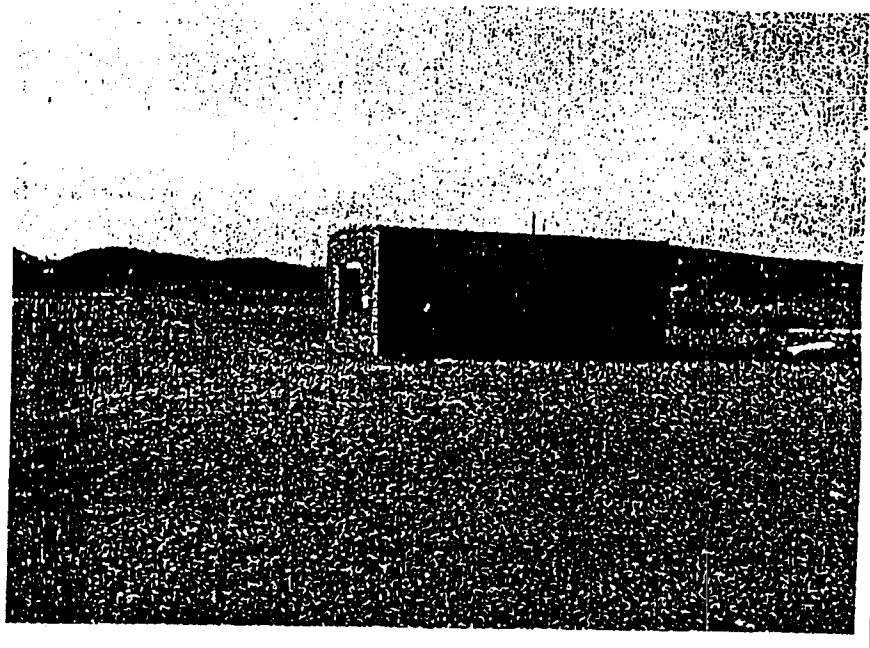


BATCHELOR ENVIRONMENTAL SERVICES, INC.	**PHOTO DESCRIPTION** O. Facing North Across the Concrete Pad Where Four (4) USTs Were Removed at the Airport. Area is Off-Site.	**PHOTO DESCRIPTION** P. Facing North Towards One (1) of the Three (3) 500 Gallon Propane ASTs at the Airport Facility.	PHOTO LOG 8

Q.



R.



BATCHELOR ENVIRONMENTAL SERVICES, INC.	**PHOTO DESCRIPTION** Q. One (1) of Three (3) Surface-Mounted Electrical Transformers at the Off-Site Airport Facility.	**PHOTO DESCRIPTION** R. Facing West Towards the 10,000 Gallon AST Which Is Scheduled for Removal at the Subject Site.	PHOTO LOG 9

Appendix I – Scoping Comments

nston H. Hickox
ency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
2020 L Street • P O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Gray Davis
Governor

March 13, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1, Box 209
Mammoth Lakes, California 93546

Dear Mr. Manning:

Thank you for providing the Air Resources Board (ARB) the opportunity to comment on the Notice of Intent to Prepare an Environmental Assessment (EA) for Proposed Improvements at Mammoth Lakes Airport. We have the following comments.

The project may need certification as required under the federal Airport and Airway Development Act of 1970, as amended (49 CFR 47106(c)(1)) because the proposed improvements include extending the existing runway. Certification is required for projects that include new airports, new runways, or major runway extensions and are funded in whole or part by the federal government. The Executive Officer of the ARB is delegated to issue certification. We recommend that you contact the Federal Aviation Administration to determine whether certification will be required and include that finding and its implications in the EA.

We reviewed air quality data for ozone and inhalable particulate matter (PM10) in the Mammoth Lakes area, and note that the area is designated as nonattainment for the State ozone standard and for the State and federal PM10 standards. Because the proposed projects have the potential to impact the air quality of the region, the EA and subsequent documents need to include an analysis of the potential air quality impacts of the proposed projects. We recommend that you contact the Great Basin Unified Air Pollution Control District for assistance with your air quality impact analysis. At a minimum, the analysis should quantify the increase in emissions of carbon monoxide, oxides of nitrogen, reactive organic compounds, particulate matter, and air toxics attributed to the proposed projects and assess the potential for these increases to cause or contribute to violations of State and federal air quality standards.

To minimize the impacts on air quality, subsequent environmental impact documents should incorporate all feasible, cost-effective mitigation measures to reduce any identified air quality impacts of the proposed projects. We have worked with a number of airports in California to develop effective mitigation programs and are available to assist you.

Printed on Recycled Paper

We look forward to reviewing the completed EA and subsequent documents when available. If you have any questions, please call me at (916) 322-8474.

Sincerely,

Gary Honcoop, Manager
Strategic Planning and Liaison Section

cc: Dr. Ellen Hardebeck
Air Pollution Control Officer
Great Basin Unified Air Pollution Control District
157 Short Street, Suite 6
Bishop, California 93514-3537

Mr. John Pfeifer
U.S. Department of Transportation
Federal Aviation Administration
San Francisco Airports District Office
831 Mitten Road
Burlingame, California 94010

California Regional Water Quality Control Board
Lahontan Region

Winston H. Hickox
Secretary for Environmental Protection

Victorville Office
Internet Address: http://www.mscomm.com/~rwqcb6
15428 Civic Drive, Suite 100, Victorville, California 92392
Phone (760) 241-6583 • FAX (760) 241-7308

Gray Davis
Governor

March 23, 2000

FILE: 6B26S003680

Mr. Bill Manning-Airport Manger
Town of Mammoth Lakes
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes CA. 93546

COMMENTS ON NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL ASSESSMENT (EA) FOR PROPOSED IMPROVEMENTS AT MAMMOTH LAKES AIRPORT, INYO COUNTY, SCH# 2000034005

California Regional Water Quality Control Board Lahontan Region Board staff (Board staff) has reviewed the Notice of Intent to Prepare an Environmental Assessment (EA) for Proposed Improvement at Mammoth Lakes Airport submitted by Mono County. The purpose of the Notice of Intent is to solicit any specific concerns or issues that should be addressed in the EA. Board staff has the following comments.

Project Summary

The Notice proposed the following airport improvements:

- Strengthen the runway and taxiways to accommodate up to B-757-200 aircraft.
- Widen the runway from 100 feet to 150 feet on the south side of the runway, resulting in a shift of the runway centerline 25 feet to the south.
- Widen the parallel taxiway from 50 feet to 75 feet—20 feet on the south side and 5 feet on the north side.
- Extend the runway 1,200 feet to the west to provide the necessary runway length for desired air carrier aircraft operations, i.e., the B-757-200.
- Extend the parallel taxiway to be consistent with the length of the runway extension.
- Add an air carrier apron for the three to six air carrier aircraft.
- Add a 75-foot wide connecting taxiway to access the air carrier apron area.
- Add turn buttons at the runway ends to permit back-taxiing on the runway during the initial phase of development.
- Expand the Runway Safety Area from 500 feet to 1000 feet to the east of the runway (required to comply with FAA airport design standards for current operations).
- Improve the security fencing from the existing 6 feet to 8 feet in height to meet FAA standards.

- Develop passenger terminal building facilities.
- Construct Airport access road improvements.
- Expand the automobile parking lot.
- Acquire in fee simple and/or lease lands owned by Los Angeles Department of Water and Power (LADWP) that currently occupy the further extension of the Runway Safety Area (required to comply with FAA airport design standards for current operations)

Specific Comments

The Board staff has the following specific comments:

1. **Environmental Site Assessment**
   Batchelor Environmental Services requested data from the Lahontan Water Board for the Mammoth Lakes Airport in a letter dated May 3, 1999. The data was for a Level I Site Investigation at the airport. Board staff would like a copy of that site investigation and requests that information from the site Investigation be included in the EA.

2. **Wetland Impacts**
   The Environmental Impact Report (EIR) dated March 1997, contained a Wetland Survey and Special-Status Species report by Jones and Stokes Associates dated March 16, 1995. Board staff requires notification by the Army Corps of Engineers that they have reviewed the study. If a permit is required (Construction Permit) by the Army Corps of Engineers, Board staff will need a copy of that permit. It should be noted that the 1995 Wetlands Survey might need to be updated to conform to current Army Corps of Engineer requirements for Wetlands.

   If any portion of the project involves fill or disturbance of wetland areas, the project proponent must also file an application with the Regional Board.

   The widening of the eastern end of the current runway may impact wetlands. In addition, the access road located at the eastern end of the airport may have been constructed in wetlands. If any work has already occurred in wetland areas, appropriate mitigation must be incorporated into the project.

   Board Staff requests the Jones and Storkes report be submitted to the Department of Fish and Game for review. The Department of Fish and Game has a local office in Bishop California.

3. Stormwater Runoff and Other

As stated in your Subsequent Environmental Impact Report (EIR) data March of 1997 under section E. Drainage, "soils throughout the Mammoth Lakes Airport consist of sands, gravel's, and boulders.....soils are very pervious and drainage water readily infiltrates into the ground". Also stated in the same section was "Future development will carry stormwater from the development area.....where it will be allowed to infiltrate and recharge the existing ground water". Given that ground water is very shallow (approximately 15 feet below ground surface), there is a potential for ground water contamination by stormwater runoff, which may contain hydrocarbons or other contaminants from daily airport operations, wash water and spills. In 1991 a gravel pit south of the current airport location was found to contain ground water that had been contaminated by hydrocarbons. Consideration must be given to methods that prevent contamination and/or remove contamination from stormwater runoff before the runoff is allowed to infiltrate into the soil. We request that such control measures be incorporated into the proposed project.

4. Septic System Impacts

The EIR (March 1997) proposed to mitigate the impact of domestic and industrial waste discharge by a centralized sewage collection, treatment and disposal system at the airport. Due to the proposed high volume of sewage flow (53,260 gpd for proposed condominiums, restaurant, and other facilities), highly permeable soils and shallow ground water, any disposal of sewage water would require the sewage to be treated to secondary level for ground water disposal via infiltration and tertiary level for surface water disposal.

5. Hazardous Materials and Under Ground Storage Tanks

Increased airport capacity will require increased fuel storage, hazardous materials usage and fire fighting materials. The impact of the additional hazardous materials to the site should be addressed in the EA. The proposed should include appropriate mitigation measures such as development and implementation of a spill prevention, contaminant and clean-up plan.

6 Project Description

It is unclear why the project description to be evaluated by the EA under the National Environmental Policy Act (NEPA) process is different than the project evaluated by the California Environmental Quality Act (CEQA) process. The EA should include a description of the entire project, and describe the relationship between the 1997 EIR and the proposed EA. The EA must evaluate cumulative impacts from all proposed activities associated with the project.

Thank you for the opportunity to review the Notice of Intent. We look forward to working with the town to develop Mammoth Lakes Airport.

If you have any questions, please contact me at (760) 241-7353, or Cindy Mitton at (760) 241-7413.

Sincerely,

Douglas E. Feay

Douglas E. Feay
Associate Engineering Geologist

Cc: U.S. Army Corp of Engineers
1325 J. St.
Sacramento, CA 95814-2922

EPA District #9
75 Hawthorne Street
San Francisco, CA 94105

Department of Fish and Game
ATTN: Darrell Wong
407 W. Line St.
Bishop, CA 93514

Mono County Health Department
PO Box 476
Bridgeport, CA 93517

Mono County Planning
PO Box 347
Mammoth Lakes, CA 93546

United States Forest Service
Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592

DF\Yrc\MamthAirprtEA.doc

Long Valley Fire Protection District
Rt. 1, P.O. Box 1145 • Crowley Lake, CA 93546
(619) 935-4545

March 29, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, Ca. 93546

Re: Environmental Assessment Scoping Letter – Airport Improvements

Dear Mr. Manning:

This letter is in response to the scoping letter from your office received by the Long Valley Fire Protection District on February 22,2000. After reviewing the proposed alternatives the Long Valley Fire District would like to express the following concern to any of the proposed options that would support scheduled passenger flight operations. Our concern is with the potential financial impact of providing crash rescue fire personnel required during flight operations and with the costs associated with providing an adequate level of fire protection resources to protect the other improvements in airport facilities. Additionally, there could be a financial impact on the Fire District in having to mitigate any off airport aircraft incidents occurring within the Fire District. We appreciate the opportunity to make comment and look foreword to working with you as this process evolves.

Sincerely,

Fred Stump
Chief

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
District 9
500 South Main Street
BISHOP, CA 93514-3174
(760) 872-0601
FAX (760) 872-0678

(760) 872-0691

May 21, 2000

Mr. William Taylor
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, California 93546
(760) 934-8989 extension 225
(760) 934-8608 fax

File: 09-MONO-SR 395
PM 22.738
SCH # 2000034005

REF: Mammoth Lakes Airport Improvements.

Dear Mr. Taylor:

This letter addresses the California Department of Transportation (CALTRANS) concerns in regards to the proposed improvements being considered for the existing Mammoth Lakes Airport.

The project's Notice of Intent (NOI) dated March 7, 2000, does not clearly specify in detail this project's improvement locations in relationship to the existing State Route (SR) 395 and its intersections. Therefore, CALTRANS is unable to make an accurate assessment as to what impacts this project will have upon those existing transportation corridors and intersections. Questions of concern include:

1) What is the airway to highway clearances involved? Will the Highway Design Manual (HDM) Code 207 be violated?

2) Will any existing county road intersections be changed? If so, an Encroachment Permit and Controlled Access Agreement with CALTRANS will be required.

3) Fence work may need to be included with the Encroachment Permit because of Right of Way issues.

4) How close will the runway be to CALTRANS Right-of-Way?

5) Will additional lighting be needed or existing lighting be relocated?

6) What are the projected traffic pattern increases along SR 395 for automobile, airplanes, and passenger per season?

7) Will the scenic resources be impacted along this corridor?

8) Will dust mitigation/landscaping measures be required during and after the improvement construction process?

9) Will storm water runoff mitigation measures be addressed?

10) Will cultural/archaeological resources be impacted?

11) Will the deer migration corridor(s) be impacted and if so, what mitigative measures will be instigated to correct this situation?

We hope the Mammoth Lakes Airport Planning Commission will seriously consider our concerns and address them in the Environmental Document. Therefore, we will be able to more accurately evaluate this project's needs.

If you have any questions, please contact me at (760) 872-0691, or Carolyn Yee of my staff at 760) 872-1492. Thank you for your consideration.

Sincerely,

CAROLYN YEE
Associate Environmental Planner

Attachment

cc: Jerry Gabriel
Ralph Cones
William Manning, Mammoth Lakes Airport

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY
GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
District 9
500 South Main Street
BISHOP, CA 93514-3174
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May 21, 2000

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If you have any questions, please contact me at (760) 872-0691, or Carolyn Yee of my staff at 760) 872-1492. Thank you for your consideration.

Sincerely,

CAROLYN YEE
Associate Environmental Planner

Attachment

cc: Jerry Gabriel
Ralph Cones
William Manning, Mammoth Lakes Airport

LONG VALLEY
HYDROLOGIC ADVISORY COMMITTEE
P.O. Box 347
Mammoth Lakes, California 93546
(760) 924-5452 FAX (760) 924-5458

March 15, 2000

Mr. Bill Manning, Airport Manager
Town of Mammoth Lakes
P. O. Box 1609
Mammoth Lakes, CA 93546

Dear Bill:

At the March 9, 2000, meeting of the Long Valley Hydrologic Advisory Committee (LVHAC), there was a consensus among the members that a monitoring well(s) should be installed between the airport wells and the California Fish and Game fish hatchery. The purpose of this well(s) would be to establish baseline water levels before and subsequent to project construction and operation and for ongoing monitoring of potential impacts to the underlying aquifer(s).

Accordingly, please include the installation of such a monitoring well(s) in the scope of your upcoming environmental analysis and feel free to consult the LVHAC as to the location and size of this well(s).

Thank you for your anticipated inclusion of this well(s) in your scoping activities and for your past acknowledgement of the importance of such a monitoring well(s) to assure the ongoing protection of the hydrologic resources within the Long Valley caldera.

If you have any questions, please contact me.

Sincerely,

Dan Lyster

Dan Lyster, Chair
LVHAC

cc: Steve Julian, Interim Town Manager

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Lorretta Lynch
DIRECTOR

Notice of Intent

March 7, 2000

To: Reviewing Agencies

Re: Proposed Improvements at Mammoth Lakes Airport, California
SCH# 2000034005

Attached for your review and comment is the Notice of Intent (NOI) for the Proposed Improvements at Mammoth Lakes Airport, California draft Environmental Assessment (EA).

Responsible agencies must transmit their comments on the scope and content of the NOI, focusing on specific information related to their own statutory responsibility, by March 17, 2000. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Mr. Bill Manning
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Katie Shulte
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

STATE OF CALIFORNIA - THE RESOURCES AGENCY
GRAY DAVIS, Governor
DEPARTMENT OF FISH AND GAME
nland Deserts-Eastern Sierra Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
(760) 872-1171

March 16, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Notice of Intent to Prepare an Environmental Assessment (EA)
Proposed Improvements at Mammoth Lakes Airport
Mono County

Dear Mr. Manning:

The Department of Fish and Game (Department) has reviewed the Notice of Intent (NOI) to Prepare an Environmental Assessment (EA) for Proposed Improvements at Mammoth Lakes Airport. The Town of Mammoth Lakes is proposing to construct a series of improvements at Mammoth Lakes Airport, primarily for the purpose of enabling commercial jet air carriers service to operate at the Airport. Proposed improvements included strengthening the runway and taxiways, widening the runway from 100 feet to 150 feet, widening the parallel taxiway from 50 feet to 75 feet, extending the runway 1,200 feet to the west, extending the parallel taxiway to be consistent with the runway extension, addition of an air carrier apron, addition of a 75-foot wide connecting taxiway, addition of turn buttons at runway ends, expansion of the Runway Safety Area (RSA) from 500 feet to 1,000 feet, improvement of security fencing from 6 feet to 8 feet, development of passenger terminal building facilities, construction of airport access road improvements, expansion of the automobile parking lot, and acquisition of lands owned by the Los Angeles Department of Public Works. Nine alternatives have been identified. These include the No Action alternative, various runway lengths and widths, development of another airport in the region, and reliance on alternate modes of transportation.

The Department is providing comments on this NOI as the state agency which has the statutory and common law responsibilities with regard to fish and wildlife

resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish & Game Code section 711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish & Game Code section 1802). The Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish & Game Code Section 702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. Sec. 15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

Potential environmental impacts from the proposed project which could affect the quality of the human environment include, but are not necessarily limited to, increased noise and adjacent use impacts to Department hatchery operations and residences at the Hot Creek Fish Hatchery, disturbance to and possible reduction in hatchery trout egg and/or fish production; direct loss of important wildlife habitat for mule deer, sage grouse, and mountain lion; disruption of seasonal foraging areas and patterns for raptors including bald and golden eagle, northern harrier, American peregrine falcon, Swainson's hawk, prairie falcon, American kestrel, red-tailed hawk, ferruginous hawk, rough-legged hawk, and other raptors; disturbance to nesting waterfowl and other aquatic and riparian birds; alteration in the quantity or quality of surface or ground water, including impacts to spring flow, habitat for Owens tui chub, and domestic water supply for Fish Hatchery residences.

The Department appreciates this opportunity to comment on the above-referenced project, relative to impacts to biological resources. The Department believes the proposed project has the potential to significantly affect the quality of the human environment, and therefore we recommend the preparation of an Environmental Impact Statement (EIS). Significance is determined by intensity and setting of the proposed project. In this case anticipated impacts from the proposed project include special-status species, cumulative effects, precedent-setting effects, degree of unique or unknown risk, degree of controversy, unique characteristics of an area, public health, and cultural and historical resources. NEPA requires that if it is reasonable to anticipate cumulatively significant impacts, an EIS must be prepared (40 CFR 1508.25(c)).

However, we believe that an EA could be appropriate if it contains specific, tangible mitigation measures to convincingly show that impacts to resources will be reduced to a less than significant level. To enable our staff to adequately review and

comment on the proposed project, we recommend the following information be included in the document:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats. All assessments must be completed using protocols and methodologies approved by the Department and U.S. Fish and Wildlife Service. Assessments must be completed at appropriate times of the year and during appropriate survey hours.

a) A thorough assessment of rare plants and rare natural communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

b) Biological surveys of the project site should be conducted during the appropriate seasons of the year to detect presence of species which occupy the site both year-round and seasonally. This should include surveys for mammals, amphibians, reptiles, resident and migratory raptors, waterfowl and songbirds which may utilize the area. Focused species-specific surveys, conducted at the appropriate time of year and time of day when sensitive species are active or otherwise identifiable are also required. A complete assessment of sensitive wildlife species winter, spring and summer use should be addressed. Species-specific survey protocols should be developed in consultation with the Department and the U.S. Fish and Wildlife Service. The Department's December 17, 1996 letter (hereby incorporated by reference) regarding the Notice of Preparation for the Mammoth Lakes Airport Master Plan Implementation contains a list of species for which we recommend focused surveys. Measures should be identified to provide protection of existing habitat, or mitigation proposed for project impacts to these species and their associated habitat areas.

c) Rare, threatened and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition. (See CEQA Sec. 15380.) Surveys for these species must be conducted using approved methodologies in coordination with the Department and the U.S. Fish and Wildlife Service. All persons conducting the surveys must have the required permits from the resource agencies. In particular, those species listed in Tables 1 and 2 of the Owens Basin Wetland and Aquatic Species Recovery Plan should be discussed.

d) The Department's California Natural Diversity Data Base in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified

under Chapter 12 of the Fish and Game Code.

e) The proposed project has the potential to have a negative impact on the Round Valley Deer Herd and the Casa Diablo Deer Herd. The document should discuss the project's conformance with the Deer Herd Management Plans which have been prepared by the Department. The document should thoroughly discuss the potential disturbance to the deer herd resulting from increased noise, lights, airplane and vehicle traffic, and any other impacts associated with the project. This should further include an analysis of the potential for the project to force deer away from the area during migration periods and any resultant increase in deer highway fatalities. The document should offer proven and effective measures for reducing or eliminating impacts to the deer herd. We believe that the discussion of impacts to mule deer and absence of mitigation measures in the 1997 Subsequent EIR (SEIR) did not adequately address the impacts to this resource.

f) The proposed project also has the potential to have a negative impact on sage grouse. This species has experienced rapid population declines throughout its range, as well as in Long Valley. Discussion of impacts to this species was also inadequate in the 1997 SEIR.

2. A thorough discussion of direct, indirect and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

a) NEPA (40 CFR 1508.27 (b)(3)) directs that unique characteristics of the geographic area such as proximity to historic or cultural resources, ... wetlands ...or ecologically critical areas should be considered in evaluating intensity of an impact. Our December 17, 1996 letter discusses potential impacts to Hot Creek Hatchery and adjacent wetlands.

b) Project impacts should also be analyzed relative to their effect on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas should be fully evaluated and provided.

c) A cumulative effects analysis should be developed, as directed by 40 CFR 1508.25 (a)(2) and (c). General Plans, Specific Plans, as well as past, present and anticipated future projects, including those projects outside the control of the agency, should be analyzed relative to their impacts on similar plant communities and wildlife habitats. The Department believes the document should include an analysis of water supply availability not only for growth-inducing impacts which will follow and how

this relates with the future water supply capacity of Mammoth Lakes, and any resultant impacts to adjacent surface and spring flows of influence within this watershed.

In identifying future projects adding to the cumulative impacts of the proposed project, the Department is aware of the following projects which will impact, at a minimum, the Round Valley deer herd, the Casa Diablo deer herd, resident sage grouse and/or their habitats, and add to growth-inducing impacts and increased needs for water supply: 1) Sherwin/Snowcreek Ski Area; 2) Intrawest resort developments, including the reported requirement for an increased airport and aircraft size capability to secure development of the proposed 250 room hotel/lodge, and the increased need for well water for expansion of the snowmaking system; 3) Eastern Sierra College Center-Mammoth; 5) Lakeridge Ranch Estates; 6) INAJA Land Company Use permit; 6) the proposed industrial park west of Highway 395; and 7) the proposed Pacifica residential development in Round Valley.

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project in this area are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity, where appropriate.

a) Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitats elsewhere should be required.

b) The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus these communities should be fully avoided and otherwise protected from project-related impacts.

4. If the project has the potential to adversely affect species of plants or animals listed under the California Endangered Species Act, either during construction or over the life of the project, a permit must be obtained under Section 2081 of the Fish and Game Code. Such permits are issued to conserve, protect, enhance and restore state-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a 2081 permit. If the project has the potential to impact species of plants or animals listed as threatened or endangered by the U.S. Fish and Wildlife Service, a consultation under Section 7 of the Endangered Species Act will be required. A list of federal and state listed species found within the project area is found

in Tables 1 and 2 of the Owens Basin Wetland and Aquatic Species Recovery Plan. In addition, recent legislation requires that all 2081 permits issued by the Department comply with CEQA.

5. Section 1603 of the Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use materials from a streambed to notify the Department before beginning the project. Similarly, under section 1601 of the Fish and Game Code, before any State or local governmental agency or public utility begins a construction project that will: 1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; 2) use materials from a streambed; or 3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify the Department of the proposed project.

Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. If you are not certain that your proposed project will require a Lake or Streambed Alteration Agreement, the Department recommends that you submit a complete notification package.

Based on the notification materials you submit to the Department and, if necessary, an investigation of the project site by the Department, the Department will determine if your proposed project may impact fish or wildlife resources. *If the Department determines that your proposed project may substantially adversely affect existing fish or wildlife resources, you will need to obtain a Lake or Streambed Alteration Agreement from the Department and your proposed project, unless it is otherwise exempt, will have to be reviewed in accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) before you may begin any work.*

(a) The document should contain a discussion of potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts.

Thank you for the opportunity to comment on the proposed project. Questions regarding this letter and further coordination on these issues should be directed to Ms.

Denyse Racine, Environmental Specialist III, at (760) 872-1158.

Sincerely,

Darrell M. Wong, Acting Supervisor
Habitat Conservation Program

Attachment

cc:
M. Haynie
D. Racine
S. Parmenter
Mono County Board of Supervisors
Mary Pipersky, Tom's Place
Diane Noda, USFWS Ventura

DEPARTMENT OF TRANSPORTATION
AERONAUTICS PROGRAM M.S. #40
1120 N STREET - ROOM 3300
P.O. BOX 942874
SACRAMENTO, CA 94274-0001
(916) 654-4959
FAX (916) 653-9531

March 16, 2000

Mr. Bill Manning
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Dear Mr. Manning:

Re: *Notice of Preparation (NOP) for Proposed Improvements at Mammoth Lakes Airport: SCH# 2000034005*

The California Department of Transportation (Caltrans) Aeronautics Program has reviewed the above-referenced document with respect to CEQA. The following comments are offered for your consideration.

According to the NOP, the proposed improvements at Mammoth Lakes Airport are needed to allow the airport to support air carrier service. Since the improvements will include a runway extension, an amended State Airport Permit will be required. For assistance with the permit process, please contact the Aeronautics Program's Aviation Consultant for Mono County, Bob Spano, at 916/654-5284. The plans to strengthen and widen the runway and extend the taxiways should also be submitted to Bob for review.

As part of the amended permit process, we must ensure that the proposal is in full compliance with CEQA. In addition to reviewing the NOP, we request copies of the Draft and Final EIRs and the Notice of Determination when available. The Draft EIR should address potential airport-related noise and safety impacts air carrier service could have on the surrounding community. The proposal should also be submitted to the Mono County Airport Land Use Commission (ALUC).

Thank you for the opportunity to review and comment on this proposal. We look forward to reviewing the Draft EIR. If you have any questions regarding our comments, please call me at 916/654-5314.

Sincerely,

Sandy Hesnard

SANDY HESNARD
Environmental Planner

c : State Clearinghouse, Mono County ALUC

United States Department of Agriculture Forest Service
Inyo National Forest
Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 1950/2720

Date: 8 March, 2000

Bill Manning, Airport Manager
Mammoth Lakes Airport
Route 1, P.O. Box 209
Mammoth Lakes, CA. 93546

Dear Bill:

I am writing this letter in response to your February 3, 2000 scoping letter requesting comments on issues or concerns that the Forest Service might have concerning the proposed improvements for the Mammoth Lakes Airport.

In general, any impacts to the surrounding national forest land, whether direct or indirect, should be clearly identified and addressed in the document. This includes having the national forest boundaries clearly identified on all maps, so that it is clear which developments may directly or indirectly involve national forest land. As there was a boundary adjustment finalized in 1999, it is essential that the map shown be the final one, and it must demonstrate the relationship of national forest land and the proposed improvements. The maps included in your scoping letter do not show this relationship, and therefore, it is unclear to me which of the alternatives avoid use of national forest land for runway widening or lengthening, or similar elements of the project which may be located entirely on private land without impacting national forest land.

However, I understand that three of the proposed expansions may directly involve national forest land under any of the alternatives: the access road on the east side of the airport, which is proposed to connect to the Benton Crossing Road; the widening of at least one of the runways, which may impact vegetation and/or soils on national forest land; and the security fence, which appears to be located on national forest land. There may be others proposed, as well, and these should be identified and addressed in the NEPA document.

There is also a grazing permittee under Special Use Permit who may be affected by portions of the proposed improvements and alternatives. Any potential effects to these permitted operations should be addressed in the analysis and, if necessary, identify appropriate mitigation measures as a consequence of those alternatives. For example, improvements in the access road or changes in the fencing perimeter may affect access to livestock watering areas or other range resources. It is difficult to determine from the proposed alternatives whether possible mitigation may be needed, such as providing an off-site watering source.

We appreciate the opportunity to review the preliminary Notice of Intent to Prepare an Environmental Document. Please feel free to call Lands Officer, Rick Murray at (760) 647-3013 if you have any questions concerning the comments in this letter, or me at (760) 924-5505. We look forward to seeing our concerns addressed in your NEPA document.

Sincerely,

SANDY G. HOGAN
Special Project Coordinator

enclosures

cc: Bill Thomas, Dave Wood Ranches
Steve Julian, Interim Town Manager
Bill Taylor, Senior Planner
Rick Murray, Lands Officer

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BERKELEY · DAVIS · IRVINE · LOS ANGELES · RIVERSIDE · SAN DIEGO · SAN FRANCISCO

SANTA BARBARA · SANTA CRUZ

SANTA BARBARA, CALIFORNIA 93106

SIERRA NEVADA AQUATIC RESEARCH LABORATORY
STAR ROUTE 1, BOX 198
MAMMOTH LAKES, CA 93546
(760) 935-4334, 935-4867 FAX

February 21, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1, Box 209
Mammoth Lakes, CA 93546

Dear Bill:

Thank you for the opportunity to comment on the Notice of Intent to Prepare an Environmental Assessment for Proposed improvements at the Mammoth Lakes Airport. We have several potential impacts we would like to have included in your analysis. Please consider the following, in no particular priority order.

1. Air Traffic Patterns: As you know, the residents and visitors at SNARL are some of the only close receptors for air traffic noise. Furthermore, low flying traffic over our Reserve may have a negative impact on wildlife. It is important that commercial aircraft be prohibited from flying over the Reserve as they approach or leave the airport.

2. Run-Up Noise: In the past we have brought this problem to your attention and we have seen (or heard) a marked improvement. However, some pilots are still not aware of the problem, and with increased private and commercial traffic the problem must be dealt with again. Specifically, when pilots do engine run-up tests in front of Doe Ridge, the Ridge acts like a giant reflector and sends all of the noise toward SNARL. Please make sure that engine run-up locations are clearly delineated and traffic is managed to prevent this problem.

3. Green Church: As air traffic increases at the airport the use of the Green Church as a classroom facility becomes more and more difficult. As a condition of the airport plan, Terry Ballas is required to move the church or build us a suitable replacement at our main compound across the highway. However, this condition is tied to the occupancy of his proposed condo project, not directly to air traffic. Commercial service with 757's will render the church useless long before Ballas has condos to sell. A plan must be in place to mitigate this impact by moving or replacing the church sooner. The plan must assume all the costs of the project including but not limited to: site planning at the new location, utility extensions, construction, removal of the church, and renovation of the church site.

4. **Night Lighting:** The current night lighting at the airport is a serious visual pollution problem, robbing us of our dark night skies. Existing lighting must be improved and all new lighting must be constructed to maintain the dark night skies in proximity to the airport.

5. **Fencing:** I understand the FAA requires new fencing around the airport with either 6' chainlink topped by concertina wire or 8' chainlink. Either will be a significant visual impact and a significant impact to wildlife in Long Valley. An attempt should be made to get a waiver of this requirement from the FAA.

6. **Water Resources:** No complete analysis has been done of the potential impact of the increased groundwater extraction for the airport project. The Long Valley Hydrologic Advisory Committee has requested that the Town construct monitoring wells between the airport and Fish Hatchery springs and between the airport and Hot Creek to monitor potential groundwater effects. These wells should be required as mitigation under the EA.

7. **Signs:** The current airport plan calls for two very large signs to be placed along US 395. These signs will have a significant visual impact that must be considered.

8. **Access Road:** The access road to the airport from the Benton Crossing Road will be critical for timely emergency response and should be moved forward in priority.

Please feel free to contact me if you require any additional information.

Sincerely,

Daniel R. Dawson
Director

MEMORANDUM

Date: March 31, 2000

To: Tom Cornell

From: John Bergener

Subject: MEETINGS WITH BILL TAYLOR AND OTHERS, MARCH 24, 2000

Morning meeting with Bill Taylor:

A meeting with Bill Taylor was held Friday morning March 24, 2000 to discuss elements that should be included in the environmental assessment (EA) and how these elements are to be addressed:

1. Forest Service
   - The access road connecting the Airport entrance to the East End of the property was already included as a direct impact for the private development environmental impact report (EIR). It was decided to include the road as a cumulative impact in the EA.
   - Questions were raised regarding the information the Forest Service would require before issuing a special access permit for the access road.
   - Questions were raised about other activities that take place on Forest Service land such as grading in the object free area (OFA) and runway safety area (RSA) and the visual quality of the fence.

2. Noise
   - Bill Taylor requested a noise contour map with multiple landmarks such as the runway, hangars, parking, the hotel, and other development shown.
   - He also requested that noise contours be shown down to the 55 DNL threshold.

3. Airport Employment
   - It was questioned if there would be a housing allotment requirement for new Airport employees. Bill Taylor mentioned that there is a cutoff on the number of employees before mitigation is required but he was unsure what this point was.
   - It was mentioned that the Employment Development office in Bishop maintains employment statistics that may be useful in some of the analyses.

4. Air Quality

- Particulate matter 10 micron (PM10) is the most prevalent and controlling factor for air quality in the region. This is primarily due to two factors: wood burning in the early winter season and road ash that was used for traction control drying out in the early spring season.

5. Water quality
   - It was questioned whether or not the Airport has a spill prevention plan. Bill Manning thought there was an existing plan but if there isn't, one will need to be developed either through obtaining one from the FBO if they have one or modifying an example from some other airport.

6. Terminal building height
   - It was noted that the planned terminal building height is different than described in the EIR. This will have to be reassessed in the EA
   - The town/local zoning will have to be changed at the building site to allow the terminal height (a height of 45 feet was discussed).

Afternoon meeting with Bill Taylor, and others [Tom, I didn't get a copy of their business cards; do you have this?]: Scott Burns + Larry Simonson — See attached business cards

1. Fencing
   - It was noted that the proposed airport perimeter fencing might interfere with a deer migration corridor, as the new design does not allow deer to pass while the existing fence does. It was suggested that a deer migration specialist be retained to study this question and the results be included in the EA.

2. Wild life
   - The issue of possible wild life impact to the sage grouse was discussed. As this was addressed in the EIR however, it was decided that further study was not warranted.

3. Vehicular traffic
   - It was noted that a traffic engineer was preparing a traffic impact analysis for a nearby project (the transition of the gravel quarry into an industrial park on the south side of Highway 395). It was suggested that his trip generation numbers would be available to us for inclusion in our traffic impact analysis prepared as part of the EA.

4. Hydrology
   - It was suggested that a hydrologist be retained to verify the results presented in the EIR or at least detail the hydrology section of the EA.
   - A suggestion for additional monitoring wells was made but discussion seemed to indicate the level of monitoring presented in the EIR would be sufficient.

5. Noise
   - The representative from Crowley and Sunny Slopes indicated that he would like to see more public outreach to the noise impacted communities.

6. Land acquisition/ownership
   - It was suggested that the town of Mammoth Lakes does not currently own the property upon which the East End of the runway lies. It is currently under county control and should be annexed sometime in the future.

The group at the meeting agreed to provide the following materials for inclusion in the EA analysis:

- Traffic impact analysis for the industrial park
- Most current Airport land use plan
- Industrial park layout plans
- A list of contacts who could answer questions that arise

cc: 98-10-0112
Read File

Meeting Memo_1242000.doc

Pat Eckart
P.O. Box 7525
Mammoth Lakes, CA 93546
(760) 934-3726

(Hand Delivered) April 3, 2000

To: Bill Taylor, Senior Planner
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Re: Airport Expansion—Noise Impacts on Wildlife and People

"No amount of open space will relieve human tensions if it is polluted by noise."*

An impact I have not seen addressed is that of noise and vibration caused by low-flying aircraft over wilderness areas and mountain communities. Specifically, what are the impacts to communities and wildlife as planes approach and depart Long Valley? What routes will these planes take, at what altitude, and how frequently? What will be done to enforce regulations, and to prevent small planes from "buzzing" the town?

The potential impacts of airport traffic on adjacent land uses *to the west* of the airport have not been addressed. The noise impact analysis by Hodges and Shutt (1986) was to "assess noise impacts of airport activity on the proposed project." The March 1997 "Subsequent Environmental Impact Report and Updated Environmental Assessment" (Mammoth Lakes Airport Expansion) only addresses noise impacts at the airport and nearby locations such as the Fish Hatchery, Hot Creek, and Hot Creek Ranch. In addition, acceptable noise levels are set for *human* impact. The California Noise Regulation establishes the maximum noise level allowed in *developed* areas. Direct airport-caused impacts to nearby wilderness areas and communities need to be addressed.

The EIR/EA refers to a "concern of *low-level overflights* over the Hatchery creating sufficient noise to disturb the young fish. These low-level overflights are banned by the Airport." [p. 17]. If such concern is shown for fish, should not an equal amount be shown for all wildlife and humans? An incident that occurred back when Alpha Air was flying out of the Mammoth Lakes Airport helped form the basis for my concerns and questions. Perhaps what I witnessed was simply a problem of enforcing regulations, but it bears repeating here:

> An fast-moving aircraft approached from the northeast as I hiked up Mammoth Crest Trail near the overlook to Horseshoe Lake. Peering through the trees I saw the plane *below* me, climbing out of the Lakes Basin. The turbojet(?) roared past the overlook at eye level, no more than 200 feet north of me, so close I could see a passenger looking out the

window. As the large red and white plane (most likely the 8:30 a.m. Alpha Air flight to Fresno) flew over Horseshoe Lake and toward Mammoth Pass, a chilling sound rose from the forest floor—a cacophony of shrieks, screams, whines, cries, yelps, howls—no two alike. The din had no resemblance to that of a coyote pack's excited howls. I had once heard a similar sound—that of a mother marmot whose baby dangled from a coyote's mouth. And like the marmot's shriek, the coyotes' cries continued long after the cause of the distress had disappeared.

What does this incident tell us about impacts on wildlife, about the need for regulations, and about air routes, altitudes, frequency of flights, and enforcement? What impact did the plane have on the animals? Was the impact significant? Was this only an isolated incident? Why does the Airport EA only address noise impacts on humans? And then only at the airport? It's well known that increasing decibels are making our human population deaf. Noise also increases stress with all its ramifications. Will any of this be taken into account when assessing and mitigating impacts by means of carefully selected air routes, altitudes, and frequency of flights?

What studies have been done on the impacts of low-flying aircraft on wildlife? What, if any, height limits are required of aircraft over wilderness areas? What mitigation will be required to lessen impacts on wildlife caused by aircraft?

Apart from wildlife, what will be done to prevent the current practice of low-flying small planes circling over the town, creating undesirable noise impacts on its human residents?

Thank you for the opportunity to comment on the possible impacts of the airport's expansion. If you have any questions, please call me at (760) 934-3726.

Sincerely,

Pat Eckart

Pat Eckart

cc: Bill Manning, Airport Manager
Town of Mammoth Lakes

Elisha Novak, FAA, San Francisco Airports District Office, 831 Mitten Rd., Room 210, Burlingame, CA 94010

Dept. of Fish & Game, Bishop

*Human Environments and Natural Systems, by Ned Greenwood and J.M.B. Edwards, 1973.

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TOWN OF MAMMOTH

April 3, 00

To Town of Mammoth Lakes

My input Regarding Air-port Expansion E.I.R. Comments

These are my comments Regarding the Expansion of Mammoth Airport.

#1. Noise. The Airport Managers efforts have not been effective. The Crowley Lake Communities are much more noisy due to airplanes than they were 2 years ago. The A.P. Manager boasted in the Mammoth Times that there is a 100% increase in air traffic at Mammoth Yosemite Airport. For us this has translated into a 100% increase in noise. I've enclosed some advertising brochures that the A.P. sends out on a regular basis to all pilots within a 250 mile radius of Mammoth Yosemite Airport. It's reasonable to believe that these brochures will bring many more private pilots to Mammoth Yosemite Airport. Every issue of the Mammoth Flight Guide should contain information on noise abatement. To the best of my knowledge, so far only one has mentioned the noise abatement procedure. That tells me the A.P. Manager does not care. That is an outrage!

In the decades ahead noise pollution will be one of the most awful pollution sources in Calif. The state population is supposed to grow

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COMMUNITY DEVELOPMENT DEPARTMENT

by 17 MILLION people in 20 year
PLANNERS throughout the STATE ar
ADDRESSING NOISE POLLUTION IN A
SERIOUS WAY. I EXPECT the SAM
~~FROM~~ You, the AIRPORT EXPANSION
SHOULD NOT GO FORWARD UNTIL THI
PROBLEM IS MITIGATED.

the answer - WE MUST FIND A
WAY TO HAVE PRIVATE PILOTS FL
IN & OUT OF MAMMOTH AIRPORT, THROU
LONG VALLEY, ON the ~~FAR~~ SIDE OF
the LAKE. IT IS AS SIMPLE OR
AS COMPLICATED AS THAT. I here
A LOT OF NONSENCE FROM the A.P
MANAGER ABOUT "WE CAN'T put
THEM IN A CORRIDOR", ITS DANGEROUS
I HAVE TWO RESPONSES: #1 THEY'RE ALR
IN A CORRIDOR. THEY FLY PARALL
TO 395 & #2 the CENTER OF CROWLEY
LAKE TO the WHITES IS HARDLY
a CORRIDOR. ILLAND A #3. PILOT
HAVE A RESPONSIBILITY TO LOOK
OUT THEIR FRONT WINDSHIELD.

#2 SAFETY The AIRPORT SHOULD
BE CLOSED IN FOUL WEATHER. I HEARD
the NONSENSE the A.P. MANAGER PU
FORWARD about the A.P. NOT BEING
MANNED 24 HRS A DAY AND SO
ON. MY RESPONSE IS that there
IS TECHNOLOGY NOW. RADIOS AND
the LIKE. I put the THRESHOLD
AT which the A.P WILL BE CLOSED

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TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

IN the PILOTS AIRPORT TRAFFIC GUIDE. When that threshold is Reached the A.P. IS Closed. Weather INFO IS AVAILABLE TO PILOTS over their radios.

#3 the Green Church SHOULD Stay. IT'S a Landmark for ALL VISITORS AND LOCAL Stores in the County. MOST people USE IT AS A REFERENCE POINT. Besides, IT IS A TRADITION. When the whole South END OF OUR STATE IS Caught up in the 90 FAST LAS VEGAS TYPE LIFE, this church IS a "SLOW DOWN" NOSTALGIC NATURAL TRANQUILIZER.

#4 The TWO AIRPORT BILLBOARDS. I CAN'T go on IM GOING TO THROW UP. I'M AGAINST the BILL BOARDS. YOU ARE A NEW RESIDENT IN Long Valley. NEW RESIDENTS SHOULD BLEND They SHOULD NOT BE OBTUSE. The TOWN OF MAMMOTH LAKES HAS BECOME A NOISY NEIGHBOR IN OUR VALLEY. NOW IT WANTS TO PUT UP these AWFUL SIGNS which are MANY TIMES LARGER THAN the COUNTY ALLOWS. YOU ARE SHOWING YOUR SOUTHERN CALIFORNIA ROOTS. IT IS DISGUSTING.

Sincerely
Ray Turner

RAY TURNER
RR 1 BOX 175
CROWLEY LK CA 93546
760-935428

MCGee CREEK
CROWLEY LAKE CA 93546

JOHN & PAT EATON
RT 1, BOX 189A
CROWLEY LAKE, CA 93546
760 935 4377

April 3, 2000

Bill Manning, Airport Manager
Mammoth Lakes/Yosemite Airport
POB 209
Mammoth Lakes, CA 93546

Dear Mr. Manning:

Thank you for the opportunity to comment on development at the Airport.

Our particular concerns, which we would like to see addressed in the EA, are as follows:

Presently the flyovers create an untenable situation for residents of the Long Valley communities, particularly the communities of Sunny Slope and Pine Glade. With airport use at its present level, nothing has been done to alleviate this problem in spite of two years of effort on the part of residents individually and as represented by the Crowley Lake Regional Planning Advisory Committee. Residents of Long Valley are very concerned that increased use will result in increased noise.

Extending the runway to the east may require removal of the famous Green Church, constructed in the 1950's. This church is a County landmark and an integral part of the cultural and social history of Long Valley. While the church's removal would be inconsistent with the historical values addressed in the Mono County General Plan, the destruction of the Duguid Family Memorial Cross would be a desecration.

Our winter weather is a concern. More pilots using the airport may result in more risky flights during periods of bad weather.

Widening the runway so that planes land closer to US395 may present a hazard to traffic on that highway.

Extending the runway east to Benton Crossing Road may present a hazard to traffic on that road.

Hydrology impacts should be discussed regarding effects of the Airport's septic system on groundwater. There may be cumulative effects when combined with the established communities west of Crowley Lake.

Visual impacts of eight foot chain link fencing and signing should be considered.

We look forward to seeing these issues discussed in the environmental documents.

Thank you.

John and Pat Eaton

cc: Bill Taylor, Town of Mammoth Lakes

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COMMUNITY DEVELOPMENT DEPARTMENT

Mary Pipersky
Resident, Sunny Slopes
PO Box 8474
Mammoth Lakes, CA 93546
760-935-4606

April 2, 2000

Bill Manning, Airport Manager
PO Box 209
Mammoth Lakes, CA 93545

Dear Mr. Manning;

Thank you for the opportunity to comment on the airport expansion and development. I have reviewed letters that were written to you by the California Department of Fish and Game, the Mono County Community Development Dept., the Crowley Lake Regional Planning Committee and CalTrans. Many agencies and individuals are interested in the developments at the Mammoth/Yosemite Airport.

I am particularly interested in the visual, traffic, hydrological and noise impacts that the current and future airport development will have. It is my understanding that the improvements at the Mammoth/Yosemite Airport will be made to support air carrier service. In the meantime, according to Mr. Ballas, general aviation has increased by 100% over the last year. It is this increase in general aviation traffic with low flyovers above the neighborhoods of Toms Place, Sunny Slopes and Pine Glade that has impacted these neighborhoods with unacceptable noise levels and possible safety issues. This is an impact that has been increasing and exists right now.

It is my hope that Hot Creek Aviation and the Mammoth/Yosemite Airport will work to solve this particular issue by being a good neighbor within the community of Mono County. Future air carrier service may also impact these communities with noise and safety issues and should be addressed in any environmental documents.

When available, I would like to see the draft and final EIR's or any other environmental documents. Thank you again and I look forward to meeting with you and working together after I take office in January, 2001.

Sincerely,

Mary Pipersky
District 2 Supervisor Elect

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TOWN OF MAMMOTH LAKES
PLANNING DIVISION

BRIAN & KATHLEEN KNOX
HCR 79 BOX 53
SUNNY SLOPES, CA 93546
760.935.4298

Bill Manning, Airport Manager
Mammoth Lakes/Yosemite Airport
P.O. box 209
Mammoth Lakes, CA 93546

Dear Mr. Manning: April 2. 2000

Thank you for the opportunity to comment on the proposed expansion at the Airport. We are concerned about the consequences the developments will have on the environment, our community, and the quality of life we are graced with by choosing to live in such a truly unique and special place. We respectfully request the following issues be thoroughly addressed in the Environmental Impact Report.

Increases in airplane and vehicle traffic, nocturnal lighting from gas marts, parking lots and condominium developments, along with the noise all these additions create, will further impact the Round Valley and Casa Diablo deer herds. The **California Department of Fish and Game** is of the opinion the 97 Subsequent EIR did not adequately address the impacts to this resource, particularly the potential for increased roadkills along Hwy 395.

The hill climbs behind the airport up Doe Ridge are seeing more abuse. The **Inyo National Forest** needs to determine how an increase in motocross bikes and snowmobiles in Mr. Ballas' 91 "toy boxes in paradise" will create further resource damage on Doe Ridge and in the Hot Creek area.

This entire development will require the construction and maintenance of Mono Countys' largest septic tank and associated leach field. The water table beneath the airport is quite close to the surface. The effect of sewage from more than 200 condos on the ground water needs to be determined and mitigated.

The plans to extend and widen the runway will require an amended State Airport Permit. The **California Department of Transportation Aeronautics Program** require, as a part of this amended permit process, that the proposal be in full compliance with CEQA.

The **Mammoth Times** reported last week that the residents of the Long Valley communities, as represented by the Crowley Regional Planning Advisory Committee, are not satisfied with the action taken to address the progressive increase in low flyovers. The **Mono County Community Development Department** shares our concern. In addition to the increased disturbance, the safety of our residents is being jeopardized.

We look forward to reviewing the environmental document addressing these and other pertinent issues.

Sincerely,

Brian & Kathleen Knox

cc Bill Taylor, TML Senior Planner

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APR - 3 2000
TOWN OF MAMMOTH LAKES
PLANNING DIVISION

March 29, 2000

Mr. Bill Taylor, Chief Planner
Town of Mammoth Lakes
PO Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Taylor:

This letter is to express my concerns regarding the proposed Mammoth Airport expansion plans:

1. Potential danger to nearby residences. Pollution potential of fuel leakage which would contaminate Convict Creek water which flows into Crowley Lake and would thus impact all contingent water supply, including Los Angeles (DWP), as well as the surrounding environment
2. Noise pollution, and by extension, property devaluation
3. Runway expansion plans to the east of the existing runway should not be considered for the above mentioned reasons as well as the fact that the expansion would allow for flight patterns that would result in planes flying even more dangerously close homes
4. Financial viability, and the potential for starting such a large project, only to abandon the effort midway for lack of funds, while already having irreparably damaged the environment
5. U.S. 395 as a scenic corridor has already been destroyed by the hasty erection of hangars with little public awareness until after the fact
6. The potential that FAA funding will be used to construct asphalt aprons that serve private storage facilities rather than aviation designated purposes.

Furthermore, I would strongly urge re-consideration of the nearby Bishop Airport for expansion, based on its much more feasible location at 3,000 foot lower altitude in a less inclement weather area where landings and take-offs are safer and less likely to result in weather close-downs.

Please be aware that the potentially adverse impact on our community, our homes and our environment is of grave concern not to me but to all that live in and visit this beautiful and pristine area.

Sincerely,

Katharine Jane Saxon, Mammoth Resident
PO Box 3212
Mammoth Lakes, CA 93546

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TOWN OF MAMMOTH LAKES
PLANNING DIVISION

Route 1 Box 192
Mammoth Lakes, CA 93546
March 20, 2000

Mr. Bill Manning, Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Dear Mr. Manning:

This letter is to express our concerns regarding the proposed Mammoth Airport expansion plans. As Crowley Lake residents in close proximity to the airport, the following particularly alarms us:

1. Potential danger to nearby residences, especially since we have witnessed an airplane crash-landing within 100 yards of our home near McGee Creek Maintenance Station
2. Pollution potential of fuel leakage which would contaminate Convict Creek water which flows into Crowley Lake and would thus impact all contingent water supply, including Los Angeles (DWP), as well as the surrounding environment
3. Noise pollution, and by extension, property devaluation
4. Runway expansion plans to the east of the existing runway should not be considered for the above mentioned reasons as well as the fact that the expansion would allow for flight patterns that would result in planes flying even more dangerously close to our home
5. Financial viability, and the potential for starting such a large project, only to abandon the effort midway for lack of funds, while already having irreparably damaged the environment
6. U.S. 395 as a scenic corridor has already been destroyed by the hasty erection of hangars with little public awareness until after the fact
7. The potential that FAA funding will be used to construct asphalt aprons that serve private storage facilities rather than aviation designated purposes.

Furthermore, we would strongly urge re-consideration of the nearby Bishop Airport for expansion, based on its much more feasible location at 3,000 foot lower altitude in a less inclement weather area where landings and take-offs are safer and less likely to result in weather close-downs.

We have contacted the Los Angeles Department of Water and Power as well as several attorneys to look into this matter in depth.

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PLANNING DIVISION

Please be aware that the potentially adverse impact on our community, our homes and our environment is of grave concern not only to us but to all who live in and visit this beautiful and pristine area.

Sincerely,

Heimo and Beatrice Ladinig
Long Valley and Mammoth Property Owners

cc: Bill Taylor, Chief Planner, Town of Mammoth Lakes
Elisha Novak, FAA San Francisco Airport District Office
Law Offices of Benjamin T. Ladinig
Law Offices of Michael Berger
Congressman John Doolittle

April 03, 2000

Bill Taylor, Senior Planner
PO Box 1609
Mammoth Lakes, CA 93546

Dear Bill,

I am writing you concerning the proposed Mammoth Airport expansion (I will never be able to use "Yosemite" in it's name.) In the years that we have lived in the Rock Creek area, there have been at least five airplane crashes within 5 miles of our home. I heard two of them , the latest of which occurred 1/4 mile from our house in Sunny Slopes. All of these accidents happened during storms, and all involved small private planes. As I'm sure you know, the east escarpment of the Sierra is one of the more dangerous places to fly a small plane in the world, especially when storm conditions produce the spill-over winds and downslope turbulence. Here at the top of Sherwin Grade is the first place that northbound highway 395 really hugs that eastern wall of the mountains.

Too many pilots approaching Mammoth Airport from the south are simply following highway 395, and are illegally low over the houses here at Sunny Slopes. We see a lot of low flying planes coming in on Friday evenings during the winter, and leaving the area on Sunday afternoons.

I understand that the larger commercial aircraft have a strict flight plan for approaching and leaving the airport that requires them to be quite a ways north of the highway, or approximately over the Owens River Gorge and Lake Crowley. From my observations this has mostly been the case in the past.

If the Mammoth Airport expansion means a big increase in air traffic over our neighborhood, I am sincerely concerned for the safety of my family and neighbors, because of the extreme flying conditions here at the base of Wheeler Crest and Red Mountain, especially during storms. We all know the nastiest storms always seem to come on the weekends too!

Noise is also a concern of mine and my neighbors, but it is secondary to the very real threat of a plane slamming into someone's home here.

I would hope that safe approach and take-off routes could be mandated for <u>all</u> aircraft, requiring them to remain at least a couple of miles away (to the north) from Sunny Slopes, before any improvements to the airport are made to increase the number of flights, or size of aircraft using it. No matter what happens to the airport, the winter storms are still going to blow just as hard, the snow is still going to pile up as fast as ever before, the elevation of the runway will remain the same, and bad judgement in human beings will still occur at the wrong time.

Sincerely,

Jim King
79 Jeffrey Pine Rd.
Sunny Slopes

cc: Bill Manning
Elisha Novak

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TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

To: Town of Mammoth Lakes
C/O Bill Manning, Airport Manager
Rt. Box 209
Mammoth Lakes, Ca. 93546

Subject: Concerns at Mammoth Lakes California

Bill,

The following is a brief description of my concerns after reviewing the March 1997 EIR. I will also address the issues listed in the Mammoth Times article dated March 2, 2000. While the March 1997 EIR and this recent article have raised several areas of concern they do not even begin to address problems off of the airport property. Therefore, I will list my concerns as 1) On airport, 2) Off airport, and 3) environmental. Finally I'll address the request as outlined in the March 2, 2000 Mammoth Times article.

1) On Airport:

* As an ex-airline employee that was employed at the Mammoth Lakes Airport (for about six years) I have a unique insight into operations of an airline. My experience is that flight crews flying a flight that originates at a distance airport can not predict the weather at Mammoth at the time of arrival. Mammoth's local weather can go from below minimums to above minimums several times in any given hour. This is especially true during the winter months, but occurs year round.

Further, the weather reporting system at Mammoth Airport only covers the area immediately around the airport. The system only reports to about the edge of the Mc Gee Creek grade. Pilots do not receive accurate weather reports covering the approach area from Sherwin Grade / Tri valley area to Crowley Lake. This approach area is often below minimums while the Mammoth radio reports above minimum conditions.

These varying conditions require airline staff (some with little or no training) to make weather related decisions after the flight is airborne and just prior to arrival. This decision is normally made around the Bishop airport. The Town of Mammoth Lakes has never provided on-site, real time, staff to report the weather for airline employees to base their decisions on.

* The 1997 report indicates that 13,000 flights occurred annually in 1986. These flights are flown into an uncontrolled airport. Recently the Town of Mammoth Lakes was provided with a report and map indicating that over thirteen accidents and twenty deaths had occurred at or near the airport that were related to weather and pilots attempting to take-off or land. This report did not include crashes from other causes such as crosswinds or accidents that resulted in injuries only. Introducing commercial traffic into the existing situation without an air traffic control system is an invitation to disaster. The 1997 EIR calls for an increase in flights to 34,430 with an increase to 9,000 flights being private pilots, (scenario #4).

However, the Mammoth Lakes Police Dept. is now the law enforcement agency that has primary jurisdiction. Does the Police Dept. have the manpower, required training as direct by the California Penal Code, and resources to meet its responsibility at the higher security levels? Are they even aware of these mandates?

2) Off Airport

* The 1997 EIR reports refers to a Cal-Trans report showing "SAFETY ZONES" and a 45db limit in the communities of Crowley Lake and Tom's Place. These reports could not be located. Both of these issues are important and should be made public for evaluation and comment. Is the 45db limit realistic with approaching and departing 757s?

*There is no mention of how the Town of Mammoth Lakes or the airport plan to address off field emergencies. Increasing passenger loads to the levels indicated in the 1997 EIR report could easily overwhelm the local emergency service, and unlike in the cities, we have no additional resources to draw from in a timely fashion. These flights will be approaching and departing over water and snow covered fields. Emergency access could be an issue. In the event of an accident Mammoth Hospital and Northern Inyo Hospital could be overwhelmed with as few as 10-15 critically injured patiences.

* No approach plates have been published or presented to the communities of Crowley Lake or Tom's Place for review or comment.

3) Environmental:

The area above Crowley Lake from Highway 395 to the Owns River is a migratory bird route. We routinely see seagulls, ducks, geese, and pelicans in this area. This has never been a major problem for propeller driven aircraft. However, with the introduction of large jet engine aircraft the birds will become a significant problem.

Likewise, the area directly south of the airport is a deer migration route. These animals routinely gain access to the airport at night. A propeller driven aircraft has little difficulty applying power and going around in the event of an animal on the runway. Jet aircraft do not respond as quickly and this could result in an accident.

The idea of moving the runway closer to Highway 395 is a poor idea in my opinion. We have already had one fatal accident on this stretch when a driver was watching a plane land and struck a bicyclist. Landing 757 will certainly distract motorist.

* I have often seen large profile aircraft sitting on the ramp because of crosswinds. The Town of Mammoth Lakes has given up the idea of a crosswind runway. Crosswinds have been a problem at this airport since the airport was built.

This airport has server weather that varies from minute to minute, strong crosswinds, is surrounded by mountains, and has a limited instrument approach system. Bishop airport is the field of choice for the diverting of flights. Many of the commercial flights of the past had to be diverted to Bishop Airport. If aircraft such as the Boeing 757 are flown into Mammoth Airport, where will these flights be diverted to in the event of bad weather? This could also occur if the runway is closed due to snow removal or a private aircraft mishap.

* On Table #2 of page 6, in the 1997 EIR the number of passengers increase from 5,200 in 1987 to a predicted 125,000 in scenario #4. This type of passenger increase creates several problems not addressed in the report. Assuming that the terminal services were increased to handle this passenger load, the airport infrastructure is not. The current Hot Creek Rd. can not handle the 400 cars/hr. described. The new road from the terminal to the Owns River Rd. is not even being discussed at this time. Neither, of these roads have any method of funneling this heavy traffic volume onto Highway 395. Both intersections are currently controlled by stop signs only. Adding traffic lights to a major State Highway would result in major accidents, and there are no current plans for highway on ramps. The question needs to be asked who pays for these roadway improvements. Is the Town of Mammoth Lakes or the Developer going to pay for these improvements?

* If these roadway issues are resolved there is the question of who performs the snow removal. The County currently plows the airport roadway after the County roads are cleared. With 4000 cars/hr. this roadway will require its own dedicated snow removal service. Will the Town plow from the terminal buildings to Highway 395? Do you expect the County to continue to provide snow removal service?

* Airline service will require <u>trained and certified</u> personnel for fire, medical, and police services. There are no such services currently assigned at the airport. The Town of Mammoth Lakes has stated they will address the problem of Fire personnel, Equipment, Training, and Housing. However, the airport is not in the fire district of Mammoth Lakes fire dept. To date, the Town has not approached the Long Valley Fire District (who does have the jurisdiction) to address these issues. Further, the Long Valley Fire District is a volunteer service and this would not be acceptable coverage for the type of operations planned. Fire service must be addressed.

* The FAA has different levels of security for airports and air carriers. These requirements vary from simply being able to respond a Patrol Officer within a set time, to having actual Officers at curbside and within the secure boarding area. The security plan at Mammoth was <u>not</u> negotiated with the Sheriff's Department prior to being sent to the FAA as indicated within the plan. During the Gulf War the level of security was raised above the ability of the local agencies. Since the Gulf War the security level has been lowered.

4) Airport Development

* With the development at the airport comes the issues of fire service, medical aid, and law enforcement. These services are required for the condos, restaurant, and shops. The response is different for structure fires than aircraft fires and requires different equipment and training. The increase in population at the airport will require more medical services and additional calls for police service outside of the Town limits.

It is clear that there are many issues that need to be addressed prior to making any decisions regarding the Mammoth Lakes Airport. To date the Town and the Developer have not addressed the concerns of the effected communities of Crowley Lake and Tom's Place. Hopefully this process can start the discussion.

In response to the Mammoth Times article, The length of the runway is not the main factor here. The width and the type of aircraft activity are. Alternatives # 1,5,8, and 9 are all acceptable.

Respectfully Submitted,

Duane "HAP" Hazard

CC. Town of Mammoth Lakes
Mono County Supervisors
FAA
Cal-Trans
Calif. Dept. of Fish & Game

BENJAMIN T. LADINIG
ATTORNEY AT LAW
550 N. PARKCENTER DRIVE, SUITE 200
SANTA ANA, CALIFORNIA 92705
PHONE: (714) 647-1506
FAX: (714) 571-0400

March 31, 2000

Mr. Bill Manning
Airport Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Re: **Expansion of Mammoth/Yosemite Airport**

Dear Mr. Manning:

This office has been contacted by Heimo and Beatrice Ladinig with regard to concerns about the planned expansion of the Mammoth Lakes Airport. Please let this letter serve as a formal opposition to the proposed expansion of the Mammoth/Yosemite Airport.

Upon reviewing the Proposed Airport Improvements contained in the Town of Mammoth Lakes Release dated February 25, 2000, it has become apparent that the proposed improvements will have a tremendously adverse effect on Heimo and Beatrice Ladinig. As you may already know, the Ladinig residence is situated within the flight path of the airport. Mr. and Mrs. Ladinig's home is located approximately 100 yards east of the Cal Trans maintenance yard in Long Valley.

Expansion of the existing airport to accommodate larger airplanes and increased air traffic to the Mammoth area would result in a catastrophic interference with Mr. and Mrs. Ladinig's comfortable enjoyment of life and/or their property. The increase in air traffic and use of much larger planes then presently allowed would create noise, smoke, air pollution and vibrations in the surrounding area. These newly created problems would not only result in a nuisance, but could constitute a governmental taking of the nearby land since this project is being partially funded by the Federal Aviation Administration. A taking of private property is constitutionally forbidden, absent just compensation.

In addressing the specific proposals of the planned expansion of the Mammoth/Yosemite Airport, any and all attempts to expand existing runways in an easterly direction will be received with strong opposition. Extending the runway east would result in the placement of the runways dangerously close to the residence of Heimo and Beatrice Ladinig.

Assuming arguendo that expansion of the airport is allowable under article I, section 14 of the California Constitution and the Fourteenth Amendment of the United States Constitution, expansion in the least invasive manner should be the principle objective. Therefore, any expansion east would not be the least invasive manner possible.

Please consider the above concerns when addressing the impact of expanding the Mammoth/Yosemite Airport. If the Ladinig's concerns are not adequately addressed, they will have no alternative but to seek legal redress.

Thank you for your anticipated cooperation and response.

Sincerely,

LAW OFFICES OF BENJAMIN T. LADINIG

Benjamin T. Ladinig, Esq.

BTL:lk

ML Airport/corr./Manning.001

Mr. Peter N. Bakuses
PO Box 263
Mammoth Lakes, CA
93546-0263

3/31/00

Re: Airport Improvement.

Dear Mr. Bill Taylor:

I have heard that, to make incoming flights safer, it would be wise to knock down the Green Church. Wise move. However if you have been around you know, one plane ended in the 395 median, another (twin) on the west side of 395. With Doe ridge on one side & hi power poles on the other it's only a matter of time when a dangerous airport will be at "Tragic" airport. The Hi power lines must "be buried" the whole length plus Benton Rd poles plus all poles north of the run way.

Sincerely Peter Bakuses

March 21, 2000

To Whom It May Concern:

This letter is in reference to the Mammoth Yosemite Airport Environmental Assessment. In reading the March 2, 2000 edition of *The Times*, I noted that the Town of Mammoth Lakes is soliciting input on specific areas of concern for inclusion or explanation through the EA process.

In reading the article, I did not see any mention of how you will assess the impact of additional flights on the Hot Creek Hatchery or on fishing in Hot Creek. I feel that is very important to determine the impact due to 1) increased number of landings and takeoffs as a result of increased operations, and 2) noise and air pollution as a result of the Boeing 757 class of aircraft flying over these sensitive areas.

I would appreciate a response that includes notices of any public hearings, deadlines for response, etc. as far in advance as possible so that I can arrange my schedule to be "home" at the appropriate times. I have listed both my local address and an interim address where I will be located over the next month.

Sincerely,

Joellin Bacon

Joellin Bacon
2112 Meridian #22
Mammoth Lakes, CA 93546

Interim Address:
5059 Quail Run Road #155
Riverside, CA 92507

3/24/00

Bill Taylor
Planning Dept, Town of Mammoth Lakes.

Re: Airport Improvements

Our recommendation for the airport is for alternative 1, no improvements. We strongly advise that Bishop be the point of arrival for carrier planes. Since this alternative is not likely to be adopted, the following concerns should be addressed in the scooping process.

1. Sage grouse habitat is now in evidence in the environs of the airport. What effect will enlarging the runways have on them?
2. What will be the impact on Hot Creek hatchery and Hot Creek istself by increased, high performance aircraft?
3. What effect will increased traffic have on the ambiance of the Town as well as the surrounding country, heavily used by both visitors and residents as a sanctuary.
4. What effect will enlarging the facility have on residents to the East?
5. What effect will enlarging the runways have on traffic along 395? Is there sufficient distance between the runway and the Highway?
6. What is the impact to the migrating deer?
7. Is there a conflict between Carrier service and small aircraft during arrivals and departures?
8. Is there a potential safety problem between carriers and mini-storage hanger users?

Again,, we opt for Alternative 1. Bishop has more favorable weather, more runway options and better approaches.

Sincerely,

Phyllis—

Phyllis and Herbert Benham
P.O. Box 1823
Mammoth Lakes, Ca 93546

H—[illegible]

Eileen Burger
P.O. Box 7233
Mammoth Lakes, CA 93546

March 22, 2000

Mr. Bill Manning, Airport Manager
Mammoth Lakes Airport
Route 1, Box 209
Mammoth Lakes, CA 93546

Dear Mr. Manning,

I am writing with concerns over the proposed improvements at Mammoth Lakes Airport, which I hope will be considered in the upcoming Environmental Assessment. As a result of these concerns, listed below, I strongly endorse Alternative 1--No Action. I believe that Alternatives 8 (Develop another airport in the region, etc.) and 9 (Use alternate modes of transportation.) are both compatible with Alternative 1, and merit consideration as well.

My primary concern with the physical changes necessary to make the runway adequate for air carrier service, is safety. Mammoth's runway is already very close to Hwy. 395, and widening the runway ANY amount toward the highway is only making an unsafe situation worse. It is my understanding that the Federal design standard for distance between the runway edge and the fence at the highway edge is 200 yards, for a commercial type airport. Without having measured the current distance between Mammoth Airport's runway and the highway, I know it is well below 200 yards. It can be distracting for drivers on the highway to pass the airport with the current aircraft that land and depart--anything larger and closer to the highway is going to look as if it is landing on the highway. When visibility is poor, it would be possible for the pilots to mistake the highway for the runway. I believe that the airport, situated as it is between Doe Ridge and Hwy. 395, is not safe enough (nor can it be made safe enough) to accommodate commercial air carriers like the B-757.

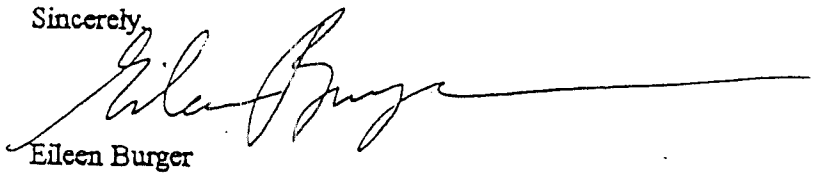
My second concern with the efforts to widen and lengthen the runway has to do with the weather patterns near the airport. When the wind is strong, it is often across the runway and causes shear in the vicinity of Doe Ridge. When the first 3000 feet of runway 27 are not recommended for landing, it effectively makes the runway only 4000 feet long. Even a 9000 foot runway would only be 6000 feet of useful runway. I do NOT support making the runway 10,000 to 12,000 feet long in order to make up the 3,000 foot loss adjacent to Doe Ridge. The airport, complete with crosswind runway, really belongs out in Long Valley near the county dump, away from the mountains on both sides of the valley (Alternative 8).

Thirdly, I do not support the removal of the "Green Church" for any changes necessary at the airport. The Green Church is part of the local history, and although it may not merit special consideration as an archeological site, it is nevertheless an important local landmark. I hope that the current owners will not consider moving it or removing it.

Next, I am concerned that our fragile high desert environment will be negatively impacted by the proposed changes to the runway at Mammoth Airport, as well as by the future air traffic itself. Commercial air carriers produce more noise than the smaller private and commuter aircraft that have traditionally utilized Mammoth Airport. How will the Hot Creek Fish Hatchery, Hot Creek day use area, and local flora and fauna be affected? How will noise affect the visitor experience at Hot Creek? How will noise impact the residential areas of Crowley Lake and Sunny Slopes? How will noise affect operations at the Fish Hatchery? How will paving many acres of land impact the local flora and fauna, the view-shed of scenic Hwy. 395, the water table?

Finally, I am deeply concerned that the changes that are being pursued are so unreasonable from a financial perspective, that we as a community will be left with the impacts--impacts to safety and to the cultural, physical and biological environment--long after a major air carrier has come and gone. Mammoth Lakes and the Eastern Sierra have neither the population base nor the type of amenities that will support a commercial air carrier service. I do not know if this sort of concern is relevant to the Mammoth Airport Environmental Assessment, but I find it nevertheless objectionable that we should bear the above risks for a highly uncertain gain.

Sincerely,



Eileen Burger

CROWLEY REGIONAL PLANNING ADVISORY COMMITTEE

Elisha Novak, FAA
San Francisco Airports District Office
831 Mitten Road room 210
Burlingame, CA. 94010
650.876.2928

RECEIVED
MAR 27 2000
SFO-600

Good morning Mr. Novak:

March 27, 2000

My name is Brian Knox, and I spoke with you last Friday regarding proposed improvements for the **Mammoth Lakes Airport.**

Members of the communities represented by **Crowley RPAC** have been under the impression that an official scoping period for public comments is open until April 3. After talking with you, I was left with the impression that, in fact a document call a *notice of availability* was sent to you office by **Mr. Terry Ballas, Developer** at the **MLA.** You indicated that, while all comments will be received and reviewed, the Developer or the Town of Mammoth Lakes are "25 steps ahead" in the process.

I would appreciate it you could FAX over an explanation of the process we should expect to see Mr. Ballas proceed through, and verify for our communities the existence of a legitimate scoping period. The persons concerned with the ramifications of these proposed improvements deserve to understand the required process, and we are not comfortable leaving this explanation to Mr. Ballas.

I have also included a copy of a letter Crowley RPAC delivered to Mr. Ballas and the Airport Manager, Mr. Manning, asking them to address the increasing number of low flyovers we are experiencing. We have not received a response.

Sincerely,

Brian Knox
phone: 760.935.4298
FAX: the same

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MAR 30 2000

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cc Bill Taylor, Senior Planner, Town of Mammoth Lakes
Scott Burns, Mono County Planning Director
Wally Hoffman, Mammoth Times

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▸ 6

To [illegible] From [illegible]

Dept./Agency Ricardo Phone #

Fax # (415) 547-1940 Fax #

Preserving the Eastern Sierra Tradition of Environmental Responsibility

Working to preserve the spectacular natural beauty of the Eastern Sierra Nevada and to keep HWY 395 in Mono County a scenic corridor now and in the future

Post Office Box 3511 Mammoth Lakes, California 93546-3511
PHONE / FAX: (760) 924-8475
E-MAIL: tenney@qnet.com / WEB: www.pester.org

ADVISORY BOARD: Phyllis Benham Janet Carle John Dittli Karen Ferrell-Ingram Claude Fiddler Gregory Reis ElizabethTenney EX OFFICIO* Byng Hunt* Rick Kattelmann*

RECEIVED MAR 20 2000

March 15, 2000

William Taylor, Senior Planner
Town of Mammoth Lakes
Post Office Box 1609
Mammoth Lakes, CA 93546

Dear Bill:
The supporters of Preserving the Eastern Sierra Tradition of Environmental Responsibility have a number of concerns that they would like addressed in the environmental assessment for improvements at Mammoth Yosemite airport.

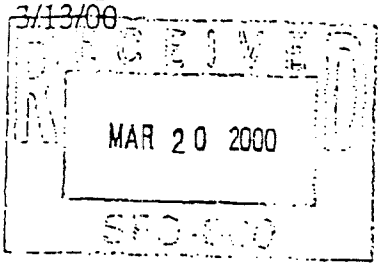
SPRAWL
We consider it vital for our quality of life and our recreation-based economy that the Town of Mammoth Lakes not expand beyond its present four-square-miles urban limits. Further development at the airport on HWY 395 will increase the pressure, we fear, for more land trades, re-zoning requests and other development deals in the Scenic Corridor leading to highly undesirable urban sprawl.

NOISE IMPACT
The flight path for landings and take-offs is critical to avoid noise impact on local residents and passing motorists. If take-offs, landings or both are over Sunnyslope, Tom's Place and Crowley, the noise will have a negative impact on the peaceful life of residents there. To avoid traffic accidents, some kind of warning system may have to be worked out to alert motorists of an impending very large noise—that of a jet plane landing alongside the highway.

SAFETY CONCERNS
There are a number of safety issues. The widened runway being 25 feet closer to 395 will make for a significant distraction/startle factor for passing motorists as 757s are landing. Also, if the runway is that close to the highway, a pilot isn't left with many options in a gust of wind as he's trying to land. Take-offs and landings over populated areas present a safety problem at our altitude, too. Some in our organization have wondered if the wake from a 757 landing or taking off could cause loss of steering control for passing motorists.

638 Cottonwood Drive
Bishop, CA 93514

3/13/00



Mr. Bill Manning
Airport Manager, Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, CA 93546

Dear Mr. Manning:

Here are my comments concerning NEPA documentation of the proposed expansion of the Mammoth Lakes, California airport facility:

First of all, the NEPA document must address how the proposed expansion fits into the current county and town plans. As I understand it, the county plan opposes leapfrog development, that is, growth should be concentrated around existing developments. How will the development of shopping, camping and residential facilities in a previously undeveloped area abide by this mandate? As a corollary, why has construction of the hangers and storage buildings of the proposed development already begun before the NEPA document has even been scoped?

Second, careful study must be made of an increase in jet traffic to the southern part of the county, those residences in the flight paths. The proposed flight paths, approach heights, frequency and type of aircraft, and allowable landing weather need to be laid-out, for south county residences stand to bear a major part of the impact of increased flight traffic. Not only is this a noise issue affecting quality of life and property values, but it is a safety issue. Over the years many planes have crashed on the approach to or departure from the Mammoth airport, many of them not far from residences. The high altitude, high surrounding mountains and inhospitable weather obviously make the Mammoth location a dubious one to plan for as the Eastern Sierra's primary airport. The accident rate of the Mammoth airport location should be compared to other small airports, to give decision makers an accurate perspective on how safe or dangerous the site is.

Third, the document should compare the alternative of developing the Bishop airport. Logic suggests that this is a much better location, with lower elevation, clearer approach and departure paths, very reliable weather, convenient location with existing services, and few residences to impact under the flight path. If the primary reason that the Town wants to expand the Mammoth airport instead of Bishop facility is because of ownership and marketing strategies, then this should be spelled out and compared to the safety, reliability and environmental benefits of the Bishop site.

Also in the flight path of the eastern approach to the Mammoth airport are a number of mating lekhs of the sage grouse. This unusual bird is a symbol of our area, but its numbers are diminishing and it is being considered for listing as a threatened species. How the increased overflights from low-flying jets might

impact the spring mating season of this bird needs to be addressed. Another concern is the impact additional airport lights will have on night skywatching. Brilliant starry nights are a primary attraction for many who live and visit this area.

Thank you for soliciting comment letters and I look forward to seeing the NEPA document.

Sincerely,

Andy Selters

cc: TML planner Bill Taylor
Elisha Novak, FAA airports officer

RECEIVED
MAR 16 2000
TOWN OF MAMMOTH LAKES
PLANNING DIVISION

March 15, 2000

Mr. Taylor,

As a resident of Pine Glade, located behind Sunnyslopes, I am concerned about development at the Mammoth Yosemite Airport.

Since Mammoth Airport, along with the Tahoe Airport & Palm Springs Airport, is deemed one of the three most dangerous airports in California, I am in favor of dropping it altogether and exploring the possibility of using the Bishop Airport instead.

However, since that sensible idea, which promotes public safety and would save lives, has already been rejected by Mammoth's planners and businesspeople, we'll have to deal with the existing situation, a dangerously located airport in a bad place.

Several environmental impacts should be considered in allowing airport expansion. NOISE of planes flying in & out should be obstructed for Mammoth. Since Mammoth wants this huge development, let require all planes to enter & depart from the airport over Mammoth, not over Sunnyslopes. RESTRICT THE SIZE of the jets, & do NOT allow close proximity to Highway 395 where Traffic could be annihilated by a slightly off-course plane. CLOSE THE AIRPORT DURING BAD WEATHER. Most crashes occur during poor conditions. RESTRICT NIGHT FLIGHTS in order to keep the dark night skies enjoyed in this area. Think of the impact of noise, jet size, length of runway on local wildlife, esp. the Sage Grouse.

I can't believe that such a poor choice of location was ever made, but since we're stuck with it at least until disasters occur,

heartening to those who love the
eauty of this area.
well, Mr. Taylor, do your best to
ke the BIG PLAN acceptable, but
't expect anyone but the profiteers
like it.

Sincerely yours,

Cathy Rose

Cathy Rose
HCR 79. Box 1-R
Mammoth Lakes, CA 93546

"Pine Glade"

let us try to minimize the noise
protect the wildlife, + Think about
safety. The hangers already
constructed are ugly, so I suppose
there's not much hope for
the design of condos + R.V. park-
Maybe instead of a chain
link fence, there should be a
wall around the condos, mall,
RV Park, + hangers, perhaps
decorated with murals of the
Mountains.

Suppose a philosopher
would say that it's all part of
the construction-destruction of
California + we know that every
part of the state is suffering
especially. It's just sad to see the
Eastern Sierra ~~Front~~ beginning to
fill with massive development
Such as these RV-condo-hangers-
sprawl airport is especially

Bill Taylor, Senior Planner,
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Taylor;

Thank you for the opportunity to comment on the airport development. Please find issues that should be discussed in the environmental documents. There are many important issues and I believe an Environmental Impact Report should be required.

Significant Environmental Issues

1. Visual Impacts: these include
   - the six-foot chain link fence and its proximity to the scenic highway
   - night lighting and glare
   - The cummulative visual impacats of all signs, buildings, hangars, towers and tanks.

2. Hydrology
   - On-going drawdown tests should be required. The effects of groundwater pumping and possible impacts on Hot Creek need to analyzed.
   - The effects of sewage on the groundwater supply need to be addressed also.

3. Wildlife
   - The effects of development on sage grouse and their leks.
   - Effects on the deer herd: their migration, the effects of the fence near the highway and increased mortality
   - Lighting mitigation
   - Revegetation and habitat replacement

4. Traffic
   - Highway 395:airport access intersection analysis
   - Highway 395:Benton crossing road
   - Increased air traffic and other aircraft activity

5. Noise
   - Noise levels from overflights of adjacent communities

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APR - 3 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

- Increased flying activities over Long Valley: approach paths, altitudes, frequency, schedule of planned aircraft activity

6. Hazardous Materials
   - Proposed personal use of hangars: storage of gasoline for snowmobiles, boats

Thank you very much for consideration of these comments.

Susan Burak
P.O. Box 8544
Mammoth Lakes, CA 93546

Cc: Bill Manning
Elisha Novak, FAA,
San Francisco Airports District Office
831 Mitten Rd.
Room 210
Burlingame, CA 94010

DAVE WOOD RANCHES
25366 W. Dorris
Coalinga, CA 93210

Respond to:
William J. Thomas
770 "L" Street, Suite 1150
Sacramento, CA 95814

March 15, 2000

Mr. Bill Manning, Airport Manager
Mammoth Lakes Airport
Route 1, P.O. Box 209
Mammoth Lakes, CA 93546

Re: Proposed Improvements For the Mammoth Lakes Airport

Dear Bill:

I am sure you read with interest the March 8, 2000 letter from the Forest Service regarding the deficiencies in the February 3, 2000 documents you apparently provided the Forest Service regarding your interest in the road over our ranch, which we have previously discussed.

As you will recall, we have been asking for your specific proposals, engineering plans and environmental documents for some time. I had assumed that there were none yet developed; however, the Forest Service letter references both a "February 3, 2000 scoping letter" and a "Notice of Intent to Prepare an Environmental Document". Apparently our copies, as the affected land operator, were not provided to us due to an oversight. I know we were to get together for a site inspection when I next go over to Mammoth, which will be before long, however, these materials should have been provided to us as they became available.

Sincerely,

WJThomas

William J. Thomas
Dave Wood Ranches

WJT:ad
cc: Mr. Dave Wood
Mr. Kirk Stapp

Appendix J – Written Comments

Appendix J – List of Commenters

The following is a list of the commenters on the Draft Environmental Assessment of the proposed Mammoth Yosemite Airport Expansion. Their comments are provided on the pages following the listing.

Commenter	Identifier Code
Federal Agencies	
United States Department of Agriculture, U.S. Forest Service Ronald F. Keil, Acting District Ranger	F-A
United States Department of the Interior, Bureau of Land Management Steve Addington, Field Office Manager	F-B
United States Department of the Interior, National Park Service Deanna M Dulen, Park Superintendent	F-C
State Agencies	
Caltrans Department of Transportation, Aeronautics Program Sandy Hesnard, Environmental Planner	S-A
Caltrans Department of Transportation, District 9 Caroyln Yee, IGR/CEQA Coordinator	S-B
California Regional Water Quality Control Board, Lahontan Region Douglas E. Feay, Associate Engineering Geologist	S-C
Department of Fish and Game, Inland Deserts-Eastern Sierra Region Darrell M. Wong, Supervisor, Habitat Conservation Program	S-D
Local Agencies, Businesses, and Interest Groups	
Long Valley Fire Protection District Fred Stump, Chief	L-A
Liebersbach, Mohun, Carney & Reed James S. Reed	L-B
Sierra Mortgage Corporation Rick Blake, CEO/Managing Partner	L-C
Sierra Mortgage Corporation Dean B. Wolf, Loan Officer	L-D
Mammoth Sierra Properties Stacey Bardfield, Owner/Broker	L-E
University of California, Santa Barbara, Sierra Nevada Aquatic Research Laboratory Daniel R. Dawson, Director	L-F
Preserving the Eastern Sierra Tradition of Environmental Responsibility Elizabeth Tenney	L-G
Sierra Club Wilma Wheeler, Chair	L-H
Mammoth Lakes Contractors Association, Inc Ed Power, President	L-I
Mammoth California Rusty Gregory, Chief Executive Officer	L-J

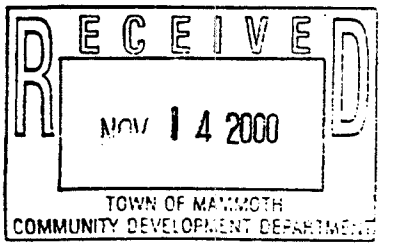
Appendix J – List of Commenters (continued)

Commenter	Identifier Code
Individuals	
Jim Langley, Mammoth Lakes, California	I-A
Sommar Farber, Mammoth Lakes, California	I-B
Pat Foster, Bishop, California	I-C
Nancy Kassel, Mammoth Lakes, California	I-D
Lloyd G. Stephens, Swall Meadows, California	I-E
Dean B. Wolf, Mammoth Lakes, California	I-F
Rick Bramble, Mammoth Lakes, California	I-G
Jim Langley, Mammoth Lakes, California	I-H
Andy Selters, Bishop, California	I-I
John and Nancy Walter, Mammoth Lakes, California	I-J
Duane "HAP" Hazard	I-K
Stephen Kalish, Swall Meadows, California	I-L
Mal Ocerani	I-M
Catherine W. Rose, Mammoth Lakes, California	I-N
Rick Jali, Mammoth Lakes, California	I-O
Mike Larimore	I-P
John Timms	I-Q
Wendy Underwood	I-R
John Cunningham	I-S
Pat Eckart, Mammoth Lakes, California	I-T
Trish Dunlap, Mammoth Lakes, California	I-U
Karolynn Ward Davis, Crowley Lake, California	I-V
Julie Wright, Mammoth Lakes, California	I-W
Gary K. Shultz, Mammoth Lakes, California	I-X
Wayne and Beth Caddell, Mammoth Lakes, California	I-Y
Patty Schwartzkopf, Mammoth Lakes, California	I-Z
Michele Hansen, Mammoth Lakes, California	I-AA
Christine Galbreath, Mammoth Lakes, California	I-BB
Meredith E. McGuire, Mammoth Lakes, California	I-CC
Dr. and Mrs. Bruce L. Taber, Mammoth Lakes, California	I-DD
Margaret and Michael Shapiro, Mammoth Lakes, California	I-EE

United States Department of Agriculture
Forest Service
Inyo National Forest
Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 1950

Date: November 14, 2000



Mr. William Manning, Airport Manager
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear ~~Bill~~ BM:

I am writing this letter to in response to your letter dated October 2, requesting comments on the Environmental Assessment for the Mammoth Yosemite Airport Expansion. As you are aware, the Forest Service will use this EA as the basis for its own decision involving any impacts which occur on National Forest land as a result of the project, and which may result in the issuance of a special use permit. We have reviewed the administrative draft, and provided comments at that time.

Therefore, I am requesting that a copy of all comments which are received by your consultant at the close of the comment period be sent to Lands Assistant Rick Murray, so that we can review them to see if any pertain to the National Forest lands. Once we have reviewed them, we will then submit any remaining comments that we may have.

Please feel free to contact Rick at 647-3013, or Special Project Coordinator Sandy Hogan at 924-5505 if you should have any questions. Thank you for the opportunity to comment.

Sincerely,

for RONALD F. KEIL
Acting District Ranger

Cc: Rick Murray, Lands Assistant

F-A

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Bishop Field Office
785 North Main Street, Suite E
Bishop, California 93514-2471
Phone (760)872-4881 Fax (760)872-2894
http://www.ca.blm.gov/bishop/

Mammoth Yosemite Airport
Expansion Project
1790 (P)
CA-170.80

November 14, 2000

Mr. William Manning
Airport Manager
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Manning:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the proposed Mammoth Yosemite Airport Expansion Project.

The Bishop Field Office of the Bureau of Land Management (BLM) is responsible for management of 18,210 acres of public land in the vicinity of the airport. Although none of the proposed expansion activities would occur on BLM managed public lands, our review of the document has raised concerns regarding the potential for off-site impacts to adjacent public lands and resources. As noted in the draft document, a large area northeast of the airport is managed by BLM. The area cited is known for it's significant wildlife and recreation values, and we believe the document is deficient in assessing potential impacts to those values. Furthermore, the document fails to identify appropriate measures to mitigate impacts to those values.

The following comments address those concerns.

F-B

Biotic Communities

The Draft Environmental Assessment (EA) for the proposed Mammoth Yosemite Airport Expansion Project identifies big sagebrush scrub as the predominant plant community within the project area. Both sage grouse and mule deer are closely associated with this vegetation type and accurately identified as significant wildlife species occurring within and adjacent to the project area. Both species also require relatively large areas to support viable populations which highlights the importance of evaluating and mitigating off-site as well as on-site impacts.

Specific comments relative to each of these species are provided below.

Sage Grouse

The Draft Environmental Assessment (EA) is inadequate in assessing on-site and off-site impacts to the Long Valley sage grouse population and in providing suitable mitigation measures to reduce potential impacts. As stated in the EA, sage grouse are a California Department of Fish and Game (DFG) Species of Special Concern. Furthermore, sage grouse populations throughout the west have undergone significant declines, and the U.S. Fish and Wildlife Service (FWS) has received a petition to list the species under the Endangered Species Act. The current high level of interest in sage grouse populations requires that a thorough analysis of potential impacts be completed, and that thoughtful mitigation measures be applied to reduce potential impacts. To that end, the Bureau of Land Management is willing to share all currently available information and expertise concerning the Long Valley sage grouse population.

On-Site Impacts/Mitigation

In contrast to the Draft EA, we anticipate significant on-site impacts to sage grouse as the result of both 1) the elimination of sagebrush scrub habitat within the project area, and 2) the construction of the six to eight foot fence around the perimeter of the airport.

Throughout their range sage grouse are dependent upon sagebrush habitat and any elimination of sagebrush habitat within a population's range must be considered a negative impact. The EA must be forthcoming in identifying this impact. We also suggest that off-site mitigation for on-site sage grouse habitat degradation be applied in the same manner as proposed for mule deer. Restoration of 1 acre of habitat in proximity to the airport development for each acre of habitat degraded on-site.

As noted in the Draft EA, construction of the six to eight foot high security fence around the airport could cause mortality to low flying adult sage grouse. Sage grouse often fly rather low when moving short distances and barbed-wire fences are a documented cause of

direct mortality. Collisions tend to occur at very low light levels, primarily at dusk and dawn, which is when most sage grouse flight occurs. Presumably a 6 to 8 foot fence should be even worse, though chain link is more visible than barbed wire. In addition, the Long Valley sage grouse population appears to be very sensitive to increased mortality and therefore fence strike mortality would represent a significant impact. We suggest the EA identify this as a potential significant impact, and propose mitigation to reduce the potential for strikes.

Off-site Impacts/Mitigation

The Draft EA includes no discussion of potential off-site impacts to sage grouse. The areas adjacent to the airport, and particularly within the proposed flight paths, must be evaluated for potential impacts. The area to the east of the airport and north of US 395 includes critical areas of winter, breeding, and summer habitat for sage grouse. Projected increases in flight activity, especially during the winter and early spring, could have potentially significant impacts on sage grouse during these critical seasons.

Sage grouse on leks are particularly susceptible to overhead disturbance and aircraft may disturb birds on leks. Impacts could be significant, especially on leks 2 and 8, which are currently the 2 major leks in Long Valley. This might be avoided by prohibiting use of the flight corridor until 2 hours after sunrise each morning during the display period (mid March - mid May) and between sunset to dark as well.

Aircraft may also disturb flocks of sage grouse that use this area in winter and early spring. Radio tracking data show that this is a key area during this time of year when areas further north and west are under deep snow. Under such conditions sage grouse are potentially more easily located by predators than at other times because snow cover restricts usable habitat. For animals that rely on inactivity to escape detection by predators, the potential impact of repeated disturbance under such circumstances would likely be increased predation.

In summary, a comprehensive analysis of the potential impacts to key sage grouse use areas due to visual and noise disturbance within flight paths must be conducted.

Mule Deer

Overall, the Draft Environmental Assessment (EA) does a fairly comprehensive job of evaluating impacts to mule deer. We concur with the finding that construction of the 6 to 8 foot high security fence would eliminate high quality sagebrush scrub habitat from use by deer. We support the restoration of off-site habitat on an acre/acre basis within proximity of the airport to help mitigate this impact. As noted above, we believe these mitigation measures should also take into account sage grouse habitat requirements.

F-B

We also concur that increased mortality due to traffic collisions would likely occur due to fence construction. However, we do not believe that this is an acceptable unmitigated impact. For public safety alone some attempt should be made to reduce deer-vehicle collisions.

Wild and Scenic Rivers

The Draft Environmental Assessment (EA) states that no wild or scenic rivers exist within the area to be affected by the proposed action or the alternatives. Therefore, no adverse impacts are expected and no mitigation measures are required. However, the Bishop Resource Management Plan Record of Decision (1993) identified a 1.5 mile segment of Hot Creek on Bureau of Land Management (BLM) Lands as eligible to be considered for the National Wild and Scenic Rivers System as a Recreational Segment. To date, this river segment has not been studied to determine eligibility. With the proximity of this river segment to the airport, noise as it affects eligibility of the river for designation should be considered.

Conclusion

In view of the concerns stated in this letter, we believe the Draft Environmental Assessment (EA) must be amended to fully address the issues stated above.

Please continue to keep us informed regarding this proposal.

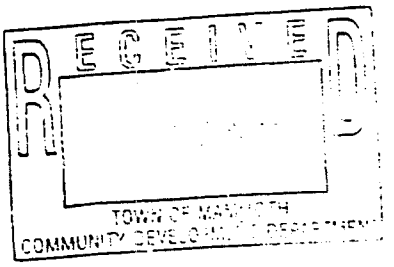
Sincerely,

Steve Addington
Field Office Manager

F-B

United States Department of the Interior

NATIONAL PARK SERVICE
Devils Postpile National Monument
P.O. Box 501
Mammoth Lakes, California 93546
(760) 934-2289



FAX COVER SHEET

To: Bill Manning

From: Park Superintendent

Subject: Mammoth Yosemite Airport

Number of Pages (including cover): 2

United States Department of the Interior

NATIONAL PARK SERVICE
Devils Postpile National Monument
P.O. 501
Mammoth Lakes, California 93546
(760-934-2289)

November 14, 2000

Town of Mammoth Lakes
Mammoth Yosemite Airport Expansion Project
P.O. Box 1609
Mammoth Lakes CA 93546

Attention: Bill Manning

Subject: Comments on Mammoth Yosemite Airport Expansion Project

Dear Bill,

Thank you for reviewing these comments concerning possible impacts to Devils Postpile National Monument. As you are well aware, one of the major visitor destinations for summer visitors of the Mammoth area is Devils Postpile National Monument. While at the monument, visitors enjoy the natural sounds of the San Joaquin River, the wind in the trees, the calls of birds, the occasional coyote howl, and a mixture of natural quiet and sound.

The majority of the Monument is in the Ansel Adams Wilderness. The National Park Service highly values the natural soundscape and the quality of the visitors' experience. It is very important to preserve this quality visitor experience and natural soundscape. Also, low flying aircraft over the monument may have a negative impact on wildlife.

Since the proposed enlargement of the airport has the likelihood of increasing flights over the Monument, this is an impact that needs to be identified and analyzed in the compliance package for this project. I would appreciate the opportunity to assist your team in this task.

In the planning and determination of flight paths over the Sierra Nevada that would impact the Devils Postpile National Monument, the National Park Service wants consulting agency status.

Thank you for your inclusion of the National Park Service in future planning.

Sincerely,

Deanna M. Dulen

DEANNA M. DULEN
SUPERINTENDENT

F-C

STATE OF CALIFORNIA--BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
AERONAUTICS PROGRAM M.S #40
120 N STREET - ROOM 3300
P.O. BOX 942874
SACRAMENTO, CA 94274-0001
(916) 654-4959
FAX (916) 653-9531

November 7, 2000

Ms. Elisha Novak
Federal Aviation Administration
831 Mitten Road
Burlingame, CA 94818-1301

Dear Ms. Novak:

Re: *Federal Aviation Administration (FAA) Draft Environmental Assessment (EA) for the Mammoth Yosemite Airport Expansion Project; SCH# 2000102045*

The California Department of Transportation (Caltrans) Aeronautics Program has reviewed the above-referenced document with respect to CEQA. The following comments are offered for your consideration.

The proposal is for improvements to the Mammoth Yosemite Airport that will allow the airfield to "safely and efficiently accommodate commercial airline service." The improvements will include a 1,200-foot extension of Runway 09-27 to the west, resulting in a runway of 8,200 feet in length; airside infrastructure improvements to accommodate narrow body air carrier aircraft up to a size of a Boeing 757-200 and the construction of an air carrier apron and associated passenger terminal building facilities.

Since the project includes a runway extension, an amended State Airport Permit will be required. Mammoth Yosemite Airport has been informed of requirement for an amended permit. Because of the permit requirements, the Aeronautics Program is a responsible agency pursuant to CEQA. In addition to this EA, we have also had the opportunity to review the 1997 EIR for the Mammoth Lakes Airport Expansion. These documents appear to adequately address the issues of concern to the Aeronautics Program as is it pertains to the amended permit requirements for the runway extension.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at 916/654-5314.

Sincerely,

Original Signed By

SANDY HESNARD
Environmental Planner

c: State Clearinghouse, Bill Manning-Mammoth Lakes Airport, Mono County ALUC

S-A

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

CALTRANS

FACSIMILE TRANSMITTAL SHEET

TO: WILLIAM MANNING	FROM: CAROLYN YEE DISTRICT 9
COMPANY: MAMMOTH LAKES AIRPORT	DATE: November 13, 2000
FAX NUMBER: (760) 934-8608	TOTAL NO. OF PAGES INCLUDING COVER: 4 8 PAGES
PHONE NUMBER: TOTAL NO. OF PAGES INCLUDING COVER: (760) 934-3813	SENDER'S PHONE NUMBER: (760) 872-1492
RE: MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT EA; SCH #2000102045	YOUR REFERENCE NUMBER: (760) 872-0678 FAX

☐ URGENT ☑ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Attached are our comments for the Mammoth Yosemite Airport Expansion Project (aka Mammoth Lakes Airport Expansion Project). A copy was also faxed to Mr. Brian Gratlidge, State Clearinghouse, and Mr. William Manning, Mammoth Lakes Airport. The hard copy will follow. In addition, a copy of a letter from the Mr. Manning states that the end of the comment period is Tuesday, November 14, 2000.

If you have any questions, concerns, and/or would like to discuss these issues further, please contact me at (760) 872-1492 or my e-mail address, Carolyn_Yee@DOT.CA.GOV. We look forward to continuing to work with you in a cooperative manner. Thank you for your consideration.

cc: Jerry Gabriel
Ralph Cones
Austin Wiswell

S-B

500 SOUTH MAIN STREET, BISHOP, CA 93514

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 9
0 SOUTH MAIN STREET
BISHOP, CA 93514-3423
Phone (760) 872-1492
Fax (760) 872-0678

November 13, 2000

Mr. William Manning, Manager
Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, California 93546

File: 09-MONO
DEA
SCH #: 2000102045

REF: DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT (AKA MAMMOTH LAKES AIRPORT EXPANSION PROJECT) FOR THE TOWN OF MAMMOTH LAKES (OCTOBER 2000)

Dear Mr. Manning:

The California Department of Transportation (Caltrans) appreciates the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Mammoth Yosemite Airport Expansion Project (aka Mammoth Lakes Airport Expansion Project).

We would like to suggest that the Town of Mammoth Lakes continue to coordinate and consult with the Federal Aviation Administration (FAA), Caltrans Division of Aeronautics, and Caltrans District 9 in Bishop during all stages of this proposed project. Ensuring that traffic safety and quality standards are met on State facilities. The following concerns need to be addressed in detail:

- Based upon our preliminary review of the submitted traffic analysis (Page V-24), we do not agree with the conclusions for the full build-out scenario because of other planned developments being considered within this vicinity. A thorough traffic intersection operation study needs to be completed to assess the potential impacts to, and remediation measures required for U.S. 395. It should consist of a high volume rural traffic assessment that includes the Sierra Business Park Project, other potential developments, Hot Creek Ranch Road, and Benton Crossing Road. The studies should meet with Caltrans standards based upon accepted methodology (i.e., Institute of Transportation Engineers, Transportation Research Board, Highway Capacity Manual, etc.). Enclosed is a copy of the Traffic Impact Studies draft guidelines for your assistance.
- The Convict Lake Road emergency access should be closed.
- Installation of property lighting and signs will need to meet specifications within the Highway Design Manual (HDM), Topic 207 and Vehicle Code, Section 21466.5. No commercial lighting or signs will be permitted on State right-of-way.

- Installation of any fence work needs to meet specifications within HDM, Topic 701, and placed on or within airport property line.
- We did not find any traffic safety studies addressing the potential for motorist accidents. The increased air flight traffic, noise, and increased width of the runway towards U.S. 395 need to be analyzed.
- We take exception with the conclusion that the potential for increased air pollution will not be significant (Pages V-25 to V-34). The potential degradation of air quality due to the increased motorized traffic needs to be examined.
- We are concerned that any mitigation measures as required by other agencies for addressing deer mortality does not increase traffic accidents on U.S. 395. Any mitigation measures proposed need to be discussed with Caltrans.
- Since U.S. 395 is designated as a scenic highway, the project will need to meet all specifications within the HDM, Topic 109.
- Dust mitigation measures will need to be employed during and after the construction period to address traffic safety.
- Continued coordination and consultation with Caltrans should be maintained to identify and resolve any potential issues on this project's design that may conflict with ours transportation corridor improvement plans for the future.
- Traffic impacts may necessitate new at-grade and/or interchanges. The existing Access Control Agreement with Mono County may need to be revised and /or a new Freeway Agreement executed.
- The Airport Design Plans and the State Facilities map seem to be in conflict; they appear to overlap. This needs to be resolved.
- References to "Morgan Industrial Park" need to be changed to "Sierra Business Park".
- All work with in the State Right of way requires an Encroachment Permit.
- FAA and/or Caltrans Division of Aeronautics may comment separately.

Please continue to forward copies of reports on this proposed project for our review, comments, and records. If you have any questions, please contact me at (760) 872-1492. We look forward to continuing to work with you in a cooperative manner.

Sincerely,

Chris D Engels

for
CAROLYN YEE
IGR/CEQA Coordinator

Enclosure

c: Jerry Gabriel
Ralph Cones
John Beischel
Jay Smart
Tom Meyers
Brad Mettam
Austin Wiswell, CT Acronautics
State Clearinghouse: Brian Grattidge
Elisha Novak, FAA

S-B

California Regional Water Quality Control Board

Lahontan Region

ston H. Hickox
Secretary for
Environmental
Protection

Victorville Office
Internet Address: http://www.swrcb.ca.gov/rwqcb6
15428 Civic Drive, Suite 100, Victorville, California 92392
Phone (760) 241-6583 • FAX (760) 241-7308

Gray Davis
Governor

November 8, 2000

FILE No.: 6B26S003680

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1 4 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

William Manning
Town of Mammoth Lakes
Airport Manager
P.O. Box 1609
Mammoth Lakes, CA 93546

COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR MAMMOTH YOSEMITE AIRPORT EXPANSION PROJECT, MONO COUNTY

The California Regional Water Quality Control Board staff (Regional Board staff) has reviewed the DEA for the Mammoth Yosemite Airport Expansion Project submitted by the Town of Mammoth Lakes on October 10, 2000. Regional Board staff has the following comments.

General Comments

Regional Board staff submitted comments on the Notice of Intent to prepare an Environmental Assessment to the Town of Mammoth Lakes on March 23, 2000. The specific comments below evaluate the DEA with respect to addressing our remarks contained in the March 23, 2000 letter. In addition, comments are provided regarding any new information contained in the DEA that was not part of the Notice of Intent.

Specific Comments

1. **Environmental Site Assessment**

Appendix H of the DEA contains a Level I Site Investigation prepared by Batchelor Environmental Services. The site investigation is dated May 17, 1999. Batchelor reported that several underground tanks were removed from the airport prior to construction of the new hangers. The report states that testing indicated hydrocarbon contamination of subsurface soil. Also stated is that there was no impact to ground water. However, Regional Board staff could not find any ground water data. Ground water must be sampled and analyzed to demonstrate that there is no impact. Before the ground water is sampled, Regional Board staff requests review and approval of the sampling plan. If it is found that ground water has been impacted by hydrocarbons, then a remedial plan will need to be submitted to Regional Board staff for review.

2. **Wetland Impacts**

Appendix G contains a report by Jones and Stokes entitled "Biological Study for the Mammoth Lakes Airport Expansion Project, Mono County." The report states that no

wetlands were identified in the project area. However, "the dry meadow in the eastern portion of the project study area supported a prevalence of hydrophilic species and exhibited a primary hydric soil indicator (a low chroma of 1), primary and secondary hydrological indicators were not observed." The conclusions made by Jones and Stokes were based on the March 16, 1995 wetland study. Regional Board staff previously requested that this study be provided to the Army Corps of Engineers for determination of jurisdictional wetlands. Regional Board staff could find no evidence that this report was reviewed by the Army Corp of Engineers. The area at the eastern end of the runway has ground water at six-feet below the ground during spring runoff. We request that the Town of Mammoth Lakes provide the previously requested determination, or a new wetlands study will be required before runway expansion can be undertaken.

3. **Stormwater Runoff**

Section 5.6.3, Mitigation Measures, contains proposed measures to reduce the impact of stormwater runoff on ground water and surface water. Mitigation measures propose collection of all surface runoff for the aircraft parking apron, automobile parking lot, and terminal roadway. The collected runoff will be piped to an oil/water separator for treatment. The oil/water separator should be equipped with a port for sampling the discharge. Once the oil is separated from the water the resultant water will then be allowed to infiltrate into the ground. The pavement for the runway and taxiways would be allowed to infiltrate without treatment by the oil/water separator. Regional Board staff has evaluated the potential for adverse impact of the proposed activities in the runway and taxiways and it does not appear that the potential impact would be significant provided that these areas are only used for taxi and takeoff. Any change in use, such as parking of aircraft or support equipment, would subject these areas to the same requirements for collection and treatment of runoff as discussed for other areas.

Regional Board staff requests to review the spill prevention, containment, and cleanup plan to insure adequate protection for all areas. There should be a description of the spill prevention, containment and cleanup plan included in the DEA.

4. **Septic System Impacts**

Section 5.6.3, Mitigation Measures, proposes the use of a package treatment plant to provide secondary sewage treatment with supplemental nitrate reduction. In addition, it is proposed to monitor ground water quality using monitor wells. Regional Board staff concurs with this proposed mitigation measure. A Report of Waste Discharge (RWD) needs to be filed with the Regional Board.

5. **Hazardous Materials and Under Ground Storage Tanks**

Section 5.19, Solid Waste/Hazardous Waste, states that there are no new hazardous materials storage areas proposed for the expansion project. Existing fuels are stored in above ground tanks. All underground tanks have been removed or abandoned in place. While there is no proposed increase of hazardous materials storage areas, there will be an increase in hazardous

materials usage at the site. Increased usage of hazardous materials (increased airport activity) increase the potential of contamination to surface waters and/or ground water. See comment three above regarding including a discussion of a spill prevention, containment, and cleanup plan in the DEA.

6. **Project Description**

The DEA document addresses mitigation measures relating to the runway expansion but does not, for the most part, evaluate cumulative impacts (Section 5.23) for all proposed changes (airport commercial development plan). The DEA states that the airport commercial development plan was evaluated in 1997 as part of the Environmental Impact Report (EIR) and that the DEA will only address issues related to the runway expansion. Regional Board staff recommends there be a summary included in the project description that lists the conclusion of the 1997 EIR.

7. **Construction Activities**

As part of the airport NPDES construction permit (6B26S310411), the project proponent is required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the runway construction. The SWPPP is subject to review by the Regional Board staff. The Regional Board will require submittal of grading/drainage and erosion control plans as part of the SWPPP. We request the project proponent contact Regional Board staff to discuss the proposed grading/drainage plans.

During construction, dewatering water cannot be discharged into any drainage, stream or wetlands area. Such discharges may require a discharge permit from the Regional Board, as the dewatering water has the potential to contain pollutants. We recommend dewatering water be discharged to land if a suitable land location exists, provided ground water samples do not indicate ground water has been impacted by pollutants. Dewatering water must be contained and not cause a nuisance.

If you have any questions, please contact me at (760) 241-7353, or Cindi Mitton at (760) 241-7413.

Sincerely,

Douglas E. Feay

Douglas E. Feay
Associate Engineering Geologist

cc: Mailing List

DF/rc/final/MamothaiprtEA.doc

MAILING LIST

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1325 "J" Street
Sacramento, CA 95814-2922

U.S. EPA - Region 9
75 Hawthorne Street
San Francisco, CA 94105

Darrell Wong
Department of Fish and Game
407 W. Line St.
Bishop, CA 93514

Dennis Lampson
Mono County Health Department
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Bridgeport, CA 93517

Mono County Planning
P.O. Box 347
Mammoth Lakes, CA 93546

United States Forest Service
Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592

State Clearinghouse
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Sacramento, CA 95812-3044

Jim Kuykendahl
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Sacramento, CA 95814-2828

Inyo National Forest
873 N. Main Street
Bishop, CA 93514

S-D

STATE OF CALIFORNIA - THE RESOURCES AGENCY GRAY DAVIS, Governor

DEPARTMENT OF FISH AND GAME
Inland Deserts-Eastern Sierra Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
(760) 872-1171

Received

November 14, 2000

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

Mr. William Manning
Airport Manager
Post Office Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Manning,

Draft Environmental Assessment
Mammoth Yosemite Airport Expansion Project
SCH #2000102045
Mono County

The Department of Fish and Game has reviewed the Draft Environmental Assessment (EA) for the Mammoth Yosemite Airport Expansion Project, SCH #2000102045. The proposed project includes the extension of Runway 09-27 to the west to a length of 8200 feet and widening of the runway to 150 feet, resulting in a shift of the runway centerline 25 feet to the south. The project also includes bringing pre-existing airside infrastructure into compliance with FAA design and safety standards and providing a passenger terminal building and other landside support facilities capable of supporting air carrier and charter operations.

The Department is providing comments on this EA as the state agency which has the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish & Game Code section 711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish & Game Code section 1802). The Department's fish and wildlife management functions are implemented through its administration and enforcement of the Fish and Game Code (Fish & Game Code Section 702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. Sec. 15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife

The Department believes that potential environmental impacts from the proposed project which could affect the quality of the human environment include, but are not necessarily limited to, increased noise and adjacent use impacts to Department hatchery operations and residences at the Hot Creek Fish Hatchery; direct loss of important wildlife habitat for mule deer and sage grouse; indirect impacts to sage grouse foraging and nesting habitat and leks; increased mortality to sage grouse as a result of project fencing; disturbance to deer migration areas and increased road kills from project-related facilities and operation; disruption of seasonal foraging areas and patterns for raptors including bald and golden eagle, northern harrier, American peregrine falcon, Swainson's hawk, prairie falcon, American kestrel, red-tailed hawk, ferruginous hawk, rough-legged hawk, and other raptors; disturbance to nesting waterfowl and other aquatic and riparian birds; alteration in the quantity or quality of surface or ground water, including impacts to spring flow, habitat for Owens tui chub, and domestic water supply for Fish Hatchery residences.

The Department appreciates this opportunity to comment on the above-referenced project, relative to impacts to biological resources. The Department continues to believe the proposed project has the potential to significantly affect the quality of the human environment, and as such NEPA requires that an Environmental Impact Statement (EIS) must be prepared. Significance is determined by intensity and setting of the proposed project. In this case anticipated impacts from the proposed project include special-status species, cumulative effects, precedent-setting effects, degree of unique or unknown risk, degree of controversy, unique characteristics of an area, public health, and cultural and historical resources. NEPA also requires that if it is reasonable to anticipate cumulatively significant impacts, an EIS must be prepared (40 CFR 1508.25(c)).

The Department believes that the information contained in the EA is not adequate to support a Finding of No Significant Impact (FONSI). The Department believes that the EA is lacking in the following areas: the discussion of the range of alternatives and how they meet the purpose and need for the project; the discussion of the compatibility of adjacent land uses and environmental impacts of the project on those uses; the discussion on air quality; the discussion of biological resources, particularly mule deer, sage grouse, bald eagle, and tui chub, the impacts of the proposed project upon these resources, and mitigation measures to offset those impacts; and the discussion of growth-inducing impacts and cumulative impacts, and mitigation to offset those impacts. In particular, the statements made in the EA claiming that the proposed project will not result in significant adverse impacts to these resources, are not supported by data presented in the EA , appendices, or existing literature. We believe that the EA and any subsequent FONSI are inappropriate for this project because the impacts of the project on biological resources are not adequately disclosed nor mitigated.

The following specific comments are offered to support the statements in the above paragraphs:

1) Purpose and Need: The stated purpose of the proposed action is only one of several ways of meeting the need for the action as stated in paragraph 2, page II-5

Similarly, the range of alternatives described does not adequately reflect the full range of alternatives possible for meeting the need as described. The problem is stated on page II-5 as a reduction in winter ski visitors to Mammoth Mountain during the 1990's. The need is stated as reducing the travel time to the Mammoth Lakes area. The EA also states that Mammoth Mountain was one of the most frequented ski resorts in North America in the 1980's. Although it is not stated in the document, it is assumed that the skiers visiting Mammoth Mountain in the 1980's were driving from southern California or from the San Francisco Bay area. It is not reasonable to assume that those visitors were driving from Chicago, Denver, or Dallas/Forth Worth, the proposed target market. As such, the need to reduce travel times to Mammoth for those skiers living in southern California or the Bay area who now fly to other ski resorts, could be met by other alternatives which have not been discussed in this document. Similarly, the need to reduce travel times for the southern California market, which is presumably the market which declined during the 1990's, is not being met by the purpose of the proposed action, which is to enable air carrier jet service, using narrow-body aircraft up to the size of a Boeing 757, to safely and efficiently operate at the airport, targeting the markets of Chicago and Dallas/Forth Worth. Alternative 1, No Action, does still allow for commercial service with carriers of no more than 30 seats. Alternative 6, Widen Existing 7000' Runway, which was rejected from further consideration, would also allow for commercial service with carriers arriving from Los Angeles, Denver, and Salt Lake City. These two alternatives appear to meet the stated need which is to shorten travel time, presumably for the market that declined in the 1990's. This appears to be supported by the statement on Page IV-13 that "California represents the largest source of business by far, for the Mammoth Mountain Ski Resort, with approximately 87% of the lift ticket revenue for the resort."

2) Air Quality: The EA makes several contradictory statements which should be clarified in the EIS. On Page II-5 the statement is made that "The introduction of airline service will directly reduce adverse air quality emissions as a result of reduced vehicular traffic to the region." However, if the airline service is bringing visitors from Dallas/Ft. Worth or Chicago, that would not reduce vehicular traffic from California, which as stated in the document makes up 87% of the business of Mammoth Mountain. In fact, on page IV-14, the EA states "..the vast majority of the region's visitors originating from Los Angeles are anticipated to continue to make the six hour drive northeast from Los Angeles by automobile." This contradicts the earlier statement that reduced vehicular traffic will reduce air quality emissions. In fact, a reasonable assumption would be that with the new visitors arriving by plane in addition to those continuing to drive from other parts of California, air quality would be negatively impacted. This assumption seems to be supported by the statement on page V-24 that "There would be increased traffic on U.S. 395 and other highways in the region as a result of the growth in tourism." The EA goes on to say " This would be offset on a micro scale by fewer tourists driving automobiles from farther airports or their homes, through which the air pollution emissions would be improved. The traffic congestion would also be reduced through the provision of bus service to the airport... ." This seems to imply that the few people who currently drive to Mammoth from Chicago and Dallas will fly instead of drive, and be bussed to Mammoth from the airport, therefore, air quality and traffic congestion over current levels will be improved. This appears to be speculation and is not supported by data contained in the EA.

3) Compatible Land Use: The EA does not discuss the Resource Management Plan (RMP) adopted for the BLM lands which are adjacent to the proposed project, and the impacts of construction and operation of the project on these lands. The impacts of airport operations on adjacent public lands and biological resources on those lands, both Forest Service and BLM, should be addressed in the EIS. These impacts should include noise, traffic, and loss of habitat. The compatibility of these types of impacts with uses authorized in the BLM RMP and the Inyo National Forest Land Management Plan should be discussed. Additionally, the Owens Basin Wetland and Aquatic Species Recovery Plan was adopted by the U.S. Fish and Wildlife Service in 1998. This plan was signed by Department of Fish and Game, Bureau of Land Management, and the U. S. Forest Service. This plan designates several Conservation Areas for the recovery and management of several state and federal Endangered and Threatened species of fish, wildlife, and plants. Four of these Conservation Areas, Little Hot Creek, Hot Creek, Little Alkali, and Whitmore, are within the vicinity of the proposed project, and future operations at the airport could potentially affect the special status species found within these Conservation Areas. It is likely that the proposed project will require consultation under Section 7 of the Federal Endangered Species Act prior to project approval. We recommend the FAA or Town of Mammoth Lakes initiate consultation with the U S. Fish and Wildlife Service as soon as possible.

4) Water Quality, Water Supply, and Stormwater Control: The EA makes a reasonable case that projected groundwater exploitation rates may not be significant. In addition, the document should disclose the physical limitations of the proposed well and pump infrastructure, so the reader can determine whether excess capacity is provided for in a way that could allow future increases resulting in significant exploitation rates. We recommend that the EIS certify annual exploitation rates will never exceed 18 acre-feet. The discussion of stormwater treatment and drainage is vague. Proposed monitoring measures, action criteria, and "additional treatment" plans should be specified. The reference to future development of a stormwater system needs to be augmented to make this part of the proposed project covered by the EA.

5) Biotic Communities:

A). Bird Strikes: The EA does not discuss the heavy use of the proposed project area by migratory birds, such as waterfowl, gulls, and raptors. The EIS should evaluate the human safety considerations associated with the proposed operation of the airport within a heavily used migratory path for large flocks of white pelicans, gulls, ducks, grebes, and smaller numbers of turkey vultures, bald eagles, and other raptors. The eastern Sierra escarpment is used heavily as a migration path for raptors due to the presence of thermals which assist the birds during migration. Also, the proximity of the Mono County Landfill to the northeast of the project attracts large numbers of ravens and gulls into the general area, which should be considered. The EIS should evaluate the impacts to human health and safety, as well as impacts on local populations of migrating and wintering birds, of operating the proposed project. The EIS should offer effective mitigation measures to address these impacts.

B) Sage Grouse: The discussion and findings in the EA on impacts to sage grouse and the proposed mitigation measures are inadequate, poorly researched, and are not based on the most recent biological investigations underway in both the

Long Valley area and throughout the range of the sage grouse in the western states. Additionally, guidelines for sage grouse management developed in January, 2000, by BLM, Idaho Department of Fish and Game, Colorado Division of Wildlife, and Washington Department of Fish and Wildlife, were not presented nor followed. Furthermore, information contained in the Biological Study contained in Appendix G was not carried forward into the EA or used to formulate mitigation measures or management recommendations. Dr. Robert Gibson, University of Nebraska, has been studying the Long Valley sage grouse population for over 17 years. Neither the EA nor the Biological Study reference these studies or use them to recommend mitigation. The EIS should contain a discussion of his findings, and use them to properly design meaningful mitigation measures. BLM biologists in Bishop are also presently conducting radio-telemetry research on the Long Valley sage grouse population, and results of this research should also be used in the EIS.

Populations of sage grouse have declined by up to 47% throughout much of its range (Connelly 2000). The development of roads, powerlines, fences, reservoirs, ranches, farms and housing developments has resulted in sage grouse habitat loss and fragmentation. Structures such as powerlines and fences post hazards to sage grouse because they provide additional perch sites for raptors, and sage grouse may be injured or killed when they fly into these structures (Connelly 2000).

Recent genetic investigations performed by Dr. Tom Quinn's lab at Denver University indicate that the Long Valley sage grouse population is one of a small number of populations in Mono County and Lyons County, Nevada, that are genetically differentiated from sage grouse populations elsewhere (Dr. Robert Gibson, pers comm). Maintaining genetic diversity is a key concept in maintaining viable populations of all species. These preliminary results argue for the careful analysis of any land use which could potentially impact the viability of the Long Valley sage grouse population. If the Long Valley sage grouse population drops below a viable level, there are no other genetically similar birds with which to simply repopulate the area. The Long Valley population appears to be isolated from the only other substantial population in Mono County (Bodie Hills). The Long Valley population's size seems to be very sensitive to increased mortality. This population has not rebounded from reduced hunting pressure over the last 5 years. The reason is unknown, but it highlights that this population has problems. This sage grouse population is considered vulnerable (R. Gibson, pers comm.)

The areas adjacent to the airport , and particularly within the proposed flight path, are of concern. The area to the east of the airport and north of US 395 includes critical areas of winter, breeding and summer habitat for sage grouse. Aircraft may disturb birds on leks, particularly Lek #2. Grouse almost invariably leave when small planes fly over the leks in Long Valley (R. Gibson pers comm). This would apply to all alternatives contained in the existing EA. Aircraft may also disturb flocks of sage grouse that use this area in winter and early spring. Radio-telemetry data show that this area is a key area during this time of year when areas further north and west are under deep snow. Under such conditions sage grouse are potentially more easily located by predators than at other times because snow cover restricts usable habitat. For birds that rely on inactivity and cryptic coloration to escape detection by raptors, the potential consequences of repeated disturbance under such circumstances should be

apparent (R. Gibson, pers comm). That is, it is highly likely that repeated disturbance could result in significantly higher predation rates, and therefore, significant declines in the population. The irrigated meadows around Convict Creek between the airport and Crowley Lake are a major foraging area for sage grouse in summer. The birds spend the day in the adjacent sagebrush. These birds are also threatened with disturbance in association with the proposed flight path. The area north and west of the airport (across Hot Creek) includes important nesting and lekking areas (especially Lek #8 which has been one of 2 major leks in the valley in the last 2-3 years). These birds are also vulnerable to disturbance associated with aircraft noise.

Sage grouse often fly rather low especially when moving short distances. Cattle fences have been a problem around Lek #2 because they intercept birds moving between feeding/roosting and lekking sites. Collisions presumably occur in the dark or at very low light levels at dusk and dawn which is when sage grouse mostly fly around. The statement on page V-49 that "It is anticipated that the rate of mortality of adult birds caused by the fencing would not significantly adversely effect (sic) the local sage grouse population." is not based on facts found in the EA , appendix, or literature. In fact, data show that sage grouse will abandon leks found in close proximity to overhead transmission lines and power poles, which provide perches for raptors and ravens who prey on adult grouse, eggs and chicks.

The mitigation measure presented on page V-50 is not adequate under NEPA. To be considered adequate under NEPA, mitigation measures should be specific, tangible actions that will reduce a physical environmental effect. Mitigation is defined in 40 CFR 1508.20 as "(a) avoiding the impact altogether by not taking a certain action of parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments." The survey proposed on page V-50 and subsequent deferral of development of the mitigation measure does not meet the requirement of 40 CFR 1508.20. Additionally, the survey methods suggested are inadequate for a species that is highly cryptic, secretive, mobile, and uses different areas seasonally. An example of an effective mitigation measure would be to prohibit the use of the flight corridor during the display period (until 2 hours after sunrise each morning and from sunset to dark from mid-March through mid-May) (R. Gibson, pers comm). Another example would be to require aircraft to approach from and take off to the west of the airport.

For the reasons discussed above, the Department believes the proposed project has the potential to significantly adversely affect the Long Valley sage grouse population. We therefore believe that a FONSI based on the current EA is not supported by current research and management guidelines. We believe an EIS should be prepared which thoroughly addresses the impacts of the proposed project on sage grouse, the cumulative impacts of the project on the Long Valley sage grouse population, and which contains effective mitigation measures to offset the adverse

. C:Mule Deer: The discussion of mule deer, potential impacts to this species, and mitigation measures are also not adequate to support a FONSI. The EA inaccurately describes the deer which use the project site as belonging to the Round Valley herd. In fact, deer from the Casa Diablo herd are also found within the project site. The statement on page V-50 that "It is anticipated that the rate of mortality of deer caused by vehicular traffic would not significantly adversely effect (sic) the Mule Deer population." is not supported by evidence in the EA or appendix. We agree with the statement on page V-50 that "The deer-proof fencing would also cause deer to circumnavigate the Airport. This may result in increased deer mortality through encounters with vehicular traffic on US Highway 395." No data is presented in Appendix G to support the statement that vehicular traffic would not significantly impact the Round Valley or Casa Diablo herds. In fact, mortality studies on the Round Valley herd conducted by Dr. Becky Pierce, Dr. Vern Bleich, and Dr. Terry Bowyer between 1991-1998 should be used to analyze the impacts of construction and operation of the project on the deer herds. These studies indicate that between 1993-1998, 115 deer (11%/year of radio-collared deer who died), were the result of road kills, the vast majority of which occurred on US Highway 395 and Highway 203 (V. Bleich pers comm). Thus, the statement that traffic would not significantly adversely impact the mule deer population is not supported by data presented. In fact, existing data indicates that impacts to the deer herd could very well be significant.

Mitigation measures offered for the loss of mule deer habitat are also not adequate by definition under NEPA. First, the additional sites to mitigate for the loss of 6 acres of habitat have not yet been identified. Furthermore, of the sites that have been identified, none have been evaluated for the likelihood that they are suitable for rehabilitation. Commitments must be made by landowners that the rehabilitated areas will be fenced to prevent grazing from livestock during the rehabilitation process. Cattle-proof fences are shown to be detrimental to sage grouse, so some of these sites may not be suitable for fencing. In summary, the mitigation measures proposed are speculative at best. The EIS should contained a well-reasoned, well-researched plan for mitigation of the loss of deer habitat.

D) Endangered and Threatened Species: The EA does not mention the nearby presence of Owens tui chub (Gila bicolor snyderi), a federal- and state-listed endangered species. Unanticipated changes to groundwater and spills of materials could have an impact on this species' habitat at Hot Creek Headsprings. The EIS should discuss these potential impacts and offer effective mitigation measures. As stated above, we recommend that the U. S. Fish and Wildlife Service be consulted relative to the need to comply with Section 7 of the Endangered Species Act.

6) Cumulative Impacts: The section in the EA discussing Cumulative Impacts does not accurately reflect the conclusion contained in Chapter 6 of Appendix G, Biotic Communities. This appendix states **"Constructing the proposed project would result in cumulative effects on wildlife species. As Mammoth Lakes continues to grow, effects (including habitat loss and human disturbance) on wildlife species such as mule deer and sage grouse will increase. Increased noise and human disturbance from increased use of the airport would decrease the value of the area for wildlife species. Recommendations contained in Chapter 7 ..would only partially compensate for local losses of these resources. The measures would**

reduce the magnitude of effects but would not fully reduce cumulative effects related to fragmentation and human disturbances, particularly noise disturbance and the inhibition of migratory movement by deer because of deer-proof fencing." The statement on page V-83 that " The proposed action would not significantly adversely effect (sic) biotic communities should the proposed mitigation measures to account for the loss of high quality deer habitat be undertaken." contradicts this statement the conclusion in Appendix G.

The Department also believes that other proposed developments along the Round Valley and Casa Diablo deer herd migration corridors will have significant cumulative impacts to these deer herds. Other proposed developments with could cumulatively impact mule deer, Long Valley sage grouse, and add to growth-inducing impacts and increased needs for water supply include: Sherwin/Snowcreek Ski Area, Intrawest resort development, Eastern Sierra College Center, Lakeridge Ranch Estates, Rimrock Ranch, INAJA Land Company Use permit, Sierra Business Park, and the proposed Pacific residential development in Round Valley. The airport expansion project should be analyzed respective to these cumulative impacts in the EIS.

Page V-83 also states that the Airport Commercial Development Plan was found in 1997 not to have any significant effects on biotic communities. As stated in our letter of March 16, 2000, the Department does not believe that the 1997 Subsequent EIR discussed impacts to sage grouse adequately. Furthermore, additional research has been conducted since the 1997 Subsequent EIR was prepared, and as stated above, this research has increased our level of understanding of the Long Valley sage grouse population. This new information has not been included in a revised CEQA document. Therefore, relying on the 1997 Subsequent EIR for conclusions regarding impacts to biotic communities is erroneous.

In conclusion, the Department believes that the information contained in the EA does not support a FONSI, and we recommend that an EIS be prepared. The Department believes that NEPA requires that an EIS be prepared, because the proposed project has the potential to significantly affect the quality of the human environment. Significance is determined by intensity and setting of the proposed project. In this case anticipated impacts from the proposed project include special-status species (Owens tui chub, Long Valley speckled dace, Owens sucker), cumulative effects, precedent-setting effects, degree of unique or unknown risk, degree of controversy, unique characteristics of an area, public health, and cultural and historical resources. NEPA also requires that if it is reasonable to anticipate cumulatively significant impacts, an EIS must be prepared (40 CFR 1508.25(c)).

Thank you for the opportunity to comment on the proposed project. If you have any questions, please direct them to Ms. Denyse Racine, Environmental Specialist III, at (760) 872-1158.

Sincerely,

Denyse Racine for

Darrell M. Wong, Supervisor
Habitat Conservation Program

cc: Ray Bransfield, USFWS
Mary Pipersky, Supervisor-Elect
Terry Russi, BLM
Brian Tillemans, LADWP
Richard Perloff, USFS
FAA

S-D

Long Valley Fire Protection District

Rt. 1, P.O. Box 1145 • Crowley Lake, CA 93546

(760) 935-4545

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TOWN OF MAMMOTH
COMMUNITY

November 9, 2000

Mr. Bill Manning
Airport Manager – Mammoth Lakes Airport
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, Ca. 93546

Re: Draft Environmental Assessment – Mammoth Yosemite Airport Expansion

Dear Mr. Manning:

The Long Valley Fire Protection District finds the draft environmental assessment deficient in the following areas.

1. Emergency Services: While the environmental assessment refers to the potential for all development at the airport the references to fire protection are confined to one paragraph only. If airport development is viewed as a package then fire protection deserves the same treatment. Approval of the environmental assessment should be contingent upon the inclusion of language mandating the Town of Mammoth Lakes to develop with the Long Valley Fire Protection District a plan addressing all the fire protection needs that airport development is creating. These would include protection needs of town homes, hangers, a motel and commercial area, as well as aircraft crash rescue. The creation of a joint facility to house fire apparatus dedicated to each task and financial arraignments reflecting the increasing levels of airport activity the E.A. projects are topics that should be addressed in a plan. Consulting services to create a unified emergency response plan including all area emergency service providers should be funded as part of the development package. These actions will only create a safer airport environment for the people who will use the airport as well as those who will live there.

2. Dust / Dirt created by construction activity: Clouds of dust or dirt can often be mistaken for smoke so the Long Valley Fire Protection District would like notification when these activities occur to prevent false alarm responses. Notification should be made to the Mono County Sheriffs Department Dispatch Center at (760) 932-7549 and the Long Valley Fire Department at (760) 935-4545.

The Environmental Assessment projects an airport of increasing growth and activity. Public safety capability must keep pace with that growth and activity. The Long Valley Fire Protection District looks foreword to playing its part in the creation of that public safety capability.

L-A

Sincerely,

Fred Stump
Chief

LIEBERSBACH, MOHUN, CARNEY & REED
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GERALD F. MOHUN, JR. †
R. MARK CARNEY
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† Admitted in California and Nevada

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FACSIMILE (760) 934-2530
E-MAIL lmcr@mammothlaw.com

November 15, 2000

TRANSMITTED BY FAX: 934-8608

Bill Taylor
Senior Planner
Department of Community Development
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Re: Mammoth Lakes Airport

Dear Bill:

I write on behalf of my clients, John Hooper, Tom Revelle, and Greyhawk Associates, a Nevada limited liability corporation, as well as myself and my family. John and Tom have been active in this community since the early '70's; I have been a resident for over 15 years. It is my understanding that you will transmit these comments to FAA and other Town officials.

We all agree with the plans to develop the airport. I have examined the environmental documents in detail and find them to be legally adequate. I don't believe there is a chance in the world that a federal district court will interfere with the discretion of either the Town or the FAA in this regard. I say this after 30 years of experience in environmental litigation.

When I first purchased my residence in Carmichael, a Sacramento suburb, it took me 20 minutes to commute from my door-step to turning the knob on my office door in the State Capitol. 12 years later the commute took over an hour. The reason was that early-on, Sacramento refused to invest the capital necessary to build an adequate mass transit system. It began that effort belatedly at a cost many times what it would have been had the decision been made earlier.

The Town is in precisely that position vis-a-vis the airport. As Terry Ballas testified, millions of visitors will begin to descend on our town, many more than at present. With the limited exception of bus tours (and absent action on the airport), their only available transit option will be the automobile. The congestion in town and on the highways, and related problems, will be enormous and increasingly costly to resolve.

As much as nostalgia compels me to empathize with those who want to leave our little town as it is, economics and population growth make that a pipe dream. That was the prevailing state of mind in Sacramento when mass transit options were voted down, and the problems came as quickly as the costs to rectify them increased.

In my judgment, the Town would be well advised to do now what Sacramento failed to do 30 years ago, and that is to take advantage of its transit options (the only reasonable one is airport development), being grateful in the process for any federal assistance that might be available. Anything less will be certain economic disaster.

Very truly yours,

James S. Reed

cc: John Hopper
Tom Revelle

Sierra Mortgage Corporation
"More than Expected"

MEMBER
Mortgage Bankers Association of America
The National Association of Real Estate Finance

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1 5 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

November 15, 2000

Re: Mammoth-Yoesmite Airport

To Whom It May Concern:

Please be advised as owners of a small business in Mammoth Lakes (Sierra Mortgage Corp. & Sierra Escrow Corp.), we believe that the economic benefits of the airport expansion would be very beneficial for all of our community.

Rick Blake,
CEO/ Managing Partner

Donn Steier,
President

L-C

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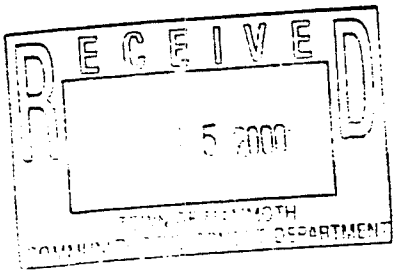
Las Vegas, Nevada: 2620 Regatta Dr. Suite 114, Las Vegas, NV 89128 • 702/242-5030

Sierra Mortgage Corporation

"More than Expected"

MEMBER

Mortgage Bankers Association of America
The National Association of Real Estate Finance



November 15, 2000

Re: Mammoth-Yoesmite Airport

To Whom It May Concern:

Please be advised, as employees of a small business in Mammoth Lakes (Sierra Mortgage Corp.), we believe that the economic benefits of the airport expansion would be very beneficial for all of our community.

Dean B. Wolf,
Loan Officer

Sue Chiesa,
Funder

Shawn Torrance,
Processor

Devon De La Salle,
Assistant

L-D

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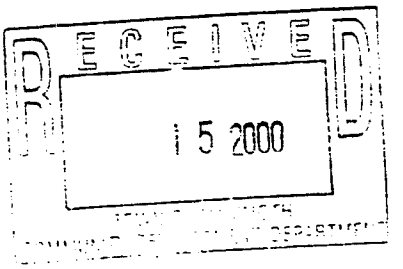
MAMMOTH SIERRA PROPERTIES



November 15, 2000

Federal Aviation Administration
Hand Delivered

RE: Mammoth/Yosemite Airport

To Whom It May Concern:

As a business owner in Mammoth Lakes for the last 20 years I recognize that the successful completion of the expansion of the Mammoth/Yosemite Airport is vital to the economic well being of this community.

Sincerely,

Stacey Bardfield

Stacey Bardfield
Owner/ Broker

L-E

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SIERRA NEVADA AQUATIC RESEARCH LABORATORY (SNARL)

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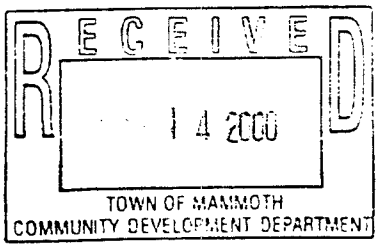
http://nrs.ucop.edu/reserves/snarl.html
dawson@icess.ucsb.edu

November 14, 2000



Mr. William Manning
Airport Manager
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Manning:

The Sierra Nevada Aquatic Research Laboratory (SNARL) is a unit in the University of California's Natural Reserve System. It is a state-of-the-art research station that supports research and teaching from colleges and universities all over the country. In addition, the station offers a K-12 enrichment program that benefits thousands of schoolchildren from Inyo and Mono Counties. Our facility, which has been here since 1935, long before the Mammoth Airport was even a dirt strip, is one of the closest developed areas to the airport. Although we are approximately one mile from the terminal facilities, we are less than one-half mile from the runway. Our operation will probably sustain the most significant impacts from the proposed project.

We have reviewed in detail the Draft Environmental Assessment for the Mammoth Yosemite Airport Expansion Project. We find the document inadequate in a number of areas. We request that the document be revised before it is certified and passed onto the FAA for review. Our comments are as follows.

Fragmentation of the environmental analysis: The draft EA frequently refers to the 1997 EIR prepared for the approved hanger, condominium, and retail commercial project (the "Ballas project") at the airport but consistently fails to consider the cumulative impact of that project and the proposed project. In particular the cumulative impacts associated with traffic and visual impact are not adequately analyzed.

Noise: The document uses a detailed methodology to assess the impact of noise from the project. This methodology employs averaging algorithms to come up with a Community Noise Equivalent Level (CNEL). While this might be the appropriate methodology for a urban or suburban airport with high aircraft traffic it is inappropriate in this case. In this case, we are dealing with receptors with extremely low background noise levels. For this reason, it is more appropriate to consider peak noise levels during aircraft takeoff and landing and how disruptive that might be rather than

L-F

the average noise levels. The EA states that the current CNEL at SNARL is 30.9 dB or, in the parlance of the EA, the equivalent of a "city residence". To my knowledge average noise measurements were never conducted at SNARL and this value is probably a guess. While this could be accurate for an average level that takes into account current airport use, the real issue is what is the background sound level at SNARL. My estimate is that it is a factor of 2 lower or close to 20 dB, the level of a "quiet country residence". The EA indicates that under Alternative 2 (the preferred alternative), in the year 2022, the CNEL will rise to 41 dB, a rise of 100% in the average noise level. However, the real issue is how noisy is it when a jet lands or takes off. From experience we can tell you that it is so loud, you cannot speak to someone outdoors. The EA indicates that the peak noise of a 757 one mile from the runway end at takeoff is 95 dB. SNARL is located one-half mile from the runway. Peak jet noise here is probably somewhere around 110 dB or 512 times as loud as background. However, the most important fact is that this is not analyzed in the EA. The methodology used, while perhaps approved by the FAA, in no way assesses the impact of jet noise at our location. The analysis must consider the impact of peak noise at our facility.

Run-up noise: When pilots perform engine run-up tests in front of Doe Ridge the ridge acts like a giant reflector and directs all the noise south toward SNARL. We have been asking for a solution to the problem for years. The Airport Manager has consistently assured us that this problem is solved. However, pilots still perform their tests in this location despite the Manager's assurances. The EA indicates that the pilots will be instructed to orient their aircraft in and east-west direction. This is not adequate, the noise is still terrible. The airport must ensure, with certainty, that engine run-ups will not take place in this location. A mitigation measure that describes, in detail, how this will be ensured must be included.

Traffic: The draft EA cites the traffic analysis performed for the proposed Sierra Business Park. In a recent action, the Mono County Planning Commission recommended to the Board of Supervisors that they not certify the EIR containing that analysis, and deny the project. At the hearing for that project a representative from Caltrans testified as to the inadequacy of the traffic impact analysis. The EA only considers the impact to traffic flow on US 395. What is required is a detailed analysis of the intersection traffic and safety at Hot Creek Road and US 395. Caltrans records show that the intersection at the Coso Rest Area, which has less traffic than the proposed intersection, has an accident frequency much higher than average. The EA contains no analysis of safety at the US 395 intersection. The analysis must consider the cumulative traffic impact of the proposed the project, the Ballas project at the airport (250 condominiums, RV park, retail commercial), and the Sierra Business Park.

Visual impacts: The draft EA fails to adequately consider the cumulative visual impact of the proposed project and the Ballas project with its 3 miles of hangers, condominiums, and retail. This analysis should also include the proposed fence and the approved billboards (part of the Ballas project). The proposed 8 foot high security fence is of questionable utility in a high snowfall area with virtually no pedestrian traffic. It will have a significant impact that cannot be mitigated by changing its color. If the FAA mandates this level of security fencing then the Town should seek relief from this requirement.

Night lighting: The Town of Mammoth Lakes has failed to deal with the current night lighting problem at the airport. Not only is it a significant impact to the surrounding area, it does not comply with Town code. How can we believe the mitigation measures in the draft EA when the Town has failed to comply with existing standards? Strict night lighting standards must be enforced to protect our dark night skies.

Air pollution: The draft EA indicates that at full airport operation in the year 2022, the emissions of oxides of nitrogen (NO_x) will increase by 6000%. Similarly, the SO_x emissions will increase by 4000%. The reason the increase is so dramatic is because our current levels are so low. The EA concludes that because emissions will not rise to a level specified by the EPA, no further consideration is warranted. The pristine condition of our region is our most valuable asset. An arbitrary level of emissions set by the EPA for the entire nation is not appropriate for consideration of environmental impact in this location. Further analysis is required.

Water pollution: The EA is very weak in this entire area. It indicates an oil/water separator in the stormwater system will solve the entire potential problem. With scores of separate hanger-owners the potential for chemicals in the sewage system is great and is not considered in the EA. The deicing fluid recovery system is planned to be isolated from the stormwater system by some valves. The potential for human error in a situation like this is huge. Furthermore, the EA provides absolutely no assessment of the risk of a catastrophic oil or fuel spill and the potential impact to Convict Creek, Hot Creek, and Crowley Lake. Along with the risk, the EA should consider the cost of cleanup of such a spill

Wildlife: The EA fails to consider the impact of the proposed 8-ft. high perimeter fence on wildlife and specifically on Sage Grouse. Experience by the California Department of Fish and Game and the Los Angeles Department of Water and Power shows that fences can have serious negative impacts on these large, low flying birds.

The Green Church: In the spring, 2000 Intrawest flew 4 professional house movers to Mammoth to consider relocation of the Travelodge. While they were here, they inspected the Green Church. It was their unanimous opinion that the building was not suitable for relocation and "would probably end up as a pile of cinder blocks in the middle of 395". The EA should reflect that a replacement building will need to be constructed at the main SNARL campus. It should be noted that infrastructure improvements will be required to accommodate a new building. The EA should indicate who the party responsible will be (one presumes the Town). The University will require funds in early 2001 for engineering and architectural fees.

Regional commuter service: The draft EA and accompanying cover letter indicate that regional commuter service is expected to follow the subsidized major airline service. There is no data in the EA to support this claim, which seems designed to garner local support for the project. The residents of the region have no guarantee of regional commercial aviation opportunity from the proposed project. Such references and claims should be deleted.

Cost/benefit analysis: The project has a very high cost per enplanement (EP). Depending on the quality of the EP projections and assuming a project cost of $40 million, the cost per enplanement for the first 20 years of operation will range from $60 - $120 per person. This seems like a ridiculously high cost for a taxpayer-funded project. The EA should contain a detailed analysis of the range of potential cost per enplanement so that this may be considered. The Benefit Cost Analysis report by Ricondo and Associates is very difficult to understand, particularly the benefits section.

Gift of public funds: While the Town of Mammoth Lakes is the owner of the airport and the proponent of the project the real driving force behind the expansion is Mammoth Mountain Ski Area and their desire to subsidize commercial aviation traffic into the airport. It should be noted

for the FAA that they and their partner Intrawest Mammoth Corporation would be the primary beneficiaries of the project. Guests will fly in on a ticket they purchase from Mammoth Mountain, shuttle to their Intrawest managed bed, ski on Mammoth Mountain, and eat in Intrawest owned commercial areas. $40 million dollars seems like a lot of money to spend to subsidize these companies. Some analysis of the economic benefit of the project to the remainder of the county should be included to reasonably evaluate the benefit of spending that kind of money.

Significant impacts: The EA concludes that there will be no adverse impacts from the proposed project. We think this is a gross underestimate of the potential impact of the proposed project. If the project goes forward as proposed there will be unmitigated noise impacts, visual impacts, and traffic impacts. There are the potentials for impacts to air quality, water quality, and wildlife but further analysis is required to evaluate the impacts in these areas.

Sincerely,

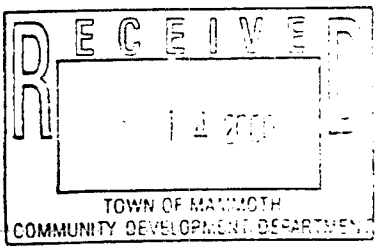
Daniel R. Dawson
Director

L-F

Preserving the Eastern Sierra Tradition of Environmental Responsibility
Working to preserve the spectacular natural beauty of the Eastern Sierra Nevada and to keep HWY 395 in Mono County a scenic corridor now and in the future

P.E.S.T.E.R.
a 501(c)3 non-profit publicly supported organization
Post Office Box 3511 Mammoth Lakes, California 93546-3511
PHONE / FAX: (760) 924-8475
E-MAIL: et@pester.org / WEB: www.pester.org

November 14, 2000



Bill Manning, Manager
Mammoth-Yosemite Airport
P. O. Box 1609
Mammoth Lakes, CA 93546

Dear Mr. Manning:
The 350-some supporters of P.E.S.T.E.R. have so many different views on the Mammoth-Yosemite Airport 's proposed expansion's environmental impacts that I, as spokesperson, can't adequately summarize the many and varied concerns they have expressed. Two issues on which they do agree though, and emphatically, are the airport's visual impact in the State Scenic Highway 395 corridor and the potential it creates for sprawl.

VISUAL IMPACT IN THE SCENIC CORRIDOR
Mono County's greatest asset is the largely unspoiled 395 Scenic Corridor at the base of the Sierra Nevada from Bishop to Walker. It's not just a pretty backdrop. It's the very base of our tourist economy. There is no other stretch of highway like it, and it is in the Town's best interest to preserve this magnificent gateway.

Any development at the Airport should have the MOST MINIMAL visual impact on the Scenic Highway. With good design and careful planning, this can be accomplished.

Buildings should be well-designed, of muted understated natural colors and non-reflective materials. How unfortunate that the simple, non-obtrusive Hot Creek Hangars design had to include tacked-on garages with brilliant blue doors under towers in deep crimson with bright yellow boxes stuck on their facades. These features catch your eye immediately and detract substantially from the design and the natural surroundings.

Signs should be planned to include all necessary information but not stand out. They should be of compatible colors with the surroundings and as small as possible.

The eight-foot fence the FAA is requiring will be painted a "neutral" color, the EA says. Exactly, what color is "neutral? If, indeed, that fence has to be constructed, it should be painted to blend in with the surroundings to the greatest degree possible.

L-G

Lighting should be in compliance with the Town's ordinance requiring shielded, down-directed outdoor lighting, not the current fixtures that glare in pilots', passengers' and passing motorists' eyes. The orange glow from the present lighting detracts from one of the Eastern Sierra's most spectacular assets: the brilliant starry night-time sky.

SPRAWL

We are troubled by the "sprawl" that the extensive airport development may trigger. Good planning requires urban limits and a clear interface between urban use and rural space. With Mammoth Lakes and June Lake hidden from the highway and the communities of Lee Vining and Bridgeport small and nearly contained, Mono County's stretch of 395 is still the unspoiled beautiful vista the highway used to be outside Moab, Utah 15 years ago and Bend, Oregon 30 years ago. Visit these cities, which have had rapid growth, and see how quickly their open space turned into sprawl.

The planned space-gobbling, huge, surface parking lot at the airport is itself a form of sprawl. A pay-parking structure built as part of the terminal would be a better use of space.

The Sierra Business Park's EIR pointed to the precedent of the airport development as justification for requiring less visual impact mitigation for their proposal across the road. Other developers who come in seeking land exchanges will point to the airport and the industrial park as precedents for their requests. When the Mono County Planning Commission rejected the SBP proposal 4-1 at the public hearing on 11/9/00, two commissioners commented the Sierra Business Park wouldn't "lead" to sprawl. "It IS sprawl," they said. Mammoth Lakes Town Councils and residents have indicated for nearly ten years they are opposed to expanding the town's urban limits, but now that the Town owns the airport, the pressure to do so will increase. The issue of potential sprawl in the 395 Scenic Corridor must be seriously addressed.

On behalf of the supporters of Preserving the Eastern Sierra Tradition of Environmental Responsibility, I appreciate your consideration of our concerns.

Sincerely,

Elizabeth Tenney

SIERRA CLUB
FOUNDED 1892

Range of Light Group
Toiyabe Chapter, Sierra Club
Counties of Inyo and Mono, California
P.O. Box 1973, Mammoth Lakes, CA, 93546

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

To: Town of Mammoth Lakes
Subject: Mammoth Airport Draft Environmental Assessment
Date: November 14, 2000

Thank you for the opportunity to comment on the Draft Environmental Assessment for the Mammoth Lakes Airport. The Sierra Club recommends the adoption of the no-action alternative. We do not believe that this site is suitable for an airport with service by carriers operating large aircraft because of safety considerations. We also believe that cumulative impacts produced by sprawl along a designated Scenic Corridor and Scenic Highway require a complete EIS.

We believe that the Town should be concerned about impact on air and water quality and wildlife, because these impacts are limited by state and federal law. Unless the risks can be shown to be truly negligible, action to enforce the law may require cessation of operations.

As a general comment, we do not believe this document represents an adequate economic or environmental assessment. There is a great deal about ski area economics, although it is clearly shown that only a few skiers arrive by air. This document cannot pass for a cost-benefit analysis, because there are no costs and very little about benefit to anyone except the ski area. There is also very little about the environmental impacts of this proposal, and it appears that a number of serious problems with this airport site and proposal have been overlooked.

First, some minor observations:

There are a number of closer airports than LAX that have scheduled air transport, namely Ontario, Burbank, Palmdale. and Inyokern. None of these meet the goal of reducing travel time significantly, but we suggest including these for completeness.

Also, the cause of the cessation of TWA Express service was the bankruptcy of Alpha Air, the contract carrier, caused by inadequate demand for air travel to Mammoth, not the bankruptcy of TWA itself. TWA Express is a franchise system, operated by local carriers. Note that Alpha Air was also the contractor for United Express. The implication that two independent carriers failed for external reasons is misleading.

Our main comments follow.

While some aspects of the airport design were discussed in the 1997 plan and environmental analysis, the aircraft traffic estimates here are new, and so the airport design numbers need to be updated to show that they are consistent. The updated cumulative impacts must be discussed.

The cost benefit study does not discuss costs, and discusses benefits only to the ski area. The data presented shows that air travel provides only an extreme minority of skier visits (10% or less). The analysis needs to trade the economic benefits to the entire region against the costs to the taxpayers.

The analysis of air travel never mentions the fact that the comparison airports are in areas with much higher population surrounding the airport. The Vail/Eagle airport serves several counties with a combined population over 80,000, adjoins an interstate highway, and 8 major ski areas, but has only 169,000 enplanements per year. Why isn't the projection for Mammoth nearer to 169,000/8 = 21,000 a year, consistent with an estimate based on population?

Why is the development of an airport at Bishop not presented as a primary alternative? The EA needs a tradeoff study between development at Mammoth and Bishop. The Bishop airport has in fact an improvement proposal pending, and so the draft EA is incorrect. The issue of control referred to can be

handled by use of a regional agreement between Mammoth and Bishop that creates a Regional Airport Authority. A joint proposal would have more chance of success. By failing to consider this approach, the Town risks failure of obtaining improvements at either airport.

The Bishop airport is at much lower altitude, has essentially no obstructions, lesser crosswinds, two existing runways, and an existing and larger terminal building. It is also at a population center, and is therefore the best location for a regional airport, located at the intersection of two US highways. If it is developed to enable operation under FAR 121, it will become the preferred destination because it is inherently safer. Mammoth Mountain has no objection to the use of the Bishop airport. We fail to see why the Mammoth airport proposal was ever submitted.

We are concerned about the safety of the Mammoth airport, particularly with respect to the obstructions, crosswinds, and weather, as well as the risk of collision in an uncontrolled airport with so much traffic and variable weather. There is no nearby backup airport proposed.

Considering the obstructions, is it even permitted by federal regulations to operate from this airport? Takeoffs of large aircraft are often to the east because of obstructions to the west, but the plan provides no stopway at the east end of the runway. It appears that the entire runway must be moved to the west to provide two stopways. What are the cost and other impacts of this change?

The range study shows that after takeoff from Mammoth in winter with a 10 kt tailwind, a 757 cannot return to either Chicago or Dallas, leaving passengers stranded. What percentage of the time will a plane taking off be able to return to the airport from which it left?

What is the payload penalty to permit safe takeoff under unfavorable conditions, and how much is the penalty when averaged over these conditions? What is the controllability of an aircraft under maximum gusty crosswind conditions, with an engine failure and considering the obstructions?

The range study also shows aircraft will need to be refueled at Mammoth. What facilities will be required, and how will the fuel be supplied? What are the environmental implications of fuel storage and transport? The existing 12,000 gallon jet fuel tank is just adequate to fuel one 757 (fuel capacity 11, 276 gallons). If six aircraft are to be on the ramp at one time, isn't a fuel supply for six aircraft irequired.

What are the risk factors for an oil spill that destroys the fishery and contaminates Crowley Lake and part of the water supply for the City of Los Angeles? What are the financial implications of a catastrophic spill and cleanup?

What is the cost and size of the oil/water separator needed to process stormwater? Note that an inch of rain on the runway, taxiways, and ramps would produce about 1 million gallons of runoff, which in a severe storm would require handling that volume at least once an hour. How will this amount of water be introduced into the water table?

Because monitoring is not mitigation, what mitigation will be pursued if the monitoring wells detect an unacceptable increase in water pollution? Will airport hours be reduced, and what is the risk of that?

What is the estimate for pollution of the wetlands to the west from exhaust fumes?

Is the air pollution estimate consistent with the future traffic levels? What is the amount of pollution per aircraft? Does this estimate allow for the higher consumption of fuel in a high-altitude takeoff?

Was the noise estimate made for sea level conditions, or for high altitude takeoff? What is the effect of noise on deer migration, on the fish hatchery, and research at SNARL? Will takeoffs be over the Town of Mammoth Lakes when conditions prevent a turn to the north after a westerly takeoff? Will noise reduction result in unsafe climb rates at this altitude?

Because US 395 is limited-access, how will vehicles access the airport under the final conditions imposed by CalTrans? Will airport traffic use the Benton Crossing road exclusively? Will it be necessary to build a road from the old substation area and the 203-395 interchange? How will this road avoid the wetlands? What will its cost be, and who will pay for it?

We are concerned about wildlife impact as a result of noise and traffic. Detailed analyses well beyond the airport fence of the effects of the airport on deer migrations and the effect of the airport noise, air pollution, traffic, and other factors should be conducted and the necessary mitigations proposed.

The deer migrate down the corridor directly across the highway, subject to aircraft takeoff noise. Will commercial activities be suspended during the migration, as they are at ski-area airports in Colorado during the elk migration season?

The local species of sage grouse is expected be listed as threatened. A three-day search for grouse next spring leading to unspecified actions if they are found is not satisfactory. Detailed field studies over several years and extensive analyses are probably required just to properly define the problem.Because monitoring is not mitigation, what reduction in service is contemplated if there is unacceptable impact on the sage grouse population?

These considerations indicate that this proposal will produce a significant impact on the environment, and so a full Environmental Impact Study mist be performed under the law. Commercial air service should operate out of the lower-altitude and safer airport at Bishop.

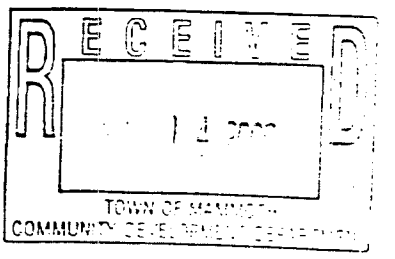
Sincerely,
Executive Committee
Range of Light Group

Wilma Wheeler

Wilma Wheeler, Chair

MAMMOTH LAKES CONTRACTORS ASSOCIATION, INC.

POST OFFICE BOX 1111
MAMMOTH LAKES, CALIFORNIA 93546



November 13, 2000

Town of Mammoth Lakes
P. O. Box 1609
Mammoth Lakes, CA 9546

To all concerned;

My name is Ed Power I am the President of the Contractors Association here in Mammoth Lakes. I am speaking on behalf of our members this afternoon to express our support for the proposed expansion at the Mammoth Yosemite Airport.

The Contractors Association is comprised of fifty-seven contractors and related construction industry businesses located here in Mammoth Lakes. I have attached a list of our members for your review.

We are in unanimous agreement to support the proposed expansion at the airport and look forward to commercial air service finally becoming a reality.

Sincerely,

Ed Power
President

MAMMOTH LAKES CONTRACTORS ASSOCIATION

2000 CURRENT PAID MEMBERSHIP LIST
AS OF NOVEMBER 08, 2000

ABBEY CARPET SIERRA FLOOR COVERING
BALDASSI, RICHARD
BLACK GOLD ASPHALT, INC
BRAINARD, ELLIOTT, DESIGNS
BUSBY, SCOTT CONSTRUCTION
COPELAND LUMBER YARDS
COUNTRY GLASS
D. & J. ROOFING
DEMPSEY CONSTRUCTION
DIENER, DAVID
DOWNUNDER CONSTRUCTION
DO IT CENTER
EASTERN SIERRA SANDBLASTING
FOSTER, RONALD
FREEMAN, PHILIP ROOFING, INC
GOOD, RICHARD L
GRIBBEN R.&R. PLUMBING
HENDERSON LANDSCAPE & HYDROSEED
HIGERD PLUMBING
HIGH COUNTRY CORPORATION
HIGH COUNTRY LUMBER
HOT CREEK HANGER GROUP, LLC
INTRAWEST MAMMOTH CORPORATION
INVISION PAINTING
J.M.J. CONCRETE CONSTRUCTION
KENNEY, MIKE ROOFING
KING'S GLASS WORKS
KUPPENS, RON ROOFING
MAMMOTH ACE HARDWARE
MAMMOTH LAKES INSULLATION
MAMMOTH WELDING
MAMMOTH SIERRA ELECTRIC (MARTIN KLEINBARD)
MARCHANT, PHIL
MASTERS, J. CONSTRUCTION, INC.
MEADE, J. GREG
MEKVOLD, CRAIG
MONO ROCK
MOUNTAIN CARPETS SERVICE
NEUBAUER-JENNISON, INC.
O'KELLY ELECTRIC
PAUL'S ELECTRIC
PHILLIPS CONSTRUCTION
PRESCHUTTI CONSTRUCTION, INC.
ROBERTS MECHANICAL HEATING - AIR COND.
ROOF COMPONENTS, INC.
RUDOLPH CONSTRUCTION, INC.
RUMMEL E. J. CONSTRUCTION
SIERRA CUSTOM PLUMBING
SIERRA DOOR AND TRIM
SIERRA DESIGN STUDIO
SIERRA PAINT AND DRYWALL
SILVA, JOHN D CONSTRUCTION
TOWN OF MAMMOTH LAKES
TRIAD/ HOLMES ASSOCIATES
WAHL, BUCK CONSTRUCTION
WILBUR, MARK CONSTRUCTION

JOHN HOOPER

57 PAID MEMBERS

MAMMOTH
CALIFORNIA

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Chief Executive Officer
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760.934.0731
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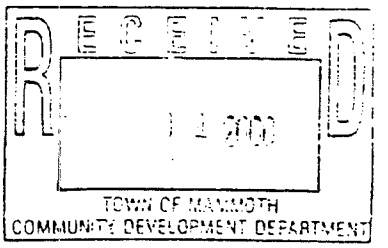
November 14, 2000



Mr. Bill Manning
Town of Mammoth Lakes
Post Office Box 1609
Mammoth Lakes, CA 93546

Re: Comments on the Environmental Assessment for the Mammoth Yosemite Airport Expansion

Dear Bill:

Thank you for accepting public comment on the Airport Expansion Project. Approval of the Preferred Alternative is a significant step for the Eastern Sierra and for the Town of Mammoth Lakes. The project allows the airport to be operated more safely and efficiently. Planned development of the airport has been proposed for several years, and it is thrilling to see the time finally arrive that our communities can take control of our own destiny.

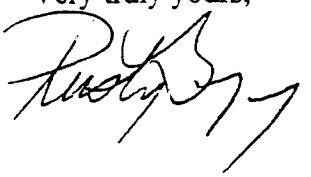
In 1986, the Board of Supervisors for Mono County completed and certified an environmental impact report and environmental assessment for planned development at the Mammoth Lakes-June Lake Airport. In 1988, the Board approved a Master Plan which began providing the details for the development consistent with the 1986 EIR/EA. The Airport was subsequently purchased by the Town of Mammoth Lakes and renamed the Mammoth Yosemite Airport. Prompted by a desire to attract visitors in order to improve the local economy, and the need to operate the airport with a positive cash flow, the Town Council has been preparing plans for development during the last several years.

The Airport is a major step in expanding services to the existing population and guests of the Eastern Sierras. Annually, approximately three million visitors travel to the Mammoth area, arriving predominately by vehicle. Numerous issues have been identified as a result of the heavy vehicle traffic volume including: air quality and non-attainment for PM-10 during the winter months, highway congestion, need for continued four-lane projects along Highway 395 and additional road construction throughout the communities, safety of highway travelers, and vehicle miles driven. Expansion and increased use of the airport will not eliminate the need to continue to address these issues, but it will cut down on the degree of impact that these issues are of concern. The improvements will occur to an existing airport, with the least land intensive impacts, no impact to threatened or endangered species or sensitive wetlands.

The Airport is also viewed as a necessary step towards providing the services needed for future development. Communities throughout the Eastern Sierras are in the process of expansion and the airport will provide the opportunity for a link with regional transit services. The Airport also establishes the portal link for the westside of the Sierras, especially Yosemite Park, and the opportunity for travelers to conveniently access the park via this airport.

Thank you again for the opportunity to provide comments on this important matter. It is not often that a project comes along that has such a tremendous benefit on a region. Such is the case with the expansion of this airport at this point in time.

Very truly yours,



RECEIVED
NOV 1 5 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

November 15, 2000

To: Federal Aviation Administration

From: Jim Langley

Re: Expansion of Mammoth Yosemite Airport

I have been intimately involved with the welfare of Mammoth Lakes for the past 30 years. I lived in Mammoth for over 26 years and raised 3 children here who are now in careers of their own elsewhere. Only 4 years ago my wife and I moved to Bishop.

This letter is to speak in favor of the proposed airport expansion of the Mammoth Yosemite Airport. The airport is critical to the growth and welfare of this community. I owned and operated a market in town for 14 years and have been a real estate broker in town for the past 12 years. Those years of experience taught me how tough it is to operate a successful business in Mammoth. We are constantly at the mercy of the weather and other elements of nature.

The airport expansion and associated regular airline route would be a tremendous asset to the health of the community. In order to compete on a national basis as a ski resort, Mammoth needs to have access to other parts of the country.

I urge you to move forward with the proposed expansion of the Mammoth Yosemite Airport.

Sincerely,

Jim Langley

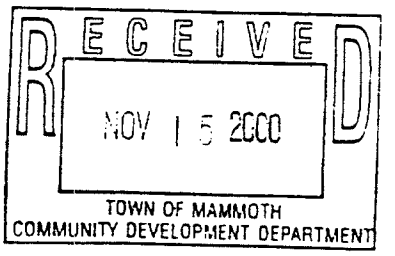
Jim Langley

Sommar Farber
P.O. Box 1724
Mammoth Lakes CA 93546

RECEIVED
NOV 15 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

I would like to pledge my support of the expansion plans to the Mammoth / Yosemite Airport. I feel that this is something Mammoth has needed for a long time and can only bring good things to the area.

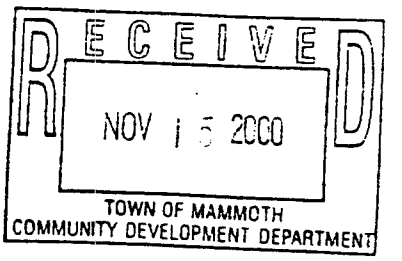
Pat Foster
2332 Stone Circle
Bishop, CA 93514



I have lived in the Eastern Sierra for 23 years and have done some pretty extensive traveling during that time. I can not begin to tell you how many hours of my life have been wasted driving to and from Los Angeles and Reno.

I am a huge supporter of the plans put forth for the expansion of the airport. Not only will travel plans be simplified but the economic support that 757s would bring the Eastern Sierra would be unparalleled. I feel that every business in the area would benefit dramatically if the airport plans go forward.

Mrs. Nancy Kassel
P.O. Box 1537
Mammoth Lakes, CA



November 15, 2000

To Whom It May Concern:

I am a resident of Mammoth Lakes and am in support of air service and all the improvements proposed for Mammoth Lakes Airport.

The improvements are an integral component of prosperity to our town because of the increase in visitors. It will allow more people to experience the wonder of this area, time is precious and today people do not have the time to spend driving the long distance to our beautiful country.

I also believe there would be a reduction in vehicles traveling the highway to come here, therefore a reduction in pollution, congestion and potential accidents. Also, on an emergency basis, it would be much easier to get to a larger city in a more timely manner.

The increase in revenue to the Town would also result in enhanced parks, programs and facilities for our community.

Thank you,

Nancy Kassel

Nancy Kassel

November 15, 2000

Bill Manning, Airport Manager
Dennis Crabb, Hearing Officer
Town of Mammoth Lakes
Mammoth-Yosemite Airport Expansion Project

RE: Additional Comments about the Draft Environmental Assessment

Dear Mr. Manning and Crabb:

After having attended and spoken at last night's meeting I would like to offer the following additional comments concerning the Mammoth-Yosemite Airport Expansion Project:

1. Commercial Air Service to Mammoth Lakes

I support the concept of commercial air service to the Mammoth-Bishop area. After a number of air carriers have tried and failed to provide service to the residents of this area, we are now left with no reliable commercial air service, the alternatives being charter flights, a lengthy drive to Reno to connect with the commercial airlines, or an even longer drive to your destination. The proposal to bring in air service from Dallas and Chicago, however, does nothing to meet the needs of the majority of this area's residents. Those needs would be better met by air service to and from the Los Angeles area, the San Francisco Bay Area, Reno, and Las Vegas. While such service can be provided by the Boeing 757 aircraft envisioned by the plan, it can also be provided by commuter aircraft , such as the Embraer Brasilia, which could operate either out of the Mammoth-Yosemite Airport, or out of the Bishop airport, using the existing facilities. I agree that it is important to contract with a stable existing carrier to provide these services so as to avoid the financial problems faced by the previous commuter providers, however the present agreement with American Airlines, rather than providing the needed air service, is based on opening up new markets for the financial benefit of Mammoth Mountain, Intrawest, and local merchants.

2. Environmental concerns

As I said at the meeting, I am pleased that the proposed plan is for minimal expansion of the airport facilities necessary to accommodate the needs of the proposed 757 aircraft, using, as much as possible, existing runway and taxiway areas, thus minimizing as much as possible environmental impact caused by the airport structure itself. The impact caused by the arriving and departing aircraft, however, depends on the number of operations that occur. The airport is currently used by a number of private jets, some of which are noisier than a 757. Obviously, the arrival and departure of two 757 flights per day would have significantly less impact than two flights per hour. While I think it is unlikely in the near future that operations would escalate to the extent where there would be three to six 757 aircraft on the ramp at any one time, I think that some limits as to the actual number of flights to be allowed need to be developed. I question whether it is appropriate to build a terminal facility that is designed to handle a large number of aircraft without addressing this issue. I am sensitive to the comments of Dan Dawson, the director of SNARL, that this is a rural airport and that airline operations by large jets will have much more of an impact here than in an urban area. I also think that specific plans need to be in place to ensure that contamination of the environment by jet fuel and de-icing fluids does not occur.

One of the things brought up at the meeting was that air carrier service would reduce environmental pollution by reducing the number of cars operating on Highway 395 and in the Mammoth Lakes area. While this might be true if service were provided from the Los Angeles area airports so that persons who presently come to the Mammoth area by car could instead fly, it does not hold true at all for flights from Dallas and Chicago. This would increase the number of visitors to Mammoth without at all reducing the number of visitors who would drive up to Mammoth from the Southern California area, thus adding to rather than reducing pollution.

3. Aviation Safety

I am a commercially licensed pilot and own a Piper Comanche which is based at the Mammoth-Yosemite airport. As such, I am very familiar with the problems connected with flying into and out of the Mammoth-Yosemite airport, particularly in the wintertime. These problems include the terrain in which the airport is situated, strong winds, significant turbulence, significant crosswinds, strong up and downdrafts, and reduced visibility. These problems frequently make operations at this airport very difficult, if not impossible. This is one of the reasons why it has been difficult to attract and keep any airline service at this airport. Past carriers have found that it was frequently necessary to divert to the Bishop airport because operations into the Mammoth-Yosemite airport would have been unsafe. Large aircraft, such as the Boeing 757, are not immune to these problems. The present plan is to divert these aircraft to Reno if operations into Mammoth would be unsafe, because Bishop is not presently equipped to handle such aircraft. Commuter aircraft, on the other hand, would still be able to divert to Bishop, using the existing facilities. Obviously, it would be a much greater imposition on travelers to Mammoth to arrive in Reno (despite the obvious charms of that city), rather than to end up in Bishop and face the rather shorter bus ride to Mammoth.

Another safety issue which was brought up at the meeting is that the Mammoth-Yosemite airport is uncontrolled. The concern is that of general aviation aircraft mixing with the expected air carrier traffic. Obviously the higher the number of air carrier flights into Mammoth, the more significant this issue becomes. Just the fact that the field is uncontrolled does not, in and of itself, cause a safety problem. Safety depends on everyone using the airport taking appropriate precautions, such as listening to and broadcasting your intentions on the radio. Appropriate use of the radio and simply paying attention can also reduce, but not eliminate, any safety problems with not being able to see aircraft at the other end of the runway. There is, however, a problem with wake turbulence with Boeing 757 aircraft. Because of the design of its wing, the 757 causes significantly more wake turbulence than other similar aircraft, and pilots of general aviation aircraft need to be made very aware of the danger of this, particularly if there is no tower to provide adequate separation.

4. Bishop vs. Mammoth

The Mammoth-Yosemite airport has certain inherent limitations that do not necessarily apply to the Bishop airport. The Mammoth airport has a single east-west runway which, as discussed above, is frequently subject to significant cross winds. Although a crosswind runway could be built at Mammoth, terrain factors make this impractical. Bishop has a number of existing runways, all of which are at least 5500 feet in length, to minimize cross-wind landings. Mammoth is situated very close to the Sierra crest and is surrounded by areas of higher terrain, whereas Bishop is in the center of the Owens Valley, minimizing issues of terrain and also up and downdrafts due to wind flow over the mountains. Bishop is at a significantly lower elevation and has considerably better weather, minimizing problems with ice, snow, and visibility. As discussed above, Bishop has been the preferred alternate for aircraft not able to land at Mammoth due to weather conditions. If we are going to spend millions of dollars developing a regional airport, it would seem that Bishop would be a better choice than Mammoth. The principal drawback is that it would require bus transportation to get passengers to Mammoth. It may prove better in the long run to provide such transportation from Bishop on a regular basis rather than have Mammoth-

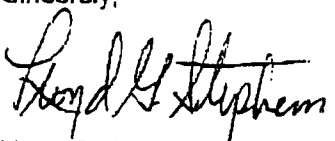
bound passengers frequently end up in Reno. I think that this alternative should be given more consideration before embarking on the presently proposed plan. Yesterday's Inyo Register contains an article indicating that the Bishop airport is similarly planning improvements "that would meet the requirements of not only small commuter planes, but 757-size aircraft as well," according to Bishop airport manager Mike Barnes. Obviously, Bishop must be thinking about the same concerns.

5. Financial Concerns

The current plan is to spend millions of dollars to bring the Mammoth-Yosemite airport up to standards to serve Boeing 757 aircraft on a regular basis. This money is to be furnished both by the FAA and the Town of Mammoth Lakes. This is based on a desire to begin subsidized service by American Airlines from Dallas and Chicago, and the hope that such service will prove profitable enough to continue on a non-subsidized basis. No plans are presently being made to provide service to other locations, as discussed above, which would be more beneficial to local residents, although certainly the hope exists that such service might occur in the future. If we look at the past, however, the carriers who have attempted service into Mammoth have not been able to provide continuous, reliable service into this airport. Partly this can be attributed to the financial instability of the carriers themselves, as well as the problems they encountered in dealing with the weather concerns here. But the fact is that it has not been demonstrated that any air carrier would be able to provide financially successful service to the Mammoth-Yosemite airport on a non-subsidized basis. Certainly the proposed plan offers the hope of financial gain to the Town of Mammoth, but it also offers the considerable risk that, after these millions are spent to improve the airport, we still will not be able to attract carriers that can provide the necessary air services unless they continue to be subsidized.

Thank you for your consideration.

Sincerely,



Lloyd G. Stephens
1312 Swall Meadows Rd.
Swall Meadows, CA 93514

RECEIVED
15 2000
TOWN OF MAMMOTH
COMMUNITY

November 15, 2000

To Whom It May Concern:

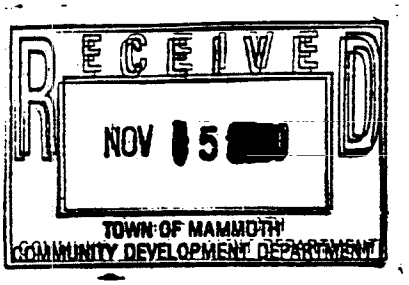
As a full time resident of the Mammoth Lakes area for over 18 years and a business owner for over 15 years, I recognize the need for a full service airport in our area. We are a customer service oriented area and NEED to have the airport completed to have a healthy and prosperous community.

Please weigh our concerns heavily for the completions of these projects that have been put into our master plan.

Thank you very much.

Sincerely,

Dean B. Wolf
Mill City Laundry
Owner



November 14, 2000

To: Federal Aviation Administration

Re: Mammoth-Yosemite Airport

I have been a resident of Mammoth lakes for 25 years and I have been active in community affairs including 12 years as an elected board member of a special district. I have been self-employed for most of those 25 years. My wife and I raised our family here and both of our sons graduated from local schools.

I believe that my years in Mammoth have given me a good perspective as to the need for the completion of the proposed airport expansion.

The economic history of Mammoth lakes has been characterized by a series of peaks and valleys, which have disrupted economic growth and stability. The effects of this boom and bust history have been negatively felt at all levels of our community. Local governments have been unable to plan effectively. Local businesses have been unable to make wise decisions in terms of investment and long term planning. An adequate, permanent work force has always been just beyond reach. Many local families have been unable remain in Mammoth because their abilities to provide for their financial futures has been clouded by economic uncertainty.

Mammoth Lakes is on the threshold of finally achieving economic stability. The successful implementation of the airport expansion plan is one of several vital mileposts needed to achieve this end.

I, like many others in my community, fully support the proposed expansion of the Mammoth Yosemite Airport.

Sincerely,

Rick Bramble
P.O. Box 1028
Mammoth Lakes, California 93546

RECEIVED
NOV 15 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

November 15, 2000

To: Federal Aviation Administration

From: Jim Langley

Re: Expansion of Mammoth Yosemite Airport

I have been intimately involved with the welfare of Mammoth Lakes for the past 30 years. I lived in Mammoth for over 26 years and raised 3 children here who are now in careers of their own elsewhere. Only 4 years ago my wife and I moved to Bishop.

This letter is to speak in favor of the proposed airport expansion of the Mammoth Yosemite Airport. The airport is critical to the growth and welfare of this community. I owned and operated a market in town for 14 years and have been a real estate broker in town for the past 12 years. Those years of experience taught me how tough it is to operate a successful business in Mammoth. We are constantly at the mercy of the weather and other elements of nature.

The airport expansion and associated regular airline route would be a tremendous asset to the health of the community. In order to compete on a national basis as a ski resort, Mammoth needs to have access to other parts of the country.

I urge you to move forward with the proposed expansion of the Mammoth Yosemite Airport.

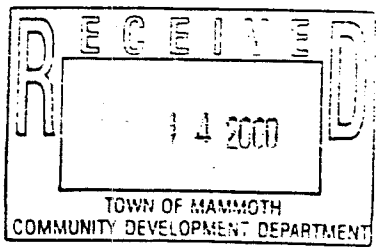
Sincerely,

Jim Langley

638 Cottonwood Dr.
Bishop, CA 93514

11/14/00

Bill Manning
Town of Mammoth Lakes
Airport Manager
PO Box 1609
Mammoth Lakes, CA 93546



Dear Mr. Manning:

I have reviewed the Draft Environmental Assessment for the proposed expansion of the Mammoth Lakes Airport, and these are my comments.

To begin with, the Purpose and Need for project are not adequately justified. The proposed action arises with the assumption that the only way to bring commercial air service to Mammoth is with long distance flights that use the Boeing 757. No consideration is given to the more reasonable option of bringing smaller aircraft from regional hubs, aircraft which could utilize the existing runway. The DEA's historical notes show that previous attempts at regional commercial service from Fresno failed not because of any inherent problem with the airport, but because of mismanagement. In fact, a lack of demand also contributed to the failure, and so the DEA fails to make the case that the proposed flights from Chicago and Dallas are necessary or even viable.

The airport at the ski resort of Aspen, Colorado has a similar length runway as the current Mammoth Lakes' airport, at a similar elevation, and it receives satisfactory air service with smaller aircraft from regional hubs like Denver, Salt Lake City and Dallas. From a marketing standpoint as well, it would be easier to attract airline customers from regional hubs like Las Vegas Los Angeles, Burbank, San Francisco, Phoenix, Portland and Seattle than to hope for long-distance customers, and smaller jets could bring passengers from these closer hubs without the necessity of expanding the runway.

Secondly, Alternative 8, the alternative that Bishop serve as the area's airport was inappropriately dismissed. The DEA requirement that 757 service be available by the 2001/02 winter is unreasonable, since if collaborative planning for expansion of the Bishop airport had begun in 1997, when Mammoth Lakes began the current campaign to expand its airport, it might be that the Bishop airport would be ready for expansion by now. Executives of Intrawest (the primary resort developer at Mammoth Lakes) hoped and expected in 1997 that the Bishop airport would be the one to take in air service for this area , because of the many

advantages that the Bishop site has (Dana Severy, personal communication). These following advantages are not considered in the DEA:

1) The Bishop site is much safer. The weather is reliably stable, the elevation is lower, there are no obstructions and there is the potential for cross-wind and bi-direction landings. At the Mammoth airport, on the other hand, the weather is severe, especially in winter, the focus season of this plan. Doe Ridge and nearby US 395 are obstructions within the cone of FAA recommended safe zones. There is no potential for cross-wind runway, and both takeoffs and landings must be from the same direction. All these factors are significant, and they make the prospect of large jet service much less safe than at the Bishop airport.

2) The Bishop site is convenient and reliable to Mammoth Lakes (Dana Severy, 1997 personal communication). The DEA claims that driving passengers from Bishop to Mammoth would be a problem during inclement weather, but during inclement weather there is a greater likelihood that flying in to the Mammoth airport would be prohibitively unsafe before driving on a divided four-lane highway would be a problem. The Bishop airport would have dramatically fewer flights delayed or cancelled due to inclement weather, and customers would learn that they could count on being able to arrive and depart, instead of the erratic storm cancellations and delays that would be inevitable at the Mammoth site.

3) There are no residential areas or settlements of any kind under the approach path of the Bishop airport. The communities of Crowley Lake and Sunny Slopes are under the approach path to the Mammoth airport. These communities would be affected by jet noise, and potential crashes. During the last 15 years a pattern of crashes of small private aircraft using the Mammoth airport has centered around these communities. One crash was into a campground very near to Tom's Place, and only a few dozen feet kept a family of campers from being killed.

4) The DEA says that the Town of Mammoth Lakes has no control over planning at the Bishop airport, yet the document does not mention any attempt to collaborate with the managers of the Bishop facility or any roadblocks to potential collaboration.

In the DEA's analysis of the environmental consequences and mitigations, I find that these problems are not adequately addressed:

The noise study is confined to the immediate area around the airport.

The communities of Sunny Slopes and Crowley Lake stand to be dramatically affected by the overflight of incoming 757's, and no mention of the expected noise levels was made. Another sensitive area for noise is the sage grouse lekhs northeast of the "Green Church." The DEA only describes a plan to monitor grouse impacts in areas immediately adjacent to the Green Church. In addition, there needs to be provisions for mitigation should impacts be detected.

The DEA mentions that de-icing fluids "*could* be contained" (emphasis added), but does not mandate that they be collected and kept out of the soil and groundwater. These are very toxic chemicals, and many count on the quality of water in this watershed—fishermen, the city of Los Angeles, the endangered tui chub, and general recreationists—and this area has a very high water table. The EA needs to require that de-icing chemicals be collected and removed.

The DEA makes no mention of the traffic problem that increased use of the airport would bring. Highway 395 is a designated limited access California Scenic Highway, and the section where the airport lies is one of the most scenic (and potentially distracting to drivers) stretches in the nation. In addition, it has some of the most severe winter weather of any stretch of highway in California. Visibility during storms is often nil here, and the hazard of traffic leaving and entering a four-lane highway must be considered. Currently, there are no ramps or special lanes, just a stop sign for highway ingress. There was a fatal ingress accident near this junction in 1982. With the Town's proposed development of the airport, the proposed resort development at the airport site, and the proposed development of the Sierra Business Park on the south side of the highway, the cumulative increase in traffic could be overwhelming.

Moreover, the proximity of the runway to the highway would make 757 takeoffs and landings an impressive distraction to drivers on 395. There has been at least one accident caused by a driver distracted by a landing aircraft, resulting in the death of a bicyclist. The DEA does not address any of these traffic problems. The DEA does wrongly suggest that increased airport use will diminish driving on 395. This claim contradicted by the proposal itself, which hopes to bring additional customers from eastern America, not just transfer existing customers from cars to planes.

This proposal is fraught with flaws, and I urge you to withdraw it.

Sincerely,

Andy Selters

cc: Elisha Novak, FAA District Airports Division

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

John and Nancy Walter
PO Box 2384
Mammoth Lakes
CA 93546

Town of Mammoth Lakes
Planning Commission
PO box 1600
Mammoth Lakes, Ca 93546

Nov. 14, 2000

Dear Commissioners:

Thank you for the opportunity to comment on the EA for the proposed expansion of the Mammoth Lakes Yosemite Airport. The document as currently done raises many questions and leaves others unanswered. It is recommended that if you decide to proceed with this project, that you prepare a full EIR in order to properly evaluate the real overall effects of this project, reasonable alternatives and proper mitigation's. .

A major difficulty with the document is its failure to deal in any substantial manor with the tremendous potential impacts of this project in its mature phases. All that is given to indicate the magnitude of the problems are estimates of 200,300 winter emplanements .and 133500 summer emplanements in 2022. Most of the winter implanements would occur during the 112 day peak winter ski season. The number and type of aircraft is not given beyond 2002, however if a mix of 757, 737 and commuter aircraft is assumed, about 20 takeoffs and 20 landings per day by commercial aircraft seems reasonable to accomidate the emplanements specified in the EA. If most of the summer traffic occurs between mid June and Labor day, about 75 days, one comes up with similar numbers, about 20 in and 20 out per day in the summer time. Most of this air traffic will peak between 11am and 3 PM since the EA correctly discourages commercial night flights and night comes early in the winter and the need to be at an airport over an hour before departure limits early arrivals. The peak traffic would then be about 5 takeoffs and 5 landings/hour. The corresponding peak passenger flow would be about 750 coming and 750 going each hour. This assumes that the planes will be about 90% loaded at peak holiday times. The number of general aviation takeoffs and landings is not discussed but if the current estimated number of 6000 per year is doubled by 2022, the general aviation landings and takeoffs would exceed twice the commercial operations. This high a commercial traffic density both in terms of commercial aircraft flights and commercial passengers raises many serious questions.

1. Can this number(20) of commercial landings and takeoffs mixed with at least twice as many general aviation operations be safely handled on a single runway mountain airport

subject to extreme weather conditions with NO AIRCRAFT CONTROL SYSTEM? It doesn't seem reasonable, much less safe.

2. Can the terminal, tarmac, baggage handling, number of terminal employees, parking. car rental operations, access roads, buses to Yosemite, turning lanes on and off 395 etc, handle a peak of 750 passengers per hour? This situation is not analyzed but is seems doubtful if this level of passenger traffic could be handled. If the airport scales up to handle this peak load, where will the employees come from? where will they live? and what will they do during the approximately 170 day slack season? A proper analysis should also include the effect of about 1000 passengers stranded at the airport when a blizzard closes both the airport and the highway.

3. If the facility and infrestructure can't handle this level of traffic, and it seems on the surface at least that they can't, then these levels should never be allowed from a safety standpoint at the proposed airport. Then the financial analysis which appareently assumes these high levels of traffic and supports the FAA, the Town of Mammoth Lakes, and MMSA investing in this airport are flawed and should be reconsidered.

The above numbers are approximations because the EA does not give enough data for a detailed analysis. However if the passenger traffic values given in the EA are right the above analyses should be close to what would be expected and points out a whole series of important issues that require detailed analysis.

Other issues that are either not discussed or are discussed in such a summery fashion that they can not be properly evaluated are:

A. Flight Safety: It is incredible that when discussing a very large increase in traffic into an at least somewhat questionable airport, little or no mention is made of flight safety. We had expected extensive analysis of weather, winds and wind shear, obstacles, and off normal conditions. Surely this issue requires extensive evaluation before proceeding with a major airport expansion.

B. Fuel use, availability, and storage. The current 12000 gallon airport jet fuel tank is about one fill up of a 757. How much fuel will be required? How will it be stored? How will potential spills, particularly in inclement weather, be handled? and how many truck loads of jet fuel will have to come up and turn on and off 395?

C. How will fire, medical and other emergencies be handled? Even if the Town or Mammoth Lakes buys equipment and stores it at the airport there is no certainty that one of the volunteer firemen (the only kind we have) will be available. The problem like many at Mammoth would certainly be compounded by blizzard conditions.

D. Vehicle traffic. The EA contains no detailed traffic analysis and depends on an uncertified draft EIR that has been voted down by a 4 to 1 vote of the Mono County Planing Commission. The issue is not how many cars per hour can safely move down 395

at highway speeds. The situation to analyze is how to get the traffic which will include a mixture of autos, buses (many if 113,000 people are to be bused to Yosemite) and trucks on and off the highway. Today a full little league schedule can make this difficult.

D. Employee housing: The major expansion proposed has to call for a large increase in employees. Where will they live?

E Sage Grouse and Deer. A major airport operation like the one proposed will certainly have major impacts on the extensive deer herd and the probably soon to be listed Sage Grouse. Detailed analyze of the effects of the airport on deer migrations and the effect of the airport noise, air pollution, traffic etc beyond the fence of the proposed airport should be conducted and mitigated as necessary. The Sage Grouse are a serious situation because so little is know about them in this area. It is known that they are here and the area around the airport is what they like the most. A three day search next spring leading to unspecified actions if they are found is just not satisfactory. Detailed field studies over several years and extensive analyses are probably required just to properly define the problem.

F. Noise: The noise section seems to ignore the local situation. The generic discussion does not take into accept altitude, local atmospheric effects, reflection off mountains and ridges, the low ambient noise that our very nearby wilderness areas demand, and the potential negative impacts of noise on our tourist industry. Actual data should be taken from not only 757, but from 737 and other aircraft operating out of this airport.

G.Sprawl and conformance to regional planning. It is not clear how much of the current thinking on spawl and land use by the local communities and county are factored into the analysis. It is clear that the airport if this plan is approved will continue to grow beyond that approved in previous planning documents like the 97 airport EIR. The analysis seems to be limited to- if the County and Town are advertising for more visitors, it must be all right to help bring them in.

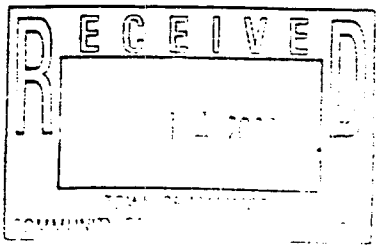
Another major flaw in the document is the failure to fully evaluate what is considered by many residents and pilots as the preferred alternative, the development of Bishop airport as the regional airport center. I'm sure others will go into great detail on why this should be the preferred alternative. Another alternative that should be considered is to only upgrade the airport to the extent necessary to handle 737 type aircraft (and hopefully its quieter successors) and commuter aircraft. This alternative would probably require some runway lengthening but no widening and less investment in terminal and infrastructure. The investment, number of daily flights, and number of passengers would be less, which is probably fitting if our carrying capacity and our needs are realistically considered.

In summery please do not accept this EA. If you decide to precede please do a full EIR with the required detailed studies, analyses, public review and peer review. The Alternatives in the EIR should include Bishop airport and a less ambitious approach at Mammoth Yosemite airport.

Thank you for the opportunity to comment.

John Walter Dr Nancy Peterson Walter

To: Town of Mammoth Lakes
C/O Bill Manning, Airport Manager
Box 1609
Mammoth Lakes, Ca. 93546



Subject: Response to Draft Environmental Assessment Report

Bill,

The following is a brief description of my concerns after reviewing the October 2000 Draft Environmental Assessment Report. This report is lacking in the issues it addresses and the scope of the report. Therefore, I will list my concerns as 1) On airport, 2) Off airport, and 3) environmental.

General Comments:

This document, as others before it, only address issues on the airport itself or within a very limited area adjacent to the airport property. Further, the report is limited to primarily the runway expansion and terminal area. It piece meals the scope of this project so as not to allow the development to be viewed in its entirety. By gaining a little foothold now, the developer can gain an advantage later, by using the logic that the next step makes sense, since we've come this far.

Pg. 111-10 (3.3.3)

This section speaks of the reasons to drop Alternative 8. Specifically, because of poor weather and conditions on Sherwin Grade. However, these same weather conditions will close or make unsafe conditions at Mammoth Airport, (MMH). These weather conditions are the reason that Bishop (BIH) becomes a more attractive alternate airport. BIH already has multiple cross-wind runways, a working ILS approach system, is 3000' lower AGL than MMH, has more acceptable flying days, a history of less weather related accidents, less wind related ground incidents, and would require the same amount of financial efforts to accomplish the same results as the proposed plan.

It appears that the only logical reason to proceed with MMH is that the timeline is in place to make this proposal happen NOW. This is not necessarily the best use of taxpayer moneys, FAA collected fees, or public / pilot / passenger safety. I believe that Alternative # 8 should be retained.

Pg. IV-18

This section refers to passenger load factors for commercial airlines in Mammoth Lakes. As an ex-employee of Alpha Air I know that the passenger loads were not as described. During the

winter months the loads ranged from 80 %– 110%. Overbooking did occur. However, during the summer months the loads ranged from 0% - 20%. The flights often flew with only one or two passengers. It has been my observation that this is the case with every airline operated in Mammoth during the last twenty-five years. This section is misleading to the reader.

Pg. V-71

This section implies that because the airport exists today that any increase in buildings, traffic, noise, or pollutants is not a significant increase. It does not consider an increase of 6,000 general aviation over flights (double today's activity) an increase of any significant. Further, today there are approximately 100 heavy aircraft landings per year. This plan calls for 600 scheduled heavy aircraft landings per year above the existing 100 flights that occur now. Again, the developer simply believes this is consistent with today's operations.
This is not a "No significant" finding.

Also contained in this document is a single reference to signage. However, the developer has already had public outcry over the size and type of signage he wishes to erect along the highway. This document would lead one to believe that the signage would simply advertise the real estate for sale and promote the businesses at the airport. The sign has been discovered to be a huge billboard type sign that is prohibited by County ordinance. This did not stop the developer from taking the position that the sign was on town property and he didn't need to comply with the laws of Mono County. His position was made very clear in public meetings, The Town and I will do as we please.

He now has applied for a variance to the building code to erect the terminal building above the height allowed by code. This document would lead the reader to believe the developer acknowledges the visual impacts and would do all he could to minimize those impacts. This document can not be trusted to detail the full extent of this plan. This E.A. is incomplete, misleading, and lacks specific detail.

This section also fails to address the fact that for the most part, only general aviation aircraft use the airport today. The landing of heavy aircraft so closely to a major highway WILL distract the motoring public. This WILL increase accidents on highway 395.

ON AIRPORT:

This plan does not address or show the size and scope of airline maintenance hangers. The commercial activities at the airport will require dedicated service facilities, which will be much larger than those described. These are not shown or described.

There is no mention of increased security cost, personnel, training, or even a security plan. The airline may provide personnel for scanning passengers, but this is a very limited function. Who patrols the airport facility, handles crimes at the hotel, restaurant, R.V. park, and retail sales outlets? Who handles the secure sections of the ramp area? How are increased levels of security handled when the F.A.A. increased the threat levels? The security plan does not exist in this E. A. and there is no discussion of who pays.

There is no discussion of the B-757's crosswind abilities. How will this aircraft and others like it land and depart during those numerous crosswind days. How often will winds cause a flight to be diverted? Where will the flights be diverted? This plan is incomplete.

There still is no discussion as to where a flight will be diverted to for: winds, poor visibility, snow removal, or if an incident occurs on the runway. There is no emergency action plan.

Can Bishop airport handle these types of aircraft or will they be diverted to Reno, Nv.?

Pg. V-23 discusses increased airport usage. It does not address the need for increased Emergency Medical Services, increased fire protection for both crash rescue and structures, and increased law enforcement. It does mention a reference to Mammoth Lakes Fire Dept. However, Mammoth Lakes Fire Dep. has NO JURISDICTION at Mammoth Airport. The fire protection agency for Mammoth Airport is the Long Valley Fire Protection District. To date the Town of Mammoth Lakes has failed to meet and work with the proper fire district to address the emergency services' concerns.

Further, when a dispute over language in the only M.O.U. between the Town of Mammoth Lakes and the Long Valley Fire Dept. came to light, the Town refused to enforce the M.O.U. and sided with the developer. The developer, rather than meet with the fire district, threatened to sue and bankrupt the fire district. This plan is lacking an "Emergency Services Plan", and the developer and the Town of Mammoth lakes will not work with the proper jurisdiction to resolve the issues before them.

Pg. V-24 table V-4

This plan does not address the issue of increased traffic flow through the intersection of "Fish Hatchery Rd". or the "Benton Crossing Rd.". These intersections are currently controlled by stop signs. With the increase in traffic described in this plan a more formal traffic control plan will be needed. On/off ramps, traffic lights, or some other system will be required. The new access road should be constructed prior to any development that would increase the number of persons at the airport. The U.S. Forest Service has repeatedly told government agencies, and private citizens that they no longer issue use permits for land, a land exchange must be completed. This traffic plan is incomplete and no land exchange for this roadway is even being discussed at this time.

This E.A. has a single word that refers to signage. The E.A. implies this sign would direct people to the retail sales, real estate, and the airport. However, the developer has had his plans for a huge, lighted, billboard type sign, discovered. It was pointed out that the County has a billboard sign ordinance that prohibits this type of signage. When confronted with this information the developer described a sign that was even larger than the community had imagined. This has resulted in very heated public meetings. The last word from the developer was that the Town owned the land at the airport and he would build the sign against the public outcry. This E.A. and the ones prior to it do not describe this project in sufficient detail and in honest terms to evaluate the scope of the project.

OFF AIRPORT:

There still is no approach or departure information contained in this documents that extents beyond Mc Gee Creek. The developer has been telling the communities of Crowley Lake, Tom's Place, and Sunny Slopes that aircraft will arrive and depart from the northeast, over Crowley Lake, and then to the runway. This limited approach / departure information states very clearly the approach will be, "straight in". Departures are listed as either straight out for runway 09 or a slight left turn for runway 27. With no formal approach or departure information, noise and pollution can not be accessed properly. Also of concern, is the reflective noise caused by the mountainous terrain. Actual flight tests are needed to determine the true extent of the noise issue, not a computer model that may not account for the mountains. This document is lacking in its detail and scope in these areas.

This document is a piece meal discussion of the project. It does not include impacts created in the County area by the construction of a condo projects, retail sales, and R.V. park. It clear discusses the benefits to the Town of Mammoth Lakes, but fails to address the problems created in the Crowley Lake, Tom's Place, and Sunny Slopes areas.

The E.A. states that it will create jobs at the airport and these employees will live in Mammoth. This is misleading, as the working population in Mammoth (today) can not afford the cost of homes. These employees will be forced to live in Crowley Lake, Tom's Place, Sunny Slopes or Bishop. Their commute will off set any saving in reduced traffic made by airline service. Highway 395 will have even more traffic during peak commute hours. There will be increased air pollutants, as these people will have to drive to and from work each day. This E.A. is incomplete and fails to address the issues in the surrounding areas of the County.

SOCIAL AND ECONOMIC JUSTICE:

The E.A. states that there are no low income or minorities involved in this assessment, therefore there is no significant finding. This is not true when you compare the income of Mammoth Lakes to that of the County residents. Further, the is no comparison between the political power of the Town of Mammoth Lakes compared to the family style communities of Crowley Lake, Tom's Place, and Sunny Slopes. This is truly an unjust debate.

Aircraft flight history from Mammoth Lake's airport has clearly shown that the communities of Crowley Lake, Tom's Place, and Sunny Slopes are at higher risk of aircraft related accidents. Thirteen fatal accidents occurred in this area over a twenty-year period. None occurred in or near the Town of Mammoth Lakes.

Despite the above facts, the County residents have had no meaningful input into the planning process at Mammoth Airport. No meaningful discussions are currently going on with the Long Valley Fire Protections District.

ENVIRONMENTAL:

While to E.A. does point out that deer habitat will be impacted this is of less concern to me that the birds that fly in the area. There is no discussion of the migratory bird routes in this document. The approach / departure routes are directly through the bird flight paths. Today the number of flights and the type of aircraft flown into the airport have not caused an accident. With the planned improvements this will change, and the odds of a bird strike accident will increase. This document is incomplete in its scope.

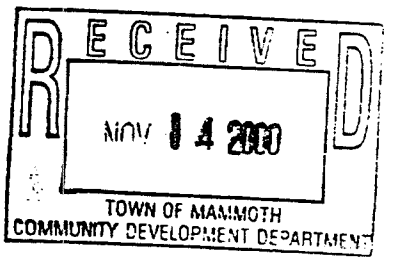
Submitted by:

Duane "HAP" Hazard

Stephen Kalish
892 Rimrock Drive
Swall Meadows, CA 93514

14 November 2000

Town of Mammoth Lakes
Mammoth Yosemite Airport Expansion Project
P.O. Box 1609
Mammoth Lakes, CA 93546
ATTN: Bill Manning



Sent via telefax to:760.934.8608

Re: Airport Expansion comment

Dear Mr. Manning:

I offer the following comments in response to the Draft Environmental Assessment for the proposed Mammoth-Yosemite Airport expansion. I am a full-time resident of Mono County, and have a number of questions/concerns regarding the proposal to bring Boeing 757 aircraft to the local airport.

1. Airport mismanagement. Over the past two years, while this proposed expansion was in the planning and design stages, the town has allowed hangers to be constructed and resold for high profit by a private developer on airport land within desired or required right-of-way of the taxiway (the hangers are too close for Boeing 757s to use the existing taxiway). As a result, preferred design alternatives (not requiring back-taxiing) are no longer available, and the existing runway setback from Highway 395 will have to be reduced to accommodate the "preferred alternative" for airport expansion. I would argue that either the hangers be removed, or the "preferred alternative" be rejected as contrary to public safety, and an extravagant waste of taxpayer's money. Other alternatives (see below) can adequately provide air service to the area, and one or more should be adopted instead of the "preferred alternative" delineated in the Draft Environmental Assessment.

2. Safety. The Draft Environmental Assessment minimizes safety issues relating to bringing large commercial jets into the local airport. Topography immediately adjacent to the airport, close proximity of Highway 395, high elevation, winter weather conditions, and lack of a cross-wind runway all downgrade the safety of upgrading the airport to accommodate local 757 service. Better—safer–alternatives (see below) exist to satisfy local commercial air traffic needs, and one or more should be adopted instead of the "preferred alternative" delineated in the Draft Environmental Assessment. The town, and commercial airlines, should place the safety and well-being of the public ahead of this "shoe-box" approach to use the Mammoth-Yosemite Airport for large jet takeoffs and landings.

3. Aircraft Diversion. Has the Draft Environmental Assessment adequately addressed the issue of aircraft diversion to the Bishop airport? Often private pilots are forced to divert to Bishop because of high cross-winds and bad weather at the Mammoth-Yosemite airport, and when Alpha Air ran scheduled commercial service into the airport it regularly had to land in Bishop where passengers were met by bus and driven up to Mammoth Lakes. This current and historic pattern of aircraft diversion cannot be mitigated under the "preferred alternative" and again speaks to the need to adopt an alternative that does not attempt to bring Boeing 757s to Mammoth—and does not require the extravagant and expensive airport expansion proposed in the "preferred alternative".

4. A Safer Alternative, Unreasonably Rejected. The Draft Environmental Assessment rejects out-of-hand the option of improving the Bishop Airport to handle commercial air traffic. The dismissal is on the grounds that the Bishop Airport cannot be made ready for commercial air service within the time frame preferred by the town of Mammoth Lakes and Intrawest. But this is a self-defeating argument, since no effort has been made to make the Bishop Airport—rather than the Mammoth-Yosemite Airport,— the regional commercial airport for the Eastern Sierra. The alternative of improving the Bishop Airport is preferable on safety and feasibility grounds, as it has multiple long runways eminently suitable for safe takeoffs and landings by aircraft even larger that 757s. It is not subject to heavy snowfall, severe cross-winds, or dangerous local topography, and is located away from the Highway and in better proximity to sources of jet fuel. This alternative requires a serious evaluation in the Draft Environmental Assessment, and the lack of such an evaluation is a fatal flaw in the Environmental Assessment as currently drafted.

5. Two Less-Expensive Alternatives. As a taxpayer, I am offended that the kind of pork-barrel funding being requested in the "preferred alternative" has made it this far, and I would hope that saner minds will prevail, and national airport improvements funds will be better spent elsewhere. Two less expensive alternatives are available, and either would be an improvement over the proposed expansion of the Mammoth-Yosemite Airport. First, the Bishop Airport could be upgraded to full service, with no back-taxiing required, and with all the safety and other advantages enumerated above. Second, the Mammoth-Yosemite Airport could bring in another feeder-airline, using smaller commercial aircraft as it has done in the past. Smaller commercial aircraft would not require the extensive and expensive runway improvements necessary for the introduction of 757s, and would not create the logistical nightmares of collecting and transporting large numbers of passengers diverted to other airports because of Mammoth's notorious winter weather conditions. Either of these would be preferable under an unbiased cost-benefit analysis, and I would encourage the adoption of either or both of these alternatives instead of the "preferred alternative" delineated in the Draft Environmental Assessment.

For the above-cited reasons, I would urge that the "preferred alternative" be rejected, and more work be done to explore other safer, less expensive, and more cost effective alternatives than the one proposed in the Draft Environmental Assessment.

Sincerely,

Stephen Kalish

I-M

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

In regaurd to the Airport DEIS, I think the element of alternative transportation needs to be considered. Could a trail from Town to the Airport, be considered under the umbrella of the final EIS?

① The airport is an extension of the city limits of Mammoth Lakes. The Bike Trail Plan calls for complete access.

② A recreational trail along Mammoth Creek to the airport and hot creek has been a topic of discussion for 5 years. (w/ USFS)

③ The USFS predicts it will be more than a decade to produce an EA. An E.I.S. would add 5 years

④ Funds for trails are available, but usually require an EA or EIS in advance.

⑤ If this were addressed as an element of the Airport E.I.S., the first and most difficult step could get this rolling.

⑥ a dirt or gravel trail would be economical. MAMBO could build it.

RECEIVED
NOV 14 2000
TOWN OF MAMMOTH
COMMUNITY DEVELOPMENT DEPARTMENT

November 3, 2000

Dear Bill Manning,

As a cabin owner in the vicinity of the Mammoth Airport, I feel sad to hear of the enormous development proposed for that site. The plans encourage urban sprawl on both sides of 395, increase noise in one of the last quiet areas in California, benefit the wealthy and very wealthy, and above all place a large airport in one of the three most dangerous (with Lake Tahoe & Palm Springs) flying locations in the state during the winter season when visibility is at its worst. I think mass development at the airport — including all the hotel & RV services — is a self-defeating idea. Do people really want to go to an urbanized Mammoth? I wish, even at this late date, that the whole project would be reconsidered & drastically scaled down to suit the small community

I-N

it serves. World class projects will bring world class headaches to us all.

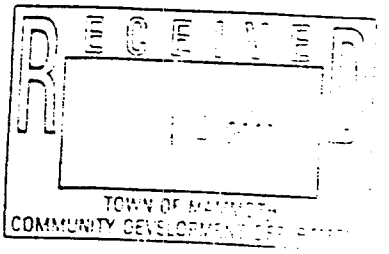
Thanks for listening.

Sincerely yours,

Catherine M. Rose

27 October 2000

Mr. William Manning, Airport Manager
Mammoth Yosemite Airport
P. O. Box 1609
Mammoth Lakes, CA 93546



Dear Bill;

I would like to offer my comments on the Draft Environmental Assessment for the Mammoth Yosemite Airport.

This assessment is extensive and complete, and covers all major issues. The Proposed Action, with the 1200' westward extension of the runway, is clearly preferred. An eastward extension would be too close to Doe Ridge, and might cause too much noise for nearby settled areas. Since no airplanes larger than a 757-200 are contemplated, a further westward extension is not needed. Airplane noise and air pollution are within limits, and the separation of the runway from Hwy 395 exceeds requirements. The only major mitigation required is moving or replacing the Green Church; the other mitigations, all of which are listed, are minor and easily done.

Two operational aspects should be considered further. The first concerns local weather. It should be stated how often the airport is closed due to stormy weather, and excessive cross-winds. As the airport has been around for a long time, these records should not be hard to find; but they may affect the proposed airport's usefulness. The other is the approach flight path, especially from the east. It should be required to be directly in line with the runway, which puts it over the middle of Crowley Lake, well away from the settled areas along Hwy 395. This should apply to all airplanes, commercial and private.

The discussion about why the Bishop Airport (Alternative 8) was not considered further is appropriate. While I have always felt we should have both MMH and BIH, as alternates for each other in case of bad weather, the present condition of Bishop Airport makes this impractical, as described in the EA. But it should be explained further that the Bishop Airport is often too hot in summer (excessive density altitude) to be really useful for large jet airplanes.

Any analysis of future demand is always somewhat speculative, but the examples of other similar airports near other resorts, such as Vail-Eagle County and Aspen-Pitkin County are encouraging. If their operations are as successful as presented, similar operations at Mammoth Yosemite should be too. I urge that the EA be speedily approved so we can get on with the improvements.

Please include these comments when considering this environmental assessment.

Yours truly,

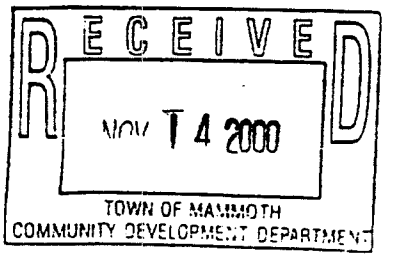
Rick Jali
P. O. Box 1717
Mammoth Lakes, CA 93546

I-O

For airport

Mike Larimore

Mike Larimore
924-5850

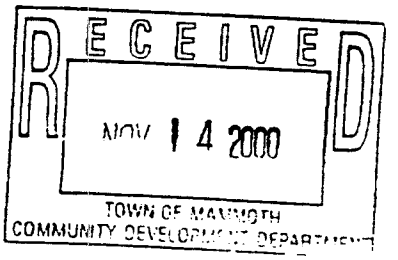


I-P

For Airport

John Timms II

John Timms II
924-5850

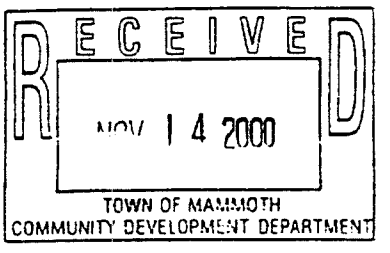


I-Q

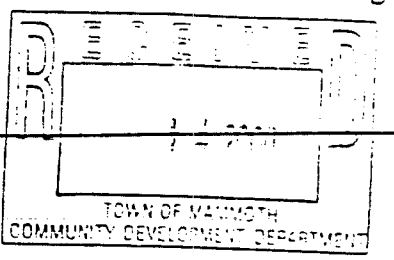
For airport

Wendy Underwood

924-5850



I-R



Bill Taylor

From: "John Cunningham"
To: <wtaylor@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 07, 2000 8:28 PM
Subject: AIRPORT EXPANSION COMMENT

I want to protest using FAA grant funds for the proposed expansion of the Mammoth airport, .

We do not need the expansion! Commuter service from Los Angles, San Francisco/ San Jose and Las Vegas will tap into the world's largest recreation market; and can be handled by the existing airport facilities.

The FAA grant, if awarded, would be a "gift of public funds" for the benefit of a single developer who desires the ability to land large aircraft to assist in selling new condos, and to bring in package tours who will exclusively utilize his facilities. The Town will derive little benefit. The subsidy for AA is for the ski season only, so the airport will be grossly underutilized the rest of the year.

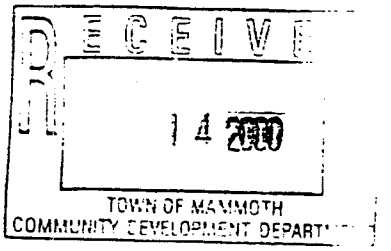
The Town will be required to borrow (~$14M) to build a larger terminal, and to pay it's share of matching funds. The interest on these borrowings will exceed $1M per year, 10% of the Town's current budget. The overall cost to the Town to pay back the long term borrowings will be ~$30M. The funds for this payback is suppposed to come from increased tax revenues from the developers projects. No legal documents are in place requiring the developer to proceed with the projects.

If the FAA desires to help small rural airports the money would be much better spent creating a true year round regional airport by upgrading the Bishop airport.

After spending $30M + $14M at the Mammoth airport it will still have only a single runway that does not meet FAA standards for a clear approach, is subject to frequent severe cross-winds, and severe winter storms. It will be under utilized.

Bill Taylor

From: "Pat Eckart" <paeckart@QNET.COM>
To: <wtaylor@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 11:03 PM
Subject: Airport Expansion Comment



November 14, 2000

TO: Bill Taylor, Senior Planner
Town of Mammoth Lakes
wtaylor@ci.mammoth-lakes.ca.us

FROM: Pat Eckart
P.O. Box 7525
Mammoth Lakes, CA 93546
(760) 934-3726

RE: Airport Expansion Comment-ADD and growth-inducing impacts

I'm concerned about a number of issues connected with the Mammoth Lakes Airport expansion, but only time for one of them-the implications of the Airport Development District's (ADD) for growth-inducing impacts on public lands outside the airport's property line. I was shocked to discover this designated area and land uses considered appropriate for it, including housing for airport employees, light industrial and warehousing, office, business, and commercial, public buildings, retail sales and services, and gas stations, as well as facilities included in Terry Ballas's development proposed within the airport property. Are all of these support facilities essential for the operation and economic viability of the airport? Or are they a speculative outgrowth of development elsewhere? Will they, like the airport, be seasonal?

Mono County's 1986 EIR and EA Airport Land Use Plan designated 455 acres for ADD zoning, of which about 170 acres would be actual developable area of the ADD zone. An alternative states that the elimination or reduction of a number of proposed uses would have potential advantages (and lists them). The primary disadvantage of this alternative would be the loss of economic development opportunities [p. 102, 1986 Plan].

My concern is the promotion of growth for growth's sake based on artificial needs. If there is a legitimate need for airport expansion and for commercial development on public lands in a scenic by-way, then each project must be proven to support long-term viability, not short-term profit-taking.

Thanks for letting me comment.

Pat Eckart

I-T

General Delivery

From: trish dunlap <trishdunlap@earthlink.net>
To: Town of Mammoth lakes <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 11:51 AM
Subject: Airport - Mammoth lakes

To whom it may concern.

I believe that it is extremely important to the development and well being of our town to have an airport and I thoroughly endorse this effort.

Trish Dunlap

General Delivery

From: Karolynn <karolynn@QNET.COM>
To: Town of Mammoth Lakes <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 1:01 PM
Subject: Fw: Support for The Village at Mammoth

-----Original Message-----
From: Karolynn <karolynn@qnet.com>
To: townofml@gte.net <townofml@gte.net>
Date: Monday, November 13, 2000 5:59 PM
Subject: Support for The Village at Mammoth

I just wanted to take this opportunity to simply voice my support for moving ahead with The Village at Mammoth AND the expanded and upgraded airport facilities AS SOON AS POSSIBLE. I live in Crowley Lake and work in Mammoth. I drive by the airport every day, and I'm sure we will be hearing airplanes as they fly over...which makes our area a little less peaceful, AND I know we need these two new projects desparately...for ourselves as residents of this beautiful area, AND for the prosperous future of our little town. There will always be issues we could deliberate and ways to delay progress, but that's already been done, and I feel it's time to get the ball rolling. I've attended several of the Planning Commission meetings, and know there have been some valid concerns voiced, but I feel good about both of these developments moving forward as soon as possible. From hearing him speak and present his plans for the airport project, and from visiting the Santa Monica Airport, which he was instrumental in developing, I think Terry Ballas has shown that he's an expert in airport development who seems to have done his homework sufficiently. There's already an airport there...let's make it work for us...let's make it useful. I also feel Intrawest has proven that they know how to develop world class resorts based on their track record across North America. We can pick apart every little thing they do, or have done, OR we can look at the big picture and see that they're the best thing to come along as far as the improvement of our town and resort...and get out of their way.

Mother Nature has done her part to make this a beautiful area...but frankly, I agree with Matthew Lehman's comments at a recent Planning Commission meeting. What's been built here in the past, for the most part, has been sorely lacking in aesthetic appeal OR practicality, and those who feel we're "lowering our standards" by allowing Intrawest to do what they've planned have a really unique perspective, which I don't understand.

I think most of Mammoth's residents' livelihoods rely on tourism in one way or another, and we need to pull together to make this a better and more viable and beautiful resort for the enjoyment of our guests, clients and ourselves. Let's get real and recognize there's a LOT of protected wilderness out there all around us (how fortunate we are!)...untouched by man, but we are here in this tiny developed pocket of paradise...let's make the best of this little space we have and respectfully enjoy it, and prosper together AND "protect" those untouched areas OUTSIDE of our little space as best we can. We can have the best of both worlds!

Thanks for all the hard work you've all put into this decision!

Karolynn Ward Davis

General Delivery

From: Julie Wright <julie@snowcreek.com>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 1:10 PM
Subject: Airport

To whom it may concern,

This email is to voice my support for the proposed upgrades to the Mammoth/Yosemite airport. I believe that this modernization, which is essential in bringing commercial air service to the town, would benefit all members of the community as well as second home owners.

Best regards,

Julie Wright
P.O. Box 781
Mammoth Lakes, CA 93546
(760)934-4445

I-W

General Delivery

From: Gary K. Shultz <garyshultz@QNET.COM>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 1:46 PM
Subject: Airport Improvement

As a homeowner and businessman in Mammoth for over 13 years I have personally experienced the ups and downs of a community which has long depended upon visitors from the Southern California for its economic well-being. In conjunction with the development of the Village at Mammoth by Intrawest, the proposed airport expansion and improvement offers us the opportunity to attract incremental vistitors from other areas of the country necessary to meeting the goal of establishing Mammoth as a legitimate year around destination resort.

Accomplishing this goal will bring unprecedented stability to our tourism based economy which has long been limited in market dimension, deprived of access to the big recreation markets of the Midwest, East and even Northern California by our lack of suitable air service. The Intrawest developments are attracting the kind of high-end investor/visitors who require the efficiency and convenience of air travel. We as a community must now provide the facilities to support expanded air service if we are to compete effectively with the established destination resorts for these new visitors.

Keeping in mind the need to proceed on an environmentally conscious basis, I urge the Town Council, Town Management, Mammoth Mountain Ski Area and the FAA to move with all speed in finalizing plans and securing funding for the airport improvements so essential to our economic future.

Gary K. Shultz
493 Mono Street
Mammoth Lakes, CA 93546
934-2880

General Delivery

From: remax <remaxml1@remax-mammoth.com>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 2:09 PM
Subject: Airport

We vote yes for the airport expansion.

2 votes - yes

Wayne and Beth Caddell
Mammoth Lakes

General Delivery

From: Patty Schwartzkopf, Coldwell Banker in Mammoth <patty@QNET.COM>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 2:46 PM
Subject: Mammoth Airport

Dear Sirs:

I support the airport expansion in Mammoth. So many benefits will come to the local population because of this expansion. The economic benefits have been needed and hope for, for years. On a personal level, locals will benefit from connections provided through American Airlines.

Please approve funding at your earliest date.

Sincerely,

Patty Schwartzkopf

General Delivery

From: Michele Hansen <misssparky@QNET.COM>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 4:28 PM

To The FAA and the Town of Mammoth Lakes,
I feel that the modernization and expansion of the airport is extremely vital for the survival of the town of Mammoth Lakes. I have been a resident of Mammoth for nearly 43 years. I feel the benefits and nessecity of a new airport far out way any opposition. During the last several years I have seen many air services come and go. Many of them have flown larger jets into this airport. There was no problem there, except maybe not enough business to support them. The timing is right. I have, for many years,shared this awesome area with everyone who could get to this remote little town. Now the opportunity has arrived to allow the rest of the world to see the beautiful place we are so fortunate to live and play in. Our businesses and the economy need this growth to survive. The people that made this town and have also gone through the tough times know that if this RESORT TOWN does not keep up with the times very few people will be able to live here and raise their families here.

Thank you for helping us.
Michele Hansen
Lifetime Resident

General Delivery

From: Chris <chrisg@remax-mammoth.com>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 5:13 PM
Subject: airport

I am in support of the airport. I feel that in my contact with clients they are looking forward to the expansion and the air service that will be possible. I hope that this moves forward in a positive direction

Thank you

Christine Galbreath

General Delivery

From: Meredith-E. McGuire <meredith@QNET.COM>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Tuesday, November 14, 2000 5:33 PM
Subject: Airport Development

Dear Town Of Mammoth Lakes:

Re: The development of the airport

As a resident of Mammoth Lakes, I look forward to having commercial air access to other parts of the country. It will facilitate my being able to seeing family and friends regularly. It will enable me to pursue educational and personal seminars I normally miss.

I believe the commercial airport will be the major link in our new stronger economy and that it is a neccessary factor in our long term success as a community. Also, the average citizen will benefit by connecting us with people in every walk of life.

I understand there could be noise pollution facing the community of Crowley. I do hope we can find a solution that will not diminish the quality of life for those who live in the areas close to the airport. Perhaps time restraints of flights would be in order.

I support of the development of the commercial airport here in Mammoth.

Thank you for you consideration on this matter.

Sincerely, Meredith McGuire

I-CC

General Delivery

From: <MaurTaber@aol.com>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Wednesday, November 15, 2000 10:46 AM
Subject: Town Meeting

Dear Council Members,

As property owners in Mammoth Lakes, we are sending this e-mail to voice our support for the Village
Project. We feel that by going ahead it will greatly benefit the town's people and its economy.

Sincerely,

Dr. and Mrs. Bruce L. Taber
Owners: SilverBear #32
Discovery 4 #106

I-DD

General Delivery

From: red2000 <red2000@email.msn.com>
To: <gendeliv@ci.mammoth-lakes.ca.us>
Sent: Wednesday, November 15, 2000 2:51 PM

Please update the airport. I would love to be able to fly up to my place easily.
Margaret & Michael Shapiro
964 Snowcreek
Thank you

I-EE

Appendix K – Public Hearing Transcripts

This appendix contains copies of the notice of public hearing and certification of publication in the Mammoth Times, as well as copies of the testimony provided at the public hearing held on November 14, 2000.

NOTICE OF PUBLIC HEARING
CONCERNING PROPOSED
ULTIMATE AIRPORT DEVELOPMENT EXPANSION FOR
THE MAMMOTH YOSEMITE AIRPORT

Notice is hereby given that the Town of Mammoth Lakes, California, operator of Mammoth Yosemite Airport, proposes to extend Runway 9-27, construct a passenger terminal building, and make other airport improvements associated with accommodating air carrier service to Mammoth Yosemite Airport. A Public Hearing to receive public comments on the project and the Draft Environmental Assessment will be held Tuesday, November 14, 2000 at the offices of the Town of Mammoth Lakes, 437 Old Mammoth Road, Suite Z, Mammoth Lakes, CA, from 4:00 PM to 6:00 PM.

The purpose of the hearing is to consider the social, economic and environmental effects of the ultimate proposed airport development for the Mammoth Yosemite Airport and to comment on the consistency of airport development with the goals and objectives of existing planning for the community. The Federal Aviation Administration (FAA) will review the proposed airport expansion project to ensure compliance with the applicable requirements of law. Representatives of Consulting Airport Engineers, Ricondo & Associates Inc., Jones & Stokes, will present a summary of the proposed airport improvements outlined in the Environmental Assessment recently prepared for the Town.

Persons in attendance will be afforded the opportunity to present written or oral views, whether opposed to, in favor of, or by way of proposed revisions to the proposed development. To ensure that everyone interested is given an equal opportunity to be heard, individual testimony will be limited to five minutes. If five minutes is not sufficient, additional time will be allotted after everyone has had an opportunity to speak. The comment period will remain open until the end of the Public Hearing, Tuesday, November 14, 2000 at 6:00 PM. All comments, oral or written, received by the hearing officer prior to the conclusion of the public hearing will be made part of the record of the public hearing for review by the FAA.

Written comments should be address to:
Town of Mammoth Lakes
Mammoth Yosemite Airport
Expansion Project
P.O. Box 1609
Mammoth Lakes, CA 93546
ATTN: Bill Manning

Persons who desire to review the Draft Environmental Assessment prepared by the Town of Mammoth Lakes may do so for thirty (30) days during normal working hours at the following locations:

1) Mono County South Offices, 437 Old Mammoth Road, Suite P, Mammoth Lakes, CA
2) Town of Mammoth Lakes, 437 Old Mammoth Road, Suite R, Mammoth Lakes, CA

3) Mammoth Lakes Library, 960 Forest Trail, Mammoth Lakes, CA
4) Bishop Library, 210 Academy, Bishop, CA
5)Mammoth Yosemite Airport, 85 Airport Road, Mammoth Lakes, CA
6) Crowley Lake Community CentorCenter, 3609 Crowley Lake Drive, Crowley Lake, CA
7) Inyo National Forest/ Mammoth Ranger District, 2500 Main Street, Mammoth Lakes, CA
8) June Lake Library, 90 W. Granite Avenue, June Lake, CA 93529
9) Bridgetport Library, 74 N. Bryant Street, Bridgeport, CA 93517
10)Mono County Planning Office in Bridgetport, 74 N. Bryant Street, Bridgeport, CA 93517

Proof of Publication

#00-449

This space is for the County Clerk's Filing Stamp

STATE OF CALIFORNIA
COUNTY OF MONO

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer of the

MAMMOTH TIMES

a newspaper of general circulation, published in

Mammoth Lakes, County of Mono.

The Mammoth Times was adjudicated on March 24, 1992, as a newspaper of general circulation for the Town of Mammoth Lakes and Mono County, CA. The notice, of which the annexed is a printed copy (set in type not smaller that nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dated, to wit:

10/12, 10/19
all in the year **2000**

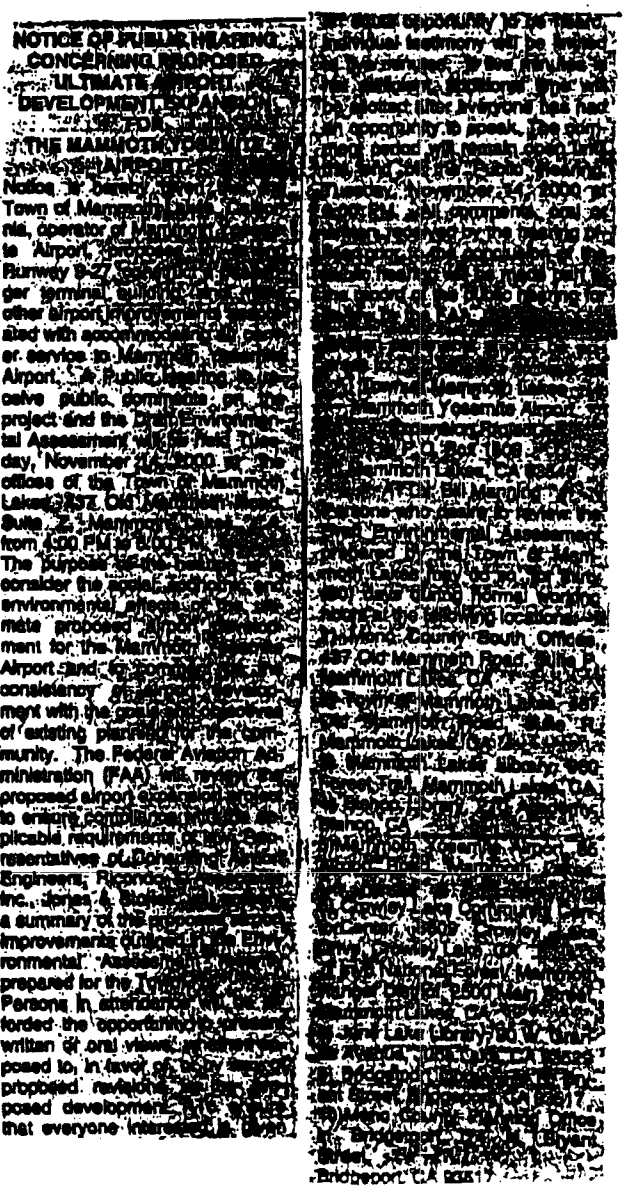
I certify (or declare) under penalty o perjury that the foregoing is true and correct.

Dated at Mammoth Lakes, California, the **19th** day of **October, 2000**

Signature

Proof of Publication Of

Public Notice



NOTICE OF PUBLIC HEARING
CONCERNING PROPOSED
ULTIMATE AIRPORT
DEVELOPMENT PLAN FOR
THE MAMMOTH YOSEMITE
AIRPORT

Notice is hereby given that the Town of Mammoth Lakes, California, operator of Mammoth Yosemite Airport, proposes to ... Runway 9-27 ... der terminal ... other airport improvements associated with accommodating ... er service to Mammoth Yosemite Airport. A Public Hearing to receive public comments on the project and the Draft Environmental Assessment will be held ... day, November 14, 2000 at the offices of the Town of Mammoth Lakes, 437 Old Mammoth Road, Suite Z, Mammoth Lakes, CA from 4:00 PM to 6:00 PM. The purpose of the ... consider the social, economic, and environmental effects of the ultimate proposed Airport development for the Mammoth Yosemite Airport and to consider the ... consistency ... ment with the goals and objectives of existing planning for the community. The Federal Aviation Administration (FAA) will review the proposed airport development ... to ensure compliance with ... plicable requirements of the ... resentatives of the ... Engineers, Ricondo & ... Inc., ... Jones & ... a summary of the proposed airport improvements ... Environmental Assessment ... prepared for the ... Persons in attendance ... be afforded the opportunity to ... written or oral views ... posed to, in favor of, ... proposed ... posed development ... that everyone interested ...

... opportunity to be heard. Individual testimony will be limited ... three minutes. In the interest of ... the speakers, additional time will be allotted ... Should other persons have had an opportunity to speak, the public comment period will remain open until ... and can be made ... Tuesday, November 14, 2000 at ... Public comments ... may be made ... hearing ... Written comments ... Town of Mammoth Lakes ... Mammoth Yosemite Airport ... P.O. Box 1609 ... Mammoth Lakes, CA 93546 ... Bill Marquis ... questions who desire to review the ... Environmental Assessment ... the Town of Mammoth ... Lakes may do so during normal working ... at the following locations: ... Mono County South Offices, ... 437 Old Mammoth Road, Suite ... Mammoth Lakes, CA ... Mammoth Lakes Library, 960 ... Forest Trail, Mammoth Lakes, CA ... Bridgeport, CA

PUBLIC HEARING ON THE MAMMOTH YOSEMITE AIRPORT

ORAL COMMENTS

MAMMOTH LAKES, CALIFORNIA

TUESDAY, NOVEMBER 14, 2000

CONDENSED

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TUESDAY, NOVEMBER 14 2000
MAMMOTH LAKES, CALIFORNIA

MS. ISAACS: My name is Lisa Issaacs, and I just would like to state my support of the airport expansion for a variety of reasons, the two most important is that I believe as Mammoth grows, and it will, that this airport expansion will help ensure that Mammoth grows in a sustainable manner, sustainable business community. But the second reason is a little more personal, in that my brother and my family members fly in and out of the airport, and anything that can be done to improve the safety of the airport, I have to support, not only for my family members, but for the safety of anyone else coming in and out. And that's the two reasons I would really like to see it.

MR. CRABB: Thank you, Lisa.

The next speaker is James Bass.

MR. BASS: My name is James Bass, P.O. Box 8001, Mammoth Lakes, California.

I just want to express my support for the airport to come in and do the expansion and do the economic promises that it would bring to us with all the restaurants, other services in the building, the areas here. So I just to express my support.

MR. CRABB: Thank you, James.

The next speaker is Daniel Dawson.

MR. DAWSON: My name is Daniel Dawson. I work for the University of California. I am director of the Sierra Nevada Aquatic Research Laboratory.

The Sierra Nevada Aquatic Research Laboratory (SNARL) is a unit in the University of California's natural reserve system. It is a state-of-the-art research station that supports research and teaching from colleges and universities all over the country. In addition, the station offers a K-12 enrichment program that benefits thousands of schoolchildren from Inyo and Mono counties. Our facility, which has been there since 1935, long before the Mammoth Airport was even a dirt strip, is one of the closest developed areas to the airport. Although we are approximately one mile from the terminal facilities, we are less than one-half mile from the runway. Our operation will probably sustain the most significant impacts from the proposed project.

We've reviewed in detail the Draft Environmental Assessment for the Mammoth Yosemite Airport Project. We find the document inadequate in a number of areas. We request that the document be revised before it is certified and passed onto the FAA for review. Our comments are as follows:

Fragmentation of the environmental analysis: The draft EA frequently refers to the 1997 EIR prepared for the approved hangar, condominium, and retail commercial project (herein referred to as the "Ballas project") at the airport but consistently fails to consider the cumulative impact of that project and the proposed project. In particular, the cumulative impacts associated with traffic and visual impact are not adequately analyzed.

Noise: The document uses the detailed methodology to assess the impact of noise from the project. This methodology employs averaging algorithms to come up with a community noise equivalent level (CNEL). While this might be the appropriate methodology for an urban or suburban airport with high aircraft traffic levels, it is inappropriate in this case. In this case we are dealing with noise receptors with extremely low background noise levels. For this reason, it is more appropriate to consider peak noise levels during aircraft takeoff and landing and how disruptive that might be, rather than the average noise levels.

The EA states that the current CNEL at SNARL is 30.9 dB or, in the parlance of the EA, the equivalent of a, quote, "city residence." To my knowledge, average noise measurements were never conducted at SNARL, and this value is more than likely a guess. While this could be accurate

for an average level that takes into account current airport use, the real issue is what is the background sound level at SNARL. My estimate is that is it a factor of two lower or close to 20 dB, the level of a, quote, "quite country residence" in the FAA parlance.

The EA indicates that under Alternative 2, the preferred alternative, in the year 2022, the CNEL will rise to 41 dB, a rise of 100 percent in this average noise level. However, the real issue is how noisy is it when a jet lands or takes off. From experience, we can tell you that it is so loud you cannot speak to someone outdoors.

The EA indicates that the peak noise of a 757 one mile from the runway end at takeoff is 95 dB. SNARL is located one half mile from the runway. Peak jet noise level here is probably somewhere around 110 dB or 512 times as loud as the background noise level. However, the most important fact is none of this is analyzed in the EA. The methodology used, while perhaps approved by the FAA, in no way assesses accurately the impact of noise at our location. The analysis must consider the impact of peak noise at our facility.

Run-up noise: When pilots perform engine run-up tests in front of Doe Ridge, the ridge acts like a giant reflector and directs all the noise south towards SNARL. We have been asking for a solution to this problem

for years. The airport manager has consistently assured us that this problem is solved; however, pilots still perform their tests in this location despite the manager's assurances.

The EA indicates that the pilots will be instructed to orient their aircraft in a east-west direction. This is not adequate. The noise is still terrible. The airport must ensure with certainty that engine run-ups will not take place in this location. A mitigation measure that describes in detail how this will be ensured must be included in the final EA.

MR. CRABB: You have one minute.

MR. DAWSON: Okay. I have a written copy of this which I'll provide you.

I go on to talk about traffic, visual impacts, night lighting, air pollution, water pollution, wildlife, the green church, regional commuter service, cost/benefit analysis, gift of public funds, and I'll conclude with significant impacts. The EA concludes that there will be no adverse impacts from the proposed project. We think this is a gross underestimate of the potential impact of the proposed project. If the project goes forward as proposed, there will be unmitigated noise impacts, visual impacts, and traffic impacts. There are potentials for impacts to air quality, water quality, and

wildlife, but further analysis is required to evaluate the impacts in these areas.

Thank you.

MR. CRABB: Thank you, Dan.

The next speaker is -- excuse me if I pronounce the name wrong -- Larry Gagnier.

MR. GAGNIER: My name is Larry Gagnier, and I live at 25 Whispering Pines Place, Mammoth Lakes, P.O. Box 8494.

And I'm here this evening just to voice my opinion that I am for the airport project. The way I look at it, if we have aircraft flying in and out of here, we're going to end up reducing a lot of the vehicular traffic coming up from LA. If the people are then bused back and forth up into town, that's going to cut a lot of traffic down.

My wife and I both feel the same way. We look forward to seeing the expansion going through and look forward to commercial airlines coming into Mammoth.

MR. CRABB: Thank you, Larry.

The next speaker is Paul McIntyre.

MR. MC INTYRE: My name is Paul McIntyre, Box 3305, Mammoth Lakes.

And I want to express my support for the initiative, and I encourage the FAA and the Town of Mammoth Lakes to do everything they can to push this forward as

soon as they can.

Thank you.

MR. CRABB: Thank you, Paul.

The next speaker is Stephanie Summers.

MS. SUMMERS: My name is Stephanie Summers, P.O. Box 8384, Mammoth Lakes.

And I just want to let you know I'm very excited about the airport, and I'm excited about it coming in and making it more accessible to family coming in to visit, and I just want to express my support.

MR. CRABB: Thank you, Stephanie.

The next speaker is -- again, excuse me if I mispronounce it -- Heath Bynum.

MR. BYNUM: My name is Heath Bynum, P.O. Box 164, Mammoth Lakes.

As a full-time resident of Mammoth Lakes, I would just like to voice my support. I look forward to the economic benefits of the proposed project at Mammoth Yosemite.

MR. CRABB: Thank you, Heath.

The next speaker is -- is it Kami Simmons?

MS. SIMMONS: Kami Simmons, P.O. Box 1275, Mammoth Lakes.

And I, as well, would like to express the interest in the new project. I'm very much in favor of it

and for a lot of reasons, mainly personal. I'm just pretty excited to have access in and out of Mammoth and to have family come and visit as well. Very much in favor.

MR. CRABB: Thank you, Kami.

The next speaker is John Cunningham.

MR. CUNNINGHAM: My name is John Cunningham, P.O. Box 3604, Mammoth Lakes.

I'm a retired businessman and a fiscal conservative. I have a brief thing that I would like to read. With the threat by Intrawest to drop plans for the development of the North Village project and a very tight deadline for submitting the proposal requesting the grant of 30 million dollars from the FAA, the Town Council entered into an MOU with Intrawest and Mammoth Mountain.

In that MOU, the town agreed to subsidize Intrawest's project by giving them back 37 percent of the TOT revenues generated by the Intrawest project. They also agreed to borrow an estimated 14 million dollars required to pay the ten percent matching funds for the FAA grant and build a new large terminal at the airport. The Mammoth, California, company promised to subsidize American Airlines' flights from Dallas Fort Worth to Mammoth for five years. For various reasons, this MOU has turned out to be very unpopular with the citizens, with continuing rumors of a voter's referendum.

Interest on the 14 million dollar loan for the airport terminal will be 1.2 million dollars a year, and the total cost over 25 years will be about 30 million dollars. The Mammoth, California, company has promised to, quote, "guarantee the loan," not meaning that they will make the loan payment, but meaning that they will loan the town the money to make the payments. If the TOT revenue falls short of projections, the town expects that American Airlines will sign a lease to rent the new terminal, hopefully covering the loan payments at least for five years. But it's a 25-year loan that has been talked about.

Well, now we're anxiously waiting to hear from the FAA that the grant is approved. Will it be approved? Will the money arrive on time? Who knows. Does it really make sense to pour 60 million dollars, 30 million of FAA money and another 30 million of town money, into a single runway air strip subject to frequent severe cross-winds and winter blizzards? The subsidy is only for the winter months and only for five years. Will American Airlines pull out when the subsidy expires, leaving the town with a huge debt? Who knows. It all depends on the economy.

But all is not lost if we don't get the FAA grant. We don't need it. What we do need, both for the business interest in the community and to bring in affluent

tourists, is good commuter service from Las Vegas, San Jose/San Francisco, and Los Angeles. This will tap into the largest, most affluent recreational market in the world. Las Vegas has direct flights to all the major cities in America and attracts tourists from all over the world. And we can do it now with only minor expenditures to the present airport. We had excellent service from Los Angeles and San Francisco in the past. Bring back the service we had, expand it, and add Las Vegas.

Thank you.

MR. CRABB: Thank you, John.

The next speaker is Elizabeth Tenney.

MS. TENNEY: Thank you. I'm the spokesperson for a local environmental group, about 350 people, a grass-roots group called P.E.S.T.E.R., Preserving the Easter Sierra Tradition and Environmental Responsibility, and I thought what we were commenting on today is the Environmental Assessment document, right?

MR. CRABB: Yes.

MS. TENNEY: Ordinarily I'm able to synthesize through our e-mail network the views of all the supporters in our group, but the views are so varied and so diverse that I can't do that today. So there are only two issues that I'm going to comment on that people are in emphatic agreement on, and one is the visual impact in the scenic

corridor. Half of our mission is preserving our state scenic highway and the scenic corridor. There's nothing like it in the world. Our tourist economy depends on it, and it's, you know, the gateway to Mammoth. So it's in the town's interest to do so.

So with that in mind, we believe that any development of the airport should have the most minimal visual impact on the scenic highway. With good design and careful planning, that certainly can be accomplished. We believe buildings should be well-designed with muted, understated, natural colors and nonreflective material so they do not detract from the scenic corridor. We regret that the existing Hot Creek hangars have chosen accents of bright blue, deep crimson, and bright yellow. We think they really detract from the design and the surroundings and we would hope colors like that would not be chosen for future development.

We also think that signs should be as small as possible and yet still include all the necessary information and be of compatible colors. We're concerned about the eight-foot fence that the FAA is requiring, but we understand that is a safety requirement. It said in the EA it would be painted a neutral color. Well, people have different ideas of what a neutral color is. So we would like that to blend in with the surroundings as much as

possible.

We're also concerned about the lighting. Another spectacular asset in the Eastern Sierra is the starry sky at night, and the existing lights are out of compliance. They shine in passing motorists' eyes, pilots' eyes, passengers' eyes. But we do understand that those will be brought into compliance.

The second issue we're concerned about is the possibility that this extensive development may trigger sprawl. Good planning requires urban limits and a clear interface between urban use and rural space. Where we live, because Mammoth and June Lake are hidden from the highway, because Lee Vining and Bridgeport are still small and nearly contained, we pretty much have a unspoiled scenic corridor, which they used to have outside Moab and they used to have outside Bend and they don't anymore, and it's amazing how quickly open space turns into sprawl.

I was at the hearing for the Sierra Business Park last Thursday, and that environmental document points to the precedent of the airport development as justification for requiring less visual impact mitigation for their proposal, and we're afraid with the rapid pace of development in our area, particularly in Mammoth, that other developers will come in, they will be seeking land exchanges, and they will point to the airport and the

Sierra Business Park. So we can see sprawl coming.

We know that the Mammoth Lakes Town Council for nearly ten years, and the residents, have indicated they are opposed to expanding the town's urban limits. But now that the town owns the airport, the pressure to do so, we think, will increase. So the issue of potential sprawl in the 395 scenic corridor needs to be seriously addressed. We don't want Mono County's 395 to become Carson Valley's 395. So we appreciate your consideration of our concerns.

Thank you.

MR. CRABB: Thank you, Elizabeth.

The next speaker is Tom Smith.

MR. SMITH: Tom Smith, P.O. Box 8324. I'm a 27-year-resident of Mammoth and the community here, and I'm in support of the airport expansion. There's significant economic benefits to the town that come with the opening of the airport. It opens up destination markets, which have long been restricted, traveling to Mammoth, both national and international guests tend to stay longer, and they spend more when they arrive at town. Town has been dependent in the past upon peak weekend business, very low periods during the shoulder seasons and mid-week times. With these guests staying longer and staying throughout the time, they will create stability for our community economically. Corporate meeting planners have long sought

to book meetings in Mammoth, and these meetings traditionally book during the shoulder seasons, also adding to stabilization of the economic cycle of the community.

As far as the environment goes, although there will be some additional noise that has been mentioned in the community, air guests do tend to use the public transportation systems, which will benefit the reduction and further reduce local impacts on the roads and congestions of the automobile traffic in town, and we do see the environmental impacts from the auto traffic. Reduced highway traffic from the state highway system will also be a benefit of this, as people from Southern California find it cheaper and easier to fly into the Mammoth Lakes Airport versus pay the higher prices for the rising costs of gasoline.

So I think there's many reasons that overcome some of the negative impacts that are concerns of this community and that we all share. But, in general, I support and applaud the town for moving forward.

MR. CRABB: Thank you, Tom.

The next speaker is Rob Perlman.

MR. PERLMAN: Hi. My name is Rob Perlman, P.O. Box 1932, Mammoth Lakes.

And I would just like to voice my support of the airport expansion for several reasons: One is the

vision of the community is to become a destination resort. The vision of the mountain is to become a world-class four-season mountain resort. Having an improved airport allows us to improve the access to and from the resort for our guests, and that will enable us to reach our vision as a community and as a resort.

Tourism is the number one industry in California, and obviously it's the major economic driver of this community. I think I won't touch on the economic benefits of destination guests. It's important to understand that right now we rely heavily on Southern California for a majority of our traffic, of a majority of our guests, and with that said, weekends -- we are at capacity on most weekends in the community. What that does is that creates peaks and valleys, and the valleys are significant. Mid-week business is definitely much less than we see on weekends. That makes it very difficult on our staffing, makes it difficult to sustain. The stability is not there in order to be sustainable in terms of business.

Also, Mammoth is the top destination resort in North America in both the winter and the summer. We could be probably number one in terms of a resort if we address the issue of access. It's been an issue that's been brought up by nationally ranked magazines. It's an

issue that we continue to try to address and improve in terms of access. And then on the other side, access out of here. Reno is a 130 miles away one way. Las Vegas is 300 miles. Los Angeles is 300 miles one way. Those are -- that's a long distance to travel in terms of us as a community, as residents of this community, in terms of when we need to get out to the world.

And American Airlines is the second largest airline in the world. They are staunch supporters of our efforts here to improve access to this community, and for us to be able to tie into the network of American Airlines to access the United States as well as the world, is an incredible opportunity that we have before us today.

It's been brought up in the past, Why not just bring back commuter service? Commuter service didn't work in the past for several reasons. It wasn't tied to the network of American Airlines. It wasn't tied to the connections of cities internationally as well as domestically. I think we, as a community, we're just in the formulation of our vision in terms of what we want it to be. So the community, as well as the resort, weren't at the stage in their life cycles where they were receptive to the idea of air service. I think we're now at that stage, at least willing to improve access for the residents as well as guests that want to come here.

MR. CRABB: You have one minute, Rob.

MR. PERLMAN: Okay. 757s are the most quiet, the quietest and most efficient engines in the air today with jet service. There's a reason why the 757 is being looked at and why the expansion is needed, and that's because this is the safest and most efficient jet aircraft out there today. It can handle the adverse conditions that we see at the airport.

And that's all I have to say, and I'm definitely in support of the airport improvements.

Thank you.

MR. CRABB: Thank you, Rob.

The next speaker is Phyllis Benham.

MS. BENHAM: My name is Phyllis Benham, P.O. Box 1823, Mammoth Lakes, California.

I have read the EA for the -- as well as I could, looking at the thickness -- of the Mammoth Yosemite Airport, and I have the following comments: Safety: I find no reference to air safety. There is no discussion regarding the danger of landings on runway 27 while takeoffs are occurring on runway 9; section V.c.5.2.1., which refers to no visual contact from one end of the runway to the other.

There is no discussion about the mix of general aviation and large jets at peak times at a

nontowered airport in Class E airspace. Class E airspace requirements are three miles visibility, 1,000-foot ceiling, and no requirement for two-way radio communication. Potential for air collision is magnified by approach through a corridor from the east and through the passes to the west. These conditions are intensified when ceilings are low and aircraft proceed from the east under cloud cover. If this is not of concern to local agencies, then it should be to the FAA.

Mammoth has abrupt wind shifts, which I have just experienced, wind sheer and strong cross-winds. These conditions require pilots to make instant decisions that may necessitate an aborted landing. Under these circumstances communication is unlikely adding to the possibility of aircraft colliding.

Noise: The EA disagrees within its document on impact between high-performance aircraft and adjacent lands. Section V under noise, quote, "However because the runway development permits the use of the airport by larger air carrier aircraft, the resulting increase in operations would cause an increase in overall noise exposure." Page C-11-c.5.1.3. "It usually takes the heavier aircraft longer to reach its takeoff velocity, thereby using more runway length, and it then climbs at a slower rate than lighter aircraft, particularly on hot days. Therefore,

more land area will be exposed to higher levels of aircraft noise by departure of heavier aircraft than departures of the same aircraft with lighter loads." This gets into range and so forth and so on, which I'm not going to get into.

In the report noise at one mile is 85 decibels for a B757, for a business jet and another aircraft. Yet the document, V.5.2.2. Environmental Impacts, quote, "The noise analysis reported in section 5.1 shows for all alternatives the current and planned land use and would remain compatible. There is no significant impact to noise-sensitive areas northeast of the airport along Hot Creek." The document fails to address other adjacent land.

Doe Ridge is zoned OA-M, open space, land that requires resource management for protection of visual quality, wildlife habitat, and wilderness value, and also, split right down the center, OA-R, low-intensity recreational opportunities. Noise level of 85 decibels is incompatible with these land uses, table C-9.

The EA does not address the impact of noise from a reverse thrust and full-power takeoffs.

Visual: The document states, "Development of the airport terminal could have adverse visual impacts from viewpoints on Highway 395. Although existing airport

facilities have been a part of the view shed for many years, additional buildings, structures, and development could result in the deterioration of visual quality. Inadequate consideration of building separations, external colors in appearance or excessive buildings and tower heights could adversely affect the view shed of the surrounding natural landscape," end of quote.

I would substitute "could" to "to has and will." Although design an color are subjective values, few would agree that the new airport construction meets the description of not adversely affecting the view shed. Cupola height, design, and color of hangars are all examples of inadequate or misguided planning. Any additional structures must be unobtrusive. In addition, sprawl is to be avoided at all costs.

Miscellaneous: Not addressed -- and this was addressed in the scoping process -- is the problem of housing, transportation other than by bus, traffic egress onto 395, medical and fire response time, and who is the responsible agency for payment, fuel storage for refueling, construction time, and closure of the airport.

Thank you for the opportunity to comment on the DEA.

MR. CRABB: Thank you, Phyllis.

Next speaker is Bruce Woodward.

MR. WOODWARD: Bruce Woodward, P.O. Box 3568.

I just want to say that I'm in favor of the airport. I was down there the day that American Airlines flew their test, and I also own property in Crowley and stood on my property in Crowley as the planes came and went, and all I could hear were the cars on Crowley Lake Drive and never heard the airplane.

Standing by the air field, the noise from the jet coming and going was not a lot louder than the cars going by behind me on the freeway, and that's a constant, and the planes coming and going are not.

Anyway, I'm all for it. I think the town needs it. Our future needs it.

Thanks.

MR. CRABB: Thank you, Bruce.

The next speaker is Ray Turner.

MR. TURNER: Ray Turner, and I live at Route 1, Box 175, Crowley.

I'm a member of RPAC down in Crowley Lake. It's a regional planning advisory committee, and we have a few concerns. One is noise. It's -- you know, this is Mammoth's Airport, but it's located in Long Valley, so it's our neighbor. And an airport as a neighbor can be like a barking dog, only at times maybe a billion. So it has real potential as the airport grows to become more of a problem.

There's been an effort to get more and more private planes to come in, and the effort has been successful. And my problem is airplane noise could become just a plain background noise as the planes come in and out. We worked with the airport manager to mitigate this to have a path well out over the lake. But it's taken a couple years to get that acceptable to them, and it still could be a problem for us, I feel, and I think it might very well be.

The next concern is safety. I think the main safety problem is pilots coming in and out. Again, I'm talking about private pilots. And, again, there's been an effort to get more and more private pilots to come in, which is fine, but I think you owe them something. They shouldn't be coming in and out of that airport in bad weather. So that has to be mitigated. And my opinion is the airport should be closed in poor weather. The threshold of the weather could be put on the radio that they call in when they come into the airport, and when that threshold is met, winds and such, the airport is closed. You don't have to have somebody on duty for 24 hours to do that.

And the third concern of ours is sprawl. The airport it's part -- it's in the town's city limits, but it's like a little island there, and islands have a way

of growing things off of them. So it's another place for other things to grow from. And so that's another concern of mine.

So I would say the three main concerns are noise, and safety, and sprawl.

Thank you.

MR. CRABB: Thank you, Ray.

The next speaker is Rusty Gregory.

MR. GREGORY: Hi. Rusty Gregory, 105 Trails End Road.

I've got a letter that I'll provide you, as soon as I dig it out of my briefcase, that talks about what, in my opinion, are the obvious attributes of the airport; that there's a lot of people that live in town that want to get out of town, not in their cars, and a lot of people outside of town, both in Southern California and throughout the world, that would like to visit Mammoth, do visit Mammoth. And if they find their way here, they drive their cars, and if we can get them by air, they won't bring their cars, and they can walk and are required to use the transit system. And those people -- the demand for those people will increase in the future. and by providing a way for them to get to Mammoth without a car I think has obvious benefits to air quality and to the infrastructure that also impacts our quality of life: size of roads,

parking lots, all the things that our community has built over the years that are designed to accommodate the car as opposed to people in them. My letter addresses that, and I think a number of people here have already talked about that.

I think that more to the point really is we have a goal of bringing back commercial air service to the Eastern Sierra, and with few exceptions I don't think that there's a lot of disagreement in that. I think there are some disagreements how best to do that. From my prospective and from Mammoth Mountain Ski Area's prospective, to do that we have to attract a carrier if we want to have it for more than a couple of weeks that doesn't face bankruptcy weekly. We know what that's like. And we know what it's like waiting in LA to find out that not only is a plane not here, but the company is not in business. We're not going to get our money back for our tickets.

So there's a lot of -- Air Mojave and Wings West -- and although Wings West is now American Airlines, interestingly enough. They got successful when they left Mammoth and got bought as a wholly-owned subsidiary of American Airlines. So we came to the conclusion that the best way, even though there's a number of ways to accomplish this, the best way was to go after a major

carrier, not one of the literally scores of fly-by-night carriers that we've been asked to subsidize and support after the demise of Alpha Air. We stuck to the big ones.

Major carriers, United Airlines, American Airlines, require the longer runway, which was already part of the 1997 environmental assessment, but also a wider runway, and a few lesser improvements for them to fly their long-hall fleets but also their commuter fleets, their wholly-owned commuter fleets.

Now, there are fly-by-night and some good operators of a smaller size that don't require 100-foot wider runway, but the big carriers for their commuter fleets and, most importantly, for the regional jets that, quite frankly, despite the fact they are new, require big runways, require these changes. So all of these changes are driven by the specifications of major air carriers for their big fleets and for their wholly-owned smaller fleets.

Now, we really don't need American Airlines to get air service. There's no question about that. We can today bring in on a nonsubsidized basis the next Alpha Air, and I've got a list of them in my office, and many of those fly commuter jets and larger jets and allow turbo props from the markets that we want to serve. The big issue is that we want a major carrier, and major carriers fly quiet planes.

It's important to remember that Mammoth Airport can accommodate very loud, large jet aircrafts right now without any changes. So the notion that if this airport gets built, that the big, noisy planes will come in is a bit incorrect. The facts are those planes can come in right now. But the facts are to bring in quieter, large aircraft, quieter, small aircraft in the form of regional jets, and if we want to have a major carrier's flag on the side, it requires they use airport improvements.

So this isn't a issue of noise/no noise. This is an issue of whether we're able to attract a American or United Airlines and 737, the various types that have quieter, large fan engines, and 757s into Mammoth and their future regional -- current and future regional jets. It's not a matter of whether we're going to get aircraft. Without this airport, we're going to get aircraft. People want to come to Mammoth and we're going to get noisy aircraft. With this airport we will get more modern aircraft on a more sustainable basis that have larger, quieter engines, and Mammoth Mountain is willing to put up the money for at least five years to ensure that that happens.

So there's a lot of reasons to have the airport improved. We need to certify the Environmental Assessment in a responsible way, mitigating the impacts

that are down there. But it's not like if the airport doesn't go, that these impacts are not going to exist. They are going to exist in greater degrees, in greater numbers, given the demand for people to go to Yosemite and the Eastern Sierra without this airport than with this airport.

So I've got all the other technical stuff in my letter. But I thought I would just point that out to the crowd and for the record.

Thank you.

MR. CRABB: Thank you, Rusty.

The next speaker is Steven Kalish.

MR. KALISH: My name is Steven Kalish. I live at 892 Rimrock Drive in Swall Meadows, which is the southern end of the county and outside the town limits of Mammoth Lakes.

I examined the Draft Environmental Assessment and find it deficient, especially in considerations of air traffic safety and exploring alternatives to the preferred alternative. I believe alternatives need to be explored that will cost less money, increase air safety, and cause less environmental degradation.

And I sent by fax a couple pages of comments to the town today, and I'm just going to leave my -- the

original of that here as a written record.

Thank you.

MR. CRABB: Thank you.

The next speaker is Doug Baysore.

MR. BAYSORE: Doug Baysore, Box 8656, Mammoth Lakes, California.

First of all, I want to start off by -- it makes me feel good that this many people show up to show their concerns for something as important as this -- this expansion. I know from a young entrepreneur's standpoint I'm in favor, as well as every business owner that I've talked to in Mammoth Lakes. Being a young entrepreneur, I know if the airport expansion goes in and we start tapping into these foreign and natural markets that we really traditionally haven't tapped into in the past, it's going to be good for my future as well as everybody else's.

I moved to Mammoth Lakes eight years ago to build my future here. I didn't come here to, you know, be a lift operator and scrape by week to week. So with this in place and North Village and all the other things going on, I think it's important that this happens so that this whole package can move on.

From an official standpoint, I'm also president of the Mammoth Lakes Chamber of Commerce, and the findings of our board meeting this morning was that Mammoth

Lakes Chamber of Commerce endorses this as proposed as well.

I would also like to introduce Neil McCarroll, since we're kind of splitting it collectively.

MR. MC CARROLL: Neil McCarroll, Post Office Box 1768.

And I'm here as the vice president of the chamber to join with Doug, and you can take my name off the list. So I'll save you some time.

And, Rusty, you reminded me, my wife and I were at LAX the day when that Alpha went under. No plane and no Alpha.

I fully support this project.

Thank you.

MR. CRABB: Thank you.

The next speaker is Lloyd Stephens.

MR. STEPHENS: My name is Lloyd Stephens, 1312 Swall Meadows Road, Swall Meadows.

There's essentially two issues I would like to address here. First, I am a supporter of air service in the Mammoth area and to the Eastern Sierra. And I think I agree with Rusty that we do need a large-scale carrier in here, and I think a 757 is a good choice of aircraft. I know I've flown to Bolivia on those, and I know that they have excellent high-altitude capabilities and are

relatively quiet as far as aircraft are concerned.

I do have some questions about targeting Chicago and Dallas as potential origination points for traffic in here. I would much prefer that the bay area, Los Angeles and/or Las Vegas be targeted because I think those areas are areas which would provide more benefits of population of the Eastern Sierra here and being able to go to places that you want to go. Essentially, I don't see that there's a lot of people here that are going to want to travel to Dallas or to Chicago. I think that that decision is being made by the mountain in an effort to target those areas to bring in people for economic reasons.

The second point that I would like to introduce is that I think that the proposed action, as illustrated up there, is very minimal, and I would like to congratulate the committee on making the decision to extend the runway 1,200 feet, and I would like to point out also that that goes into an existing stopway area, and this is an old runway. So there really isn't an awful lot of extra development that would be needed. I think it's a minimal widening of the taxiway and also of the runway necessary to support the aircraft which we want to bring here.

Thank you.

MR. CRABB: Thank you, Lloyd.

The next speaker is David Moss.

MR. MOSS: Yes. My name is David Moss. I live at 190 Silver Tip Lane, Mammoth Lakes.

As I step up here, people are going to say, Well, that's fine. He owns the car rental company that's here in town. But that's not -- that really isn't the issue and why I came to speak here.

Right now probably my company is the alternative source of transportation out of town when one's source no longer exists, and that happens quite frequently. But we, as a town, both the people who live here, people who work here, and the visitors who come here need an alternative method of transportation to get both here and away from Mammoth.

I believe that the Environmental Assessment was prepared with due diligence and that I support the expansion of the airport and I hope that most of the people here do as well. Thank you.

MR. CRABB: Thank you, David.

The next speaker is Neil McCarroll.

MR. MC CARROLL: I already yielded my time.

MR. CRABB: Too many cards.

The next speaker is Gordon Alper.

MR. ALPER: Gordon Alper, Box 2007, Mammoth Lakes.

Let's see, I was a member of the town council in 1990 and, in fact, the mayor of the town when we

spearheaded an effort to purchase Mammoth Airport from Mono County. The sole purpose of that was to maintain the airport under the town control until such time as this time would happen. We realize then and we realize now that transportation is fundamental to our successes of community. This community has been subject to wild, if you would, oscillations of economic activity. I think at some time in the early 1990s we were about to become a ghost town.

I listened to the concerns of people with respect to the adequacy of this document, and I note that the airport has been subject to three economic -- environmental documents since I've been in the community; that it's been studied thoroughly, and although there's no such thing as a perfect document that addresses all issues, this document definitely seems adequate. I would like to request the FAA to certify this document and the preferred alternative contained therein.

In addition, I would mention that the area that the airport is in is a highly disturbed area. It's not pristine mountain environment. Either the county or the Forest Service -- I can't remember which -- operates a batch plant for the purpose of making asphalt, not what you would consider the most environmentally friendly use of the environment nor ought it be a concern of the groundwater.

There's also a quarry on one side of the highway. There's a geothermal plant at the approach of highway -- of runway 9.

Most the noise you are going to hear at an airport are on its approach and departures, which are runways 9 and 27. Runway 27's approach is over Lake Crowley, which is uninhabited, except by a number of trout and perch. The approach at runway 9 is occupied by the geothermal plant, which on a quiet night makes enough noise to disturb anyone probably from here to Benton.

So there are impacts, but I think the impacts are really minimal. As a earlier speaker had mentioned, the noise coming off the highway under normal traffic conditions is substantially louder than any of the noise you hear at the airport from departing and landing traffic.

So I would like to just close with I appreciate the concerns of others and think that they ought to be mitigated at some point in time, but that I would urge the FAA certify this document and the preferred alternative.

Thank you.

MR. CRABB: Thank you, Gordon.

The next speaker is John Walter.

MR. WALTER: I, like, I think, everybody in this

room, like to fly in and out of Mammoth.

MR. CRABB: If you could address your remarks to the hearing officer.

MR. WALTER: I'm sorry. I've flown in here both recreationally and flown on medical emergency, and it's nice to have; however, I find the current EA does not provide an adequate basis for resolving the problems we're talking about here today, whether the noise is too much, whether it can be mitigated, how bad the traffic will be. To me, it just raises a whole series of questions that need to really be fully addressed before we can answer these questions and decide what kind and how big an airport we really want in town.

One of the biggest problems I have is where this thing looks like it's going, if you read what it says, for the year 2022. And if you take their number of enplanements that are in the document -- they do not give the number of aircrafts. You have to make some assumptions of what the mix would be -- but you can come to the conclusion that there are probably about 20 landings and 20 takeoffs of commercial aircrafts per day. Most of those will probably occur between 11 o'clock and four o'clock or three o'clock. Rightfully, they are not considering night operations, and with the time you have to get to an airport before the people -- the plane takes off today, I doubt

whether people are going to want to get up at three o'clock in the morning in Chicago to get to Mammoth. So it looks to me like we may be having five landings and five takeoffs per hour during the busiest part of the day. An extrapolation of the current general aviation market shows maybe it would be double that. That's about one -- either a landing or takeoff every two minutes out of this airport.

Can a single runway airport under a mountain environment, with hazardous wind and weather conditions, support, with no aircraft control, no radio, no tower, can it support those kind of operations safely? I really doubt it.

The other part of the same issue is you can use the same numbers, you'll come up with about 750 passengers per hour going and 750 passengers per hour coming. Does this terminal actually support that many people? Will a car rental -- that's good business -- you know, support that kind? How about the buses turning onto the highway? It just doesn't seem to me that, you know, we've thought about or are equipped to handle this level of operations.

It looks like it would have about -- if you use their numbers -- about the same level winter and summer. The winter season is 112 days. The summer is about 75 days. There are over 150 days of dead time in

between. Where are the people going to go? Where are they going to live? Where are they going to work? Where are we going to get the people to handle a terminal that can handle 750 people an hour? Maybe we can, but I don't think this has been thought out. None of this type discussion appears in the EA, and I think it really has to be before we can make a decision whether we want this kind of service.

Other things that are not addressed completely --

MR. CRABB: You have one minute.

MR. WALTER: Okay. -- and should be addressed are flight safety, as Phyllis said. The current fuel load is one -- their tank will resupply one 757. The whole thing on fuel needs to be discussed. Medical services needs to be discussed. The thing depends on vehicular traffic analysis from a study that was not approved this week by the Planning Commission of the county. Employee housing. Noise should be done on a specific basis, not with a generic analysis. And sprawl, the analysis seems to be limited, saying that, Well, if Mammoth and the county are advertising for people to come here, it must be okay to bring as many in as possible.

So I really think you ought to look at the alternative of Bishop, smaller field. Let's look at what

we can really handle, afford, and go that direction.

Thank you.

MR. CRABB: Thank you, John.

The next speaker is Mark Clausen.

MR. CLAUSEN: I'm Mark Clausen, P.O. Box 1536, Mammoth Lakes.

I just want to express my support for the airport development. I feel very strongly that we need to separate people from the cars, and the only way that we can separate people from their cars is to give them a better alternative. And if we're able to have more access through the airport and create situations where people don't need a car once they get here and can rely more on public transportation, I'm fully in support of that. Just want to express my views.

MR. CRABB: Thank you, Mark.

The next speaker is Herb Benham.

MR. BENHAM: Herb Benham, P.O. Box 1823.

My wife spoke before me, eloquently. I'm coming from a slightly different prospective. I don't make my living here. I am retired. I commisenate with a lot of my good friends who have businesses here and are anxious to see the area grow, and I appreciate that. So I like it the way it is. I love our airport the way it is. I like the job Bill is doing, for example. I like the FBO that he's

got there. Hot Creek Aviation gives me everything I need. My wife and I own a plane. It's hangared there. We fly a couple hundred hours a year, which is quite a bit for general aviation for an older couple like ourselves.

But my concern -- and I happened to be there when that big airplane came July 4th weekend, and, man, it was big, I must say. My son and I were -- our son and I were driving down to Crowley Lake, and it was impressive. It was sort of lumbering, if I may use that word. It was certainly in full control. But I thought to myself, Man, that is a big plane that's going to come into this enlarged airport.

We fly in and out of here, as I said, all the time. The winds are tricky. I'm always concerned when we go to bigger airports and we're advised by the tower when we come in behind a large aircraft or takeoff after a large aircraft has taken off about wake turbulence. It happened to me one time in a twin engine and almost flipped us on our back. We were advised by the tower of this danger. And I'm concerned, because we don't have a tower here, who is going to be advising people about that. Of course, visually you can see the plane come in and you must position yourself accordingly. But I think -- you know, it's definitely a safety issue.

The other thing that bothers me about a

no-tower airport is that when you're coming in, you go to AWAS to see what the weather and the winds are, and so you're not on unicom, for not very long. But if there's going to be this kind of traffic, sometimes there can be a slip in communication there. Now, Bill has advised me yesterday that Hot Creek Aviation is going to carry information on winds, which I think is good.

And so where I'm coming from is that I like it the way it is. I think we need additional -- I think we need air service in here. It's questionable in my mind whether it's a 757. I've flown on those and seen them. We all have. And they may be quiet and all this. But I think that Environmental Assessment, while I haven't poured over it as my wife has, I think there are some things in there, some inadequacies and things that haven't been answered.

So that's all I've got to say. As I say, I -- I come from a different prospective, and I can understand people that live here and have businesses here wanting to be number one. I'm very satisfied with number whatever we are at this point.

Thank you.

MR. CRABB: Thank you.

The next speaker is Pat Savage.

MS. SAVAGE: My name is Pat Savage, P.O. Box 100.

One thing I want to talk about or comment on

is as I was going through the EA and then going back to the prior EIRs for the airport, I didn't see any address of emergency medical services, rescue operations. And in talking with Bill Manning, I was advised that you would look at the incident report that's on file with the town.

But I really think that an environmental document is supposed to be an informational document. I think it's to inform the public, the user, and other agencies just what this whole plan entails, and I don't see any discussion on how we deal with emergency situations, who's going to supply the services, how it's going to all be funded and paid for. I have been advised that that's part of the capital management plan or part of the budget. But just -- I don't have that information, and this is an area that deeply concerns me. God forbid there should ever be an incident, but I do think you have to consider a runway accident of some sort, and I would like to see that addressed.

Also, I don't see any traffic analysis, and I do know that Caltrans had quite a few concerns with regard to the Sierra Business Park, and I know that the current EA for the airport is advising you to look at that traffic study or impact, the EIR for the Sierra Business Park, and I just don't see how that is efficient.

Thank you.

MR. CRABB: Thank you, Pat.

Our next speaker is Pat Eckart.

MS. ECKART: Pat Eckart, Post Office Box 7525.

I have a number of issues of concern, but I'm only going to address one which is indirectly related to the very specific proposal. I'll just mention the other ones. I am concerned about sprawl and traffic and others as well. But what I'm concerned about are the implications of the airport development district, the ADD. Potential for growth-inducing impacts on public lands, specifically Forest Service lands, outside the airport's property line.

I was shocked to discover yesterday that this designated area, the ADD and land uses considered appropriate to it, include housing for airport employees, light industrial and warehousing, office, business, commercial, public buildings, retail sales and services, gas stations, as well as the facilities that are also included in Terry Ballas' development that's proposed for within the airport properties. Other ones are outside the property.

Are all of these support facilities essential for the operation and economic viability of the airport or are they a speculative outgrowth of development elsewhere? Will they, like the airport, be seasonal? And as reference, Mono County's 1986 EIR and EA airport land

use plan designated 455 acres for ADD zoning, of which about 170 acres would be actual developable area of the ADD zone.

An alternative in that document states the elimination or reduction of a number of proposed uses would have potential advantages, and in the document lists them. I'm not going to repeat them here. The primary disadvantage that is noted in the document of this alternative would be the loss of economic development opportunities, and this is what I'm looking at, the economic development questions about the ADD area.

My concern is the promotion of growth for growth's sake based on artificial needs. If there is legitimate need for airport expansion and for commercial development on public lands and a scenic byway, then each project must be proven to support long-term viability, not short-term profit taking.

Thank you for letting me comment.

MR. CRABB: Thank you, Pat.

The next speaker is Kathy Copeland.

MS. COPELAND: My name is Kathy Copeland, and my P.O. Box is 7615.

I've lived and played here in Mammoth since the early 1970s, and I've watched this town grow and change. We now have a hospital. We've had schools built.

We used to have an airline service. I think it's time we have an airline service again. We're still a pretty well-kept secret to people not from the LA and San Diego area. I think it's time that we open our doors and are accessible to more people. I would like to go on record in favor of the proposed airport expansion.

Thank you.

MR. CRABB: Thank you, Kathy.

The next speaker is Mark -- forgive me if I mispronounce it -- Myhedyn, M-Y-H-E-D-Y-N.

MR. MYHEDYN: My name is Mark Myhedyn. Close, but no cigar.

MR. CRABB: I already polished it.

MR. MYHEDYN: The P.O. Box is 7401, Mammoth Lakes.

I'm here today to support the initiative for the airport expansion. My family and I moved here years ago for three main reasons: Firstly, for the tremendous lifestyle that Mammoth has to offer; secondly, the career opportunities; and, thirdly, the commitment made by the town, Intrawest, and the ski area to improve Mammoth as a world-class resort.

It's my opinion that in order for Mammoth to become a world-class resort, the airport has to be improved. People need to get here. That seems to be the frustration. I think we're so close at this time that it's

time for us to seize the day.

Thank you.

MR. CRABB: Thank you, Mark.

The next speaker is Owen Maloy.

MR. MALOY: I'm speaking for the Sierra Club. I'm a resident of Mammoth Lakes for 13 years and member of the club for 32. This is an official submission. I'll just summarize it briefly.

We think this airport should be in Bishop. We think that because this analysis shows that a 757 cannot reach Chicago with a tail wind in winter or summer, and it's right in the report. And that means that if you fly here from Chicago, you can't get home if the winds are rough.

Also, there are very severe obstructions in this airport. So we're not sure whether the FAA will permit operation of a large aircraft from here. There is another issue which we think was neglected, and that is there is no stopway at the end of the runway, as required for a large aircraft, at the east end of the runway. If the aircraft has to take off to the east, the runway is not correct.

The other thing is that the -- because you can't make a round-trip -- the 757 has a range of 4,500 miles if it takes off at sea level. But if it takes off

from Mammoth, particularly in the summer, it's impossible to make a round-trip, and that means that you have to have fuel storage here. And since this plan projects as many as six planes on the ground at one time, that means that there has to be 72,000 gallons of fuel storage. If you have an oil spill, you're directly upstream from the LA water supply and the fish hatchery and Hot Creek, and if you pollute that water, you could have a catastrophic clean-up cost in the millions, and so it's not a good site for an airport. It's not against the air travel, understand. It's the airport.

Bishop is lower altitude. You can do this round-trip stuff. It has no obstructions, and it's a safer airport. That's one thing. The other thing is we have urban sprawl problems here with this down along the airport. It's a scenic corridor. It's a scenic highway. It's controlled by laws affecting those things. It's a controlled-access highway, which means that Caltrans might not go on and let them do this. So there's enormous problems with federal and state laws in doing this at all. And there's no penalty to the town if it's in Bishop. It's just a bus route. So that – those are our comments substantially. There are wildlife impacts and so on.

THE COURT REPORTER: Excuse me, sir. Excuse me.

MR. MALOY: Yes.

THE COURT REPORTER: Can you turn around? can't –

MR. CRABB: It's kind of hard for the court reporter -- again, direct your comments --

MR. MALOY: Oh, can't you hear me? Well, I'm done.

MR. CRABB: If you could give her your written statement.

MR. MALOY: Yes, here's a copy.

THE COURT REPORTER: No, I could hear you fine. It's just –

MR. MALOY: All right. I'm sorry.

MR. CRABB: That's a general reminder for the rest of you, address the hearing officer so the court reporter can hear you.

The next speaker is Rochelle Hair.

MS. HAIR: My name is Rochelle Hair. Post Office Box 8563.

I just want to say that I've been a resident for over four years in Mammoth Lakes. My spouse has been raised in this area and has been a permanent resident in Mammoth Lakes for over five years. We both support the airport and the economic benefits that it gives to Mammoth Lakes and the surrounding area.

Most importantly though, we support it because of the environmental impacts it might actually

prevent. Without the airport, we feel that the 395 highway would have to be expanded, causing miles of territory to be disrupted. as well as many trees and scenic areas. We support it.

Thank you.

MR. CRABB: Thank you, Rochelle.

The next speaker is Roger O'Donnell.

MR. O'DONNELL: Hi. I'm Roger O'Donnell. Post Office Box 7461, Mammoth Lakes.

I've been a resident for 27 years. I've seen numerous attempts for air travel to Mammoth Lakes and from, to and from. And I would like to see a successful long- and short-range service for people who haven't seen Mammoth and would like to come up here. And, frankly, I'm tired of driving to Reno.

Thank you.

MR. CRABB: And you only used one minute.

Larry McKee.

MR. MC KEE: Larry McKee. 97 Trails End.

It's nice coming up after a lot of people have already spoken, because a lot of stuff that I wanted to say has been said, and all of that in favor of the airport. There is a lot of things I see, both economically and from an environmental impact, that's going to be reduced, especially the vehicle reduction up here.

But my main reason for wanting to see this airport initiative go through is a bit of a selfish reason. My wife and I and little boy moved here a few years ago to raise a family here and left many friends and family two to 3,000 miles away. We would like them to come up here. Whenever we try to get them to come up here, they say, "It's too hard to get there. Fly somewhere else and meet us there." Well, we all know the tribulations it is to get out of here sometimes. And I just want to say I would like to see this airport go through for that reason and all the other reasons.

And with no disrespect being meant to any of the following speakers or the meeting, if I have to rush out of here, it's because there's another strong supporter about to be born in Mammoth, and he or she would like to have his or her family and relatives visit him.

MR. CRABB: Next speaker is Al Lankes.

MR. LANKES: Hi. I'm Al Lankes, P.O. Box 51, Mammoth Lakes, and 4318 Burning Tree Loop, Flagstaff, Arizona.

I have been a full- and part-time resident of Mammoth Lakes for 30 years. During those 30 years, I've been a property owner, both residential as well as commercial. I have personally flown into Mammoth Lakes Airport as a pilot, as well as a passenger on commercial

aircraft, during these 30 years, and I certainly would welcome any additional safety that this new airport would afford us.

Personally, having lived here over that period of time, I've had occasions to use the commercial air services as they were available. As a resident, historically, they were totally inadequate. As a owner of a business which relied upon guests, the service was also totally inadequate.

I would certainly welcome the increased economic viability that I perceive this airport would provide the community, as well as the increased safety for both passengers as well as private pilots.

I would welcome the improved access to Mammoth Lakes from other major cities, not only for myself but guests and residents. I am certainly in favor of improving Mammoth Lakes Airport and improving the economic viability of this community.

Thank you.

MR. CRABB: Thank you, Al.

The next speaker is Tara Calvin.

MS. CALVIN: Tara Calvin, P.O. Box 7986 and then 146 Mammoth Knolls Drive.

My name is Tara Calvin, and I've been a permanent resident in Mammoth for eight years now, but I've

been skiing for about 28. I'll be brief. I just want to echo all the support that's been stated, and most important to me is really for my family, to get my family here, to be able to go down and see my family. And also, I moved to Mammoth to make it my home, which I have, and I feel that the airport is a crucial factor in making Mammoth be able to stand on its own two economic feet. And that's it.

MR. CRABB: Thank you, Tara.

The next speaker is JoAnna Forsythe.

MS. FORSYTHE: JoAnna Forsythe, Box 9160.

I've lived here for ten years now with my husband, who's been a 20-year resident, and we are very much in support of this project. The idea of a short plane ride with two small children under the age of three versus a three- to seven-hour drive is very appealing to me. And as many of you know, it's difficult to get to and from. So I'm very much in support of the project, and my economic and personal future relies on the economic success of this town, as most of yours does. So I certainly hope that this goes forward.

Thank you.

MR. CRABB: Thank you, JoAnna.

Phil Romero.

MR. ROMERO: Phil Romero, P.O. Box 2306, Mammoth Lakes.

As a full-time year-round resident of Mammoth and a home owner down in Crowley, I would like to state my support of the Environmental Assessment and strongly urge the Town of Mammoth Lakes and those other regulatory agencies to work expeditiously in maintaining the integrity of the Environmental Assessment as an Environmental Assessment and deal with the other minutia associated with this initiative in a manner that keeps us on track towards the 2001/2002 goal of bringing in the air service that the mountain has been working towards.

MR. CRABB: Thank you, Phil.

Terry Ballas.

MR. BALLAS: My name is Terry Ballas, P.O. Box 877, Mammoth Lakes.

My family and children and I are full-time residents of Mammoth for the last six years. I'm here tonight specifically to address the sufficiency of the Environmental Assessment has it has been prepared. I would like to applaud the consultants who prepared it. $600,000 a year of intensive work, study, analysis to bring this document to this point, many preliminary meetings, many agencies had a chance to put in comments early. I think that a very open mind was used to get us to this point. I think the document is exceedingly thorough. I would like to ask the FAA to approve it as an EA in its current form

so we can move forward with this.

As I listened to people speak tonight, it appears there's two really significant issues here. There's the environmental group, and there's the economic group. I don't see them as mutually exclusive. A few years ago, the majority of Mammoth Mountain, although control did not transfer, was purchased by a company, a New-York-stock-exchange-listed company, with nine other ski resorts around North America. A million new visitors are coming to Mammoth Lakes with or without the airport. I strongly believe that. And to the environmentalists in the group tonight, I strongly believe that quality of life is really the issue that is at hand here.

Without air service we're looking at millions, literally millions of hours of additional traffic time on Highway 395 for the folks to get here. As a community, we're looking at unbelievable overcrowding on the weekends. The ski resort once handled a million and a half skiers a day. With the new lifts, with the things that have taken place, the ski resort will handle two, two and a half million skiers a day during the winter. The question is: Is that additional million skiers coming with their automobiles, with the three or 400,000 additional passings by the green church, or are they coming in small, noisy commuter airplanes or are they coming in quiet Boeing

757s?

At the end of the day, it's my opinion they are coming. I believe quality of life is about this EA being approved; that the latest technology, best aircraft for the job, safest aircraft for the job is coming in with a few flights a day, as opposed to many, many, many airplanes coming with ten passengers on board with twin propellers that are much noisier under anybody's noise study.

Las Vegas, LA, and San Francisco, which would be the primary connecting hub for the small airplanes, which the airport can currently handle, including even larger regional jets under its current form, are tremendously overcrowded right now. We're talking about saving the traveling public literally hundreds of thousands of hours annually in travel time by being able to have direct flights. We're talking about cutting down on significant traffic on major airport hubs. We're talking about a reduction of air pollution, in my opinion. We're talking about a reduction in dependency on the automobile to this community, which I think is exceedingly important. And I think this is also extremely consistent with Mr. Babbit's announcements today relative to Yosemite National Park, all of the things that are going to be happening and how people can actually assess that great natural resource.

MR. CRABB: You have one minute.

MR. BALLAS: I do believe and I would like the FAA to consider the environmental benefits associated with this, because I believe properly looked at -- and I do believe this document very thoroughly addresses those things -- this is a great improvement to the environment, not a detriment.

Thank you.

MR. CRABB: Thank you, Terry.

The next speaker is Bruce Hopper.

MR. HOPPER: Bruce Hopper, Box 374, Mammoth.

I think I'll start with my ending. I urge the FAA to approve and certify the EA document as it is written now.

Not to be facetious, but I think big planes are exciting, and I like big planes. I've always liked watching airplanes land and take off. I really think that's going to be great. But more to the point and not so personal, I support the complete expansion of the airport so that major air service can come here from all hubs in the world and United States, not just regional hubs like Los Angeles or Las Vegas or Santa Barbara, places like that. I also want to be able to fly out of Mammoth to large cities all over the world. That's my dream, is to travel. Some day I'll do that.

Mammoth needs the airport to become a four-season world-class resort for a stable economic environment. We've gone over that tonight a lot. We need to be able to draw tourists to Mammoth instead of having them go to Colorado or Utah. I don't see what is wrong with having a huge gas tank at the airport so that big jets can refuel and get home. Put a moat around it in case there's a spill. I'm sure there's technology to contain an accident. I'm also sure that federal and state laws have been taken into account in preparation of the EA document. I can't believe that those have been ignored.

And, let's see, I believe the noise concern has been addressed by the types of jets and also maybe -- I'm sure that the flight path approaching the airport and taking off has been pushed as far to the east away from residences of Long Valley and Crowley Lake as possible to minimize their, you know, having to listen to the airplanes. So I'm sure there's a lot of land out to the east to fly in and out of away from the people. And it's hard for me to believe that we'll ever have ten, 15, or 20 flights per day in and out of the Mammoth Airport. I don't think that's ever going to happen, but -- so I'm not too worried about planes taking off every five or ten minutes, maybe once an hour, maybe once every couple hours. I think that's more in line with reality.

And I think increased tourism will benefit every resident economically in Mammoth. This will be great for all the people that live here, economically. And, finally, I think the resulting increase in visitors to Mammoth will not spoil Mammoth. The wilderness will remain intact, and yet the town itself will have many more attractions with retail and lodging development. So I support it wholeheartedly.

MR. CRABB: The next speaker is Kaysie Williams.

MS. WILLIAMS: Kaysie Williams, P.O. Box 3296.

I'm here to voice my opinion, and I'm very pleased with the expansion of the airport. The airport is already there. It's not like they are trying to have an airport built in a new location that's going to spoil the beauty of our area. It's there. What they have done to it I think looks great and I don't think that that's going to make a huge visual impact along our scenic corridor, and I can't wait for it to happen.

Thank you.

MR. CRABB: Thank you.

Ed Power.

MR. POWER: Ed Power, Box 1111.

I'm really encouraged by the many people here who are in support of the airport. So many times at past community meetings, most of the people in the meeting

are not in favor of the event happening and all the people who are in favor are at work and can't make it to the meeting.

My name is Ed Power, and I'm the president of the Contractors' Association here in Mammoth Lakes. I am speaking on behalf of our members this afternoon to express our support for the proposed expansion of the Mammoth Yosemite Airport.

The Contractors' Association is comprised of 57 contractors -- we're not all here today, but some are -- and related construction-industry businesses located here in Mammoth Lakes. I have attached a list of our members for your review.

We are in unanimous agreement to support the proposed expansion at the airport and look forward to commercial air service finally becoming a reality.

MR. CRABB: Thank you.

Next speaker is Carl Williams.

MR. WILLIAMS: Carl Williams, P.O. Box 4044, Mammoth Lakes.

I, too, would like to voice my support for the expansion of the airport really for several reasons which have been voiced before in this room tonight. Primarily, I don't think there's any question that air service with a major carrier opening new markets will have

a positive impact on the economy or the business of the town.

Secondly, I think destination visitors, who will have less reliance on the personal automobile, will have a positive impact on the town without the reliance on the automobile at all, the issues that that brings along with it.

And, thirdly, it's really a selfish reason. As a relatively new resident in Mammoth Lakes, one who feels fortunate to live here but one who likens it a bit to living on a island, it would be -- some days Dallas would look real nice. So I do support the airport so that my family can visit me, and we can get out of town on occasion.

Thank you.

MR. CRABB: Thank you, Carl.

The next speaker is Andy Selters.

MR. SELTERS: My name is Andy Selters, 638 Cottonwood Drive, Bishop. And my family has a recreational cabin in the southern part of the county.

I reviewed the Draft Environmental Assessment for the proposed expansion of the Mammoth Lakes Airport, and these are my comments:

To begin with, the purpose and need for the project are not adequately justified. The proposed action

arises with the assumption that the only way to bring commercial air service to Mammoth is with long-distance flights that use the Boeing 757. No consideration is given to the more reasonable option of bringing smaller aircraft from regional hubs, which could use the existing runway.

The DEA's historic notes show that previous attempts at regional commercial service from Fresno and elsewhere failed not because of any inherent problem with the airport, but because of mismanagement. In fact, a lack of demand also contributed to the failure, and so the DEA fails to make the case that the proposed flights from Chicago and Dallas are necessary or even viable.

The airport at the ski resort of Aspen, Colorado, has a similar length runway as the current Mammoth Airport at a similar elevation, and it receives satisfactory air service with smaller aircraft from regional hubs like Denver, Salt Lake City, and Dallas. From a marketing standpoint as well, it would be easier to attract -- to first attract airline customers from regional hubs like Las Vegas, Los Angeles, Burbank, San Francisco, Phoenix, Portland, and Seattle than to hope for long-distance customers.

Secondly, Alternative 8, the alternative considered that Bishop serve as the area's airport, was inappropriately dismissed. The DEA requirement that 757

service be available by the 2001/2002 winter is unreasonable, since if collaborative planning for expansion of the Bishop Airport had begun in 1997, when Mammoth Lakes began the current campaign to expand its airport, it might be that the Bishop Airport would be ready for expansion right now.

Executives of Intrawest hoped and expected in 1997 that the Bishop Airport would be the one to take in air service for this area because of the many advantages that the Bishop site has. And I cite Dana Severy, personal communication.

These following advantages are not considered in the DEA:

(1) The Bishop site is much safer. The weather is reliably stable, the elevation is lower, there are no obstructions, and there is the potential for cross-winds and bi-directional landings. At the Mammoth Airport, on the other hand, the weather is severe, especially in the winter, the focus season of this plan. Doe Ridge and nearby US 395 are obstructions within the cone of FAA-recommended safe zones. Also, there's no potential for cross-wind runway, and both takeoffs and landings must be from the same direction, as I understood anyway. All these factors are significant, and they make the process of larger jet service much less safe than at

the Bishop Airport.

(2) The Bishop site is convenient and reliable to Mammoth Lakes, again, Dana Severy, 1997 personal communication. The DEA claims that driving passengers from Bishop to Mammoth would be a problem during inclement weather. But during inclement weather, there is a greater likelihood that flying into Mammoth Airport would be prohibitively unsafe before driving on a divided four-lane highway would be a problem.

The Bishop Airport would have dramatically fewer flights delayed or cancelled due to inclement weather, and customers would learn that they could count on being able to arrive and depart, instead of the erratic storm cancellations and delays that would be inevitable at the Mammoth site.

(3) There are no residential areas or settlements of any kind under the approach path of the Bishop Airport. At the Mammoth Airport, the communities of Crowley Lake and Sunny Slopes are near the approach path. These communities would be affected by jet noise and potential crashes. During the last 15 years, the pattern of crashes of small private aircraft using the Mammoth Airport has centered around these communities. One crash was into a campground very near to Tom's Place, and only a few dozen feet kept a family of campers from being killed.

(4) The DEA says that the Town of Mammoth Lakes has no control over planning at the Bishop Airport, yet the document does not mention any attempt to collaborate with the managers of the Bishop facility or any roadblocks to potential collaboration.

In the DEA's analysis of the environmental consequences and mitigations, I find that the following problems are not adequately addressed: The noise study is confined to the immediate area around the airport. The communities of Sunny Slopes and Crowley Lake stand to be dramatically affected by the overflight of incoming 757s, and no mention of the expected noise levels there was made.

Another sensitive area for noise is the sage grouse leks northeast of the green church. The DEA only describes a plan to monitor grouse impacts in areas immediately adjacent to the green church. In addition, there needs to be provisions for mitigations, should impacts be detected.

The DEA mentions that de-icing fluids, quote, "could be contained," emphasis added, but does not maintain that they be collected and kept out of the soil and groundwater. These are very toxic chemicals, and many count on the quality of water in this water shed -- fishermen, the City of Los Angeles, the endanger tui chub, and general recreationalists -- and this area has a very

high water table. The EA needs to require that de-icing chemicals be collected and removed.

The DEA makes no mention of the traffic problem that increased use of the airport would bring. Highway 395 is a designated limited-access California scenic highway, and a section where the airport lies is one of the most scenic, and potentially distracting to drivers, stretches in the nation. In addition, it has some of the most severe winter weather of any stretch of highway in California. Visibility during storms is almost nil here, and the hazard of traffic leaving and entering a four-lane highway must be considered. Currently there are no ramps or special lanes, just a stop sign for highway ingress and egress.

MR. CRABB: You have one minute, Andy.

MR. SELTERS: Thank you.

Moreover, the proximity of the highway would make 757 takeoffs and landings an impressive distraction to drivers on 395. There has been at least one accident caused by a driver distracted by a landing aircraft, resulting in the death of a bicyclist. The DEA does not address any of these traffic problems. The DEA does wrongly suggest that increased airport use will diminish driving on 395. This claim is contradicted by the proposal itself, which hopes to bring additional customers not from

the Carson areas regionally, but from the eastern part of the country, not just transfer existing customers from cars to planes.

This proposal is fraught with flaws, and I urge the town to collaborate with Inyo County and the City of Bishop in developing the airport there.

MR. CRABB: Thank you, Andy. If you would like to leave a copy of your written statement, you're welcome to.

The next speaker is Soibian Spring, if I pronounced that right.

MS. SPRING: Soibian Spring, P.O. Box 7881, Mammoth Lakes.

I'm here to express my support of the expansion of the airport. First of all, for personal reasons, access to my family in Chicago, and excitement about big airplanes in general.

And, second of all, I believe that the expansion of this airport is a chance. It's a chance for Mammoth, California, as a leader in this effort, to define exactly what their relationship with the environment is. I think if balance between commerce and the environment is possible, this is an opportunity to strike it. I think that the mountain can do it if it wants to. It can synthesize the momentum of a developing economy with the undescribably precious resources of our surroundings, our

environment. I think it can set a precedent for that.

I think here the mountain can, if it chooses to, rise to the expectations of such a large body of support by not only considering but finding concrete solutions to the concerns addressed throughout this hearing, especially the issues of sprawl, visual quality, noise, safety, emergency services, and the issue that, from my age group and income group, seems to be always swept under the rug, affordable housing, also called employee housing.

I think that if there were -- we talked a lot about the people who are going to be flying in, the guests. We talk about it all the time on the mountain. The people that our daily efforts are there to please. I think if they were here, they would -- they would express the same concerns that the residents are. And I think that the mountain, having made the statement -- having the vision and having made the statement that they want to provide a world-class resort for these people, I think that in that commitment, which is obviously very strong, I think that the people included in that commitment should be the residents because they share -- they share the experience of this area.

Thank you.

MR. CRABB: Thank you.

The next speaker is Carolyn Caputo.

MR. TAYLOR: She had to leave.

MR. CRABB: Okay. Next speaker would be Bill Cockroft. Is that close?

MR. COCKROFT: Bill Cockroft, and I live at 15 Pine Knoll Place. And I've got pages of a nice note that I thought I would read to you. I'll try and do it in less than five minutes if I talk really quick. On second thought, I'll give you two cents.

I agree with everything that the people have said as a positive effort of the airport. I like the ideas there. So I'm a person of -- but let me give you two selfish reasons. I enjoy Mammoth --

MR. CRABB: Kind of turn your head so the court reporter can see you.

MR. COCKROFT: I enjoy Mammoth. I love it. But I like to travel to other parts of the country, both for pleasure and for business. What a pleasure and an absolute dream not to have to drive to Reno or to Los Angeles. Number one question my friends ask me, "When are you guys going to get an airport?"

Thank you.

MR. CRABB: Thank you.

The next speaker is Lanie Somers.

MS. SOMERS: Good evening. Lanie Somers, Box 3006.

I would like to speak tonight in support of the airport project. As we all know, we're witnessing the revitalization of Mammoth. I would like to, however, remind everyone the economic uncertainties associated with the late '80s and the early '90s are not that far behind us, and that the prosperity that we enjoy today is fragile and easily lost.

We now have a resort partner, Intrawest, and a town that is ready to move forward and a mountain run by folks with a vision of a world-class ski resort. All of this leads to a great team who have the economic viability and stability of Mammoth in mind. We need to take advantage of this.

I've had the pleasure of speaking with many folks in the trade and travel industry lately. Their number one comment is that Mammoth is hard to get to. This expansion and American Airlines as our partner will allow us to could accommodate our guests.

I believe with thoughtful and careful planning, we can mitigate the potential problems and bring long-term economic viability to our community.

Thank you.

MR. CRABB: Thank you.

The next speaker is Pam, I believe it's Murphy.

MS. MURPHY: Pam Murphy, Box 7155.

And I'm here to speak in favor of the airport expansion. I've lived in Mammoth for over 40 years, along with four generations of my family. I've flown in and out of the Mammoth Airport hundreds of times, both commercially and privately in everything from Convair 580s to Cessna 182s, and I feel it's imperative that we improve the airport and bring major air service to Mammoth. I feel this for several reasons.

First, I agree with all of the previous speakers about the positive impact it will have on our economy and our guests. I think it's important to allow our guests the choice to fly to Mammoth, rather than forcing them to drive to Mammoth. I also really would like to see this improvement for environmental reasons. I think air service will help reduce the noise pollution and congestion on the roads to Mammoth and in the town of Mammoth created by the thousands of cars we force into this village every weekend.

And, lastly, I really support this for the quality of life for me and my family and the residents of Mammoth. Like everyone else here, we like to travel away from Mammoth, and if we even want a three-day getaway, we spend two of it traveling on roads that are often unsafe. Many of us have lost loved ones on those roads. So I'm in

support of this expansion.

Thank you.

MR. CRABB: Thank you.

The next speaker is Eileen Burger.

MS. BURGER: Eileen Burger, Box 7233.

My husband and I are both pilots in the area and as such we generally support airport improvement; however, I found the Draft Environmental Assessment to be deficient in several areas.

First of all, it was my understanding that the assessment, the Environmental Assessment, needs to address all of the factors of the general – the town's general plan, which includes safety. And safety is the major concern that I have with the DEA.

A number of people before me have brought up all the comments that I wanted to bring up, but just real quickly again, the fact that we're in a nontowered Class E airspace that does not require two-way radio communication, the fact that the airport lacks visibility end to end, which we actually directly experienced with two planes taking off from opposite ends of the runway. My husband aborted that one and avoided an obvious catastrophe. There are just a number of safety issues that I could not find addressed anywhere in the EA.

I also found some -- what I felt were

inconsistencies in air quality and noise that I believe that other people brought up.

The last thing I would like to say is that frequently I get asked, Why shouldn't Mammoth have regular air service, commuter air service? And I would like to see regular commuter air service in Mammoth.

I believe that we have an example, we frequently compare ourselves to Aspen. Aspen has the same runway length, virtually the same elevation, same mountainous terrain, same runway pattern required for large carriers, accident rates in general aviation are just about the same as Mammoth. And yet they do have two air carriers that regularly service Aspen Airport. One of them I think is considered a major air carrier. It's United Airlines. And they go in with planes that are 80- to 90-passenger planes on a regular basis year-round, multiple flights per day. We could have regular air traffic in Mammoth, and we could have it right now. I just believe that 757's aren't what we're going to be flying to and from Reno.

Thank you.

MR. CRABB: Thank you.

The next speaker is Jack Copeland.

MR. COPELAND: I'm Jack Copeland, P.O. Box 7615.

I lived and worked in Mammoth Lakes for the last 27 years, and I came to Mammoth because of the skiing,

but I stayed I think you could say because of the environment. And I am very concerned about the environment, and I urge you to consider all of the mitigating issues that will maintain our environment. But I am in support of the airport expansion, and I believe that we can have an airport and expanded air services and a positive environment now and in the future.

Although I've been here for 27 years. I grew up on the east coast, and I have family and friends spread all over from Bangor, Maine, to Vero Beach, Florida, and all of them say the same thing to me when I go back and when I hear from them, You can't get there from here. And they are absolutely convinced that it's impossible to get to Mammoth and because it is very difficult to get to Mammoth. You can't fly directly to here, to Mammoth, and this would be a tremendous economic advantage to us. It would also be great for me because I could go and see them without spending two days on either end of my little holiday time.

Last year I had three friends and neighbors who were killed on Highway 395, and the amount of traffic that we have now on Highway 395 and the amount of traffic we have in town cannot get any greater than it is. We need to provide additional public access to the town of Mammoth Lakes, and we need to maximize the use of the airport to do

that.

I believe that environmentally it makes good sense to utilize the airport as an access alternative to Highway 395, and I urge you to accept this document and to move ahead with the airport expansion.

MR. CRABB: Thank you.

The next speaker is Pam Rake, if I pronounced that right.

MS. RAKE: My name is Pam Rake, P.O. Box 571, June Lake, California.

I, too, come from the flying community. Over 20 years my husband and I have been flying in Mammoth, and over 30 years as residents of the Mammoth and June Lake areas. I believe that the improvements at the airport are going to be beneficial for us as private pilots with the improved equipment that we'll have there and better weather forecasting, I'm sure, will be an improvement for us. We started flying 20 years ago after we got a little tired of the weary drive between Southern California, as all of you have been speaking about. And I think it's only fair that all of us should have that advantage of being able to fly back and forth, not just us privileged pilots.

I think that Aspen, as was mentioned here. would be pretty envious to have the advantage of an airport such as Mammoth has, with the -- compared to Aspen, we

don't have mountain terrain or weather, mountain weather, and we have a very safe airport compared to what you have to fly into there, if anybody has flown into Aspen. I think we're in a much better situation.

I, too, have had business associates and friends who can't believe that such a prestigious ski area that we have and beautiful area and we have no airport -- air service to it. They would be bringing in conventions, and we would be seeing our friends a lot more often, and I just definitely support the expansion.

Thank you.

MR. CRABB: Thank you.

The next speaker is Monty Waugh.

MR. WAUGH: My name is Monty Waugh, P.O. Box 806.

I strongly support the airport and urge the FAA to approve the EA in its current form and bring the expanded airport to fruition. I don't want to sit here and reiterate all the economic benefits that have already been said more eloquently than I could. But I just want to make one point, and that's that I believe the expanded airport would provide additional access to experience our beautiful Eastern Sierra environment, which includes Yosemite, not only Mammoth, for individuals throughout the country and the world who would not otherwise have access. And, again, I strongly support the airport.

Thank you.

MR. CRABB: Thank you.

Next one is Thom Heller.

MR. HELLER: My name is Thom Heller, P.O. Box 1765.

I support the development of the airport, support the preferred alternative in this environmental document and believe that the document is a sufficient document that covers all of the adequate issues and concerns that have been raised and that are associated with the project and believe that it does point out that there are no significant impacts that cannot be mitigated through the course of applying different types of mitigation towards different types of anticipated impacts.

I support the increased access to the Mammoth area and to the Eastern Sierra. As has been pointed out by a lot of people, this is not just a Mammoth Airport or Mammoth facility. It's an Eastern Sierra facility. And also support the concept of long- and short-distance airport opportunities. The document certainly goes into discussing the long-distance-type opportunities. Mammoth Mountain has been working with American Airlines on some short-distance nonsubsidized commuter service, targeted Los Angeles, San Jose. But in order to get a service, a major carrier, to come to a place

such as Mammoth, you've got to deal with their major hub areas, and those major hub areas are Chicago and Dallas Fort Worth.

In time -- there have been negotiations that have been going on, and in time, in conjunction with the development of the airport, we should see that opportunity for the commuter service that numerous people I've talked to be part of the opportunity that we, as locals, have the opportunity to enjoy, both for travel in and out, as well as for our guests to be able to travel in and out.

And as we see right now, we've got numerous guests who come from foreign countries. In particular, we end up with 60, 70,000 people coming from the United Kingdom, who at this point have to travel via road system in order to get here. Having a commuter system or having a long-distance hub system available for them, would provide them for the opportunity being able to come in a single flight, instead of having to make several flights and being able to tie into some kind of ground transportation in order to get here.

MR. CRABB: Thank you.

MR. HELLER: Thank you.

MR. CRABB: Final speaker is Dennis Agee.

MR. AGEE: Dennis Agee, Post Office Box 1885, Mammoth Lakes, California.

I'm here tonight to voice my support for the Mammoth Lakes -- Mammoth Yosemite Airport, and I think that all the positives have been stated extremely well tonight. Let's not miss this opportunity. Let's get going on this.

Thank you.

(Oral comments concluded at 6:06 p.m.)

STATE OF CALIFORNIA)
) ss.
COUNTY OF INYO)

I, Niccole M. Rossy, certify that the foregoing transcript is a full, true, and a correct transcription of my stenographic notes of the entire proceedings made at the time and place above set forth; that I am a qualified Shorthand Reporter, certified under the laws of the State of California, and appointed to act in the reporting of the foregoing matter.

Dated this _____ day of _____, 2000.

_____
NICCOLE M. ROSSY
Certified Shorthand Reporter, #10698

Appendix L – Response to Comments

This appendix contains responses to a summary compilation of the questions and comments submitted in writing (Appendix J) and received at the public hearing (Appendix K) regarding the Draft Environmental Assessment on the proposed Mammoth Yosemite Airport Expansion project. **Table L-1** provides a list of the agencies and individuals who provided comments along with an index code for each commenter. For each summary comment presented below, the index code identifying the commenter(s) is provided. Responses to the questions and comments are also provided.

L.1 Proposed Action

1. **Summary of Comment:** Developing the Airport to accommodate aircraft such as the B-737 and commuter aircraft may require extending the runway but not widening the runway. This would reduce the cost of the project.

   Commenter: I-J

   Response: The need for a specific runway width is a requirement of FAA design standards found in FAA AC 150/5300-13. Both the B-737 and B-757 are approach category C aircraft. A B-737 is an Airplane Design Group (ADG) III and a B-757 is an ADG IV thereby requiring a runway width of 150 feet. In addition, the policy of American Airlines and its commuter subsidiary, American Eagle, is to have a runway width of 150 feet at high altitude airports such as Mammoth Yosemite Airport. Airfield design requirements are discussed in Appendix B of the EA, Section B.3, Airfield Requirements.

2. **Summary of Comment:** The hangars that have been constructed along the parallel taxiway should be relocated to avoid having to shift the taxiway and runway to the south to provide the required separations for the B-757 aircraft.

   Commenter: I-L

   Response: The airfield modifications required to provide adequate runway to taxiway separation of 312.5 feet and taxiway to fixed or movable object separation of 97.5 feet can be achieved without the relocation of the hangers. With the proposed action, a runway to taxiway separation of 317.5 feet has been included to provide sufficient additional space for a drainage system. The east hangers would be setback 97.5 feet from the widened and relocated parallel taxiway. This would permit aircraft with a wingspan up to 125 feet (the wingspan of a B-757) to use the taxiway as long as there are no aircraft or other objects located beyond the face of the east hangers. Operational measures would be required to ensure that the taxiway and object free areas are clear during air carrier aircraft operations using this taxiway. The full-length parallel taxiway provides the capability for aircraft to exit the runway and avoid backtaxiing on the runway.

Table L-1

LIST OF COMMENTERS
Draft Environmental Assessment
Mammoth Yosemite Airport Expansion

Commenter	Identifier Code
Federal Agencies	
United States Department of Agriculture, U.S. Forest Service	
Ronald F. Keil, Acting District Ranger	F-A
United States Department of the Interior, Bureau of Land Management	
Steve Addington, Field Office Manager	F-B
United States Department of the Interior, National Park Service	
Deanna M Dulen, Park Superintendent	F-C
State Agencies	
Caltrans Department of Transportation, Aeronautics Program	
Sandy Hesnard, Environmental Planner	S-A
Caltrans Department of Transportation, District 9	
Caroyln Yee, IGR/CEQA Coordinator	S-B
California Regional Water Quality Control Board, Lahontan Region	
Douglas E. Feay, Associate Engineering Geologist	S-C
Department of Fish and Game, Inland Deserts-Eastern Sierra Region	
Darrell M. Wong, Supervisor, Habitat Conservation Program	S-D
Local Agencies, Businesses, and Interest Groups	
Long Valley Fire Protection District	
Fred Stump, Chief	L-A
Liebersbach, Mohun, Carney & Reed	
James S. Reed	L-B
Sierra Mortgage Corporation	
Rick Blake, CEO/Managing Partner	L-C
Sierra Mortgage Corporation	
Dean B. Wolf, Loan Officer	L-D
Mammoth Sierra Properties	
Stacey Bardfield, Owner/Broker	L-E
University of California, Santa Barbara, Sierra Nevada Aquatic Research Laboratory	
Daniel R. Dawson, Director	L-F
Preserving the Eastern Sierra Tradition of Environmental Responsibility	
Elizabeth Tenney	L-G
Sierra Club	
Wilma Wheeler, Chair	L-H
Mammoth Lakes Contractors Association, Inc	
Power, President	L-I
mmoth California	
sty Gregory, Chief Executive Officer	L-J

Commenter	Identifier Code
Individuals	
Jim Langley, Mammoth Lakes, California	I-A
Sommar Farber, Mammoth Lakes, California	I-B
Pat Foster, Bishop, California	I-C
Nancy Kassel, Mammoth Lakes, California	I-D
Lloyd G. Stephens, Swall Meadows, California	I-E
Dean B. Wolf, Mammoth Lakes, California	I-F
Rick Bramble, Mammoth Lakes, California	I-G
Jim Langley, Mammoth Lakes, California	I-H
Andy Selters, Bishop, California	I-I
John and Nancy Walter, Mammoth Lakes, California	I-J
Duane "HAP" Hazard	I-K
Stephen Kalish, Swall Meadows, California	I-L
Mal Ocerani	I-M
Catherine W. Rose, Mammoth Lakes, California	I-N
Rick Jali, Mammoth Lakes, California	I-O
Mike Larimore	I-P
John Timms	I-Q
Wendy Underwood	I-R
John Cunningham	I-S
Pat Eckart, Mammoth Lakes, California	I-T
Trish Dunlap, Mammoth Lakes, California	I-U
Karolynn Ward Davis, Crowley Lake, California	I-V
Julie Wright, Mammoth Lakes, California	I-W
Gary K. Shultz, Mammoth Lakes, California	I-X
Wayne and Beth Caddell, Mammoth Lakes, California	I-Y
Patty Schwartzkopf, Mammoth Lakes, California	I-Z
Michele Hansen, Mammoth Lakes, California	I-AA
Christine Galbreath, Mammoth Lakes, California	I-BB
Meredith E. McGuire, Mammoth Lakes, California	I-CC
Dr. and Mrs. Bruce L. Taber, Mammoth Lakes, California	I-DD
Margaret and Michael Shapiro, Mammoth Lakes, California	I-EE
Public Hearing Comments	
Lisa Issacs, Mammoth Lakes, California	P-A, 2-4
James Bass, Mammoth Lakes, California	P-B, 2-18
Daniel R. Dawson, Director, Sierra Nevada Aquatic Research Laboratory	P-C, 3-2
Larry Gagnier, Mammoth Lakes, California	P-D, 7-5
Paul McIntyre, Mammoth Lakes, California	P-E, 7-20
Stephanie Summers, Mammoth Lakes, California	P-F, 8-4
Heath Bynum, Mammoth Lakes, California	P-G, 8-14
Kami Simmons, Mammoth Lakes, California	P-H, 8-21
John Cunningham, Mammoth Lakes, California	P-I, 9-5
Elizabeth Tenney, Preserving the Eastern Sierra Tradition of Environmental Responsibility	P-J, 11-12
Tom Smith, Mammoth Lakes, California	P-K, 14-12
Rob Perlman, Mammoth Lakes, California	P-L, 15-21
Phyllis Benham, Mammoth Lakes, California	P-M, 18-14
Bruce Woodward, Crowley, California	P-N, 21-25
Ray Turner, Member, Regional Planning Advisory Committee, Crowley, California	P-O, 22-7
Rusty Gregory, Mammoth Lakes, California	P-P, 24-8

Commenter	Identifier Code
Public Hearing Comments (continued)	
Steven Kalish, Swall Meadows, California	P-Q, 28-12
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Neil McCarroll, Vice-President, Mammoth Lakes Chamber of Commerce	P-S, 30-5
Lloyd Stephens, Swall Meadows, California	P-T, 30-16
David Moss, Mammoth Lakes, California	P-U, 32-1
Gordon Alper, Mammoth Lakes, California	P-V, 32-22
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L.2 Alternatives

3. **Summary of Comment:** Bishop Airport should be considered as a safer and less expensive alternative to the development of Mammoth Yosemite Airport.

   Commenter: L-H, I-E, I-I, I-J, I-K, I-L, I-S, P-Q, P-W, P-DD, P-QQ

   Response: Both Mammoth Yosemite Airport and Bishop Airport are operated and maintained in accordance with applicable federal regulations and their approaches meet the standards of United States Standard for Terminal Instrument Procedures (TERPS). There is no accepted standard to compare the present or future safety of one airport to another. The FAA's certification process determines if an airport is safe or not and the FAA has determined that both airfields are safe.

   Because of the location of the airfield, obstacles, including the White Mountains, place certain aircraft restrictions on operations at Bishop Airport. The location of these obstacles precludes straight-in instrument approaches procedures to approaches to any runway at Bishop Airport. All landings at Bishop Airport must be completed through visual circling maneuvers. Consequently the weather minimums proscribed by these approaches for large aircraft are higher than the Mammoth Yosemite Airport approach procedure. As is the case with Mammoth Yosemite, Bishop also requires a special departure procedure for obstacle avoidance.

   The primary population center of Bishop California is located within one to five miles of the Bishop Airport and directly under the flight path for the east-west runway. The primary population of the Town of Mammoth Lakes, Sunny Slopes, and Lake Crowley are all located significantly further away from Mammoth Yosemite Airport and south of the flight path of the Airport's runway. **Exhibits L-1** and **L-2** show the general proximity of the populated areas in the vicinities of Bishop Airport and Mammoth Yosemite Airport respectively.

   Bishop Airport is not currently 14 CFR Part 139 certified, and therefore, cannot accommodate the air carrier or commuter operations. Mammoth Yosemite Airport is certificated pursuant to 14 CFR Part 139. The runway length available on the longest runway at Bishop Airport would likely be sufficient to accommodate the aircraft types and markets identified. However, the existing runways and taxiways would have to be widened and strengthened to accommodate air carrier aircraft, air carrier apron areas constructed, passenger terminal and parking facilities constructed, and many of the same facility improvements that are required at Mammoth Yosemite Airport would have to be completed at Bishop Airport in addition to the infrastructure improvements for 14 CFR Part 139 certification. Given the current level of 14 CFR Part 139 development at Bishop Airport, it is highly doubtful that all these improvements could be accomplished at significantly less cost than the proposed action at Mammoth Yosemite Airport.

   An early coordination meeting was held with representatives of Bishop on January 31, 2000, and a copy of a letter to the FAA Airports District Office documenting the discussions at that meeting is provided in Appendix D of this EA. Representatives from Bishop indicated their potential plans to attract commuter service to Bishop Airport. It was agreed that the role of

Mammoth Yosemite Airport would be as an air carrier airport, in addition to the existing general aviation activity, and the role of Bishop Airport would primarily be as a commuter airport in addition to the existing general aviation activity. These identified roles are complimentary in nature rather than competitive, and each provides a distinct service to the region. Each jurisdiction is planning in areas meet the needs of their respective communities and the region as a whole.

A further discussion with the Airport Manager at Bishop Airport was held on November 30, 2000. Bishop is planning several airfield maintenance projects and the construction of a 4,900 square-foot general aviation terminal. However, they are not planning on obtaining an 14 CFR Part 139 certification because of the high costs of upgrading the facilities to meet the requirements for commuter operations.

Mammoth Yosemite Airport is owned and operated by the Town of Mammoth Lakes. The Town does not have any authority to implement any improvements or other actions at Bishop Airport. It is our understanding, in response to one of the commenters, that the creation of a Regional Airport Authority to develop both Mammoth Yosemite and Bishop airports together, would likely require enabling legislation from the State of California.

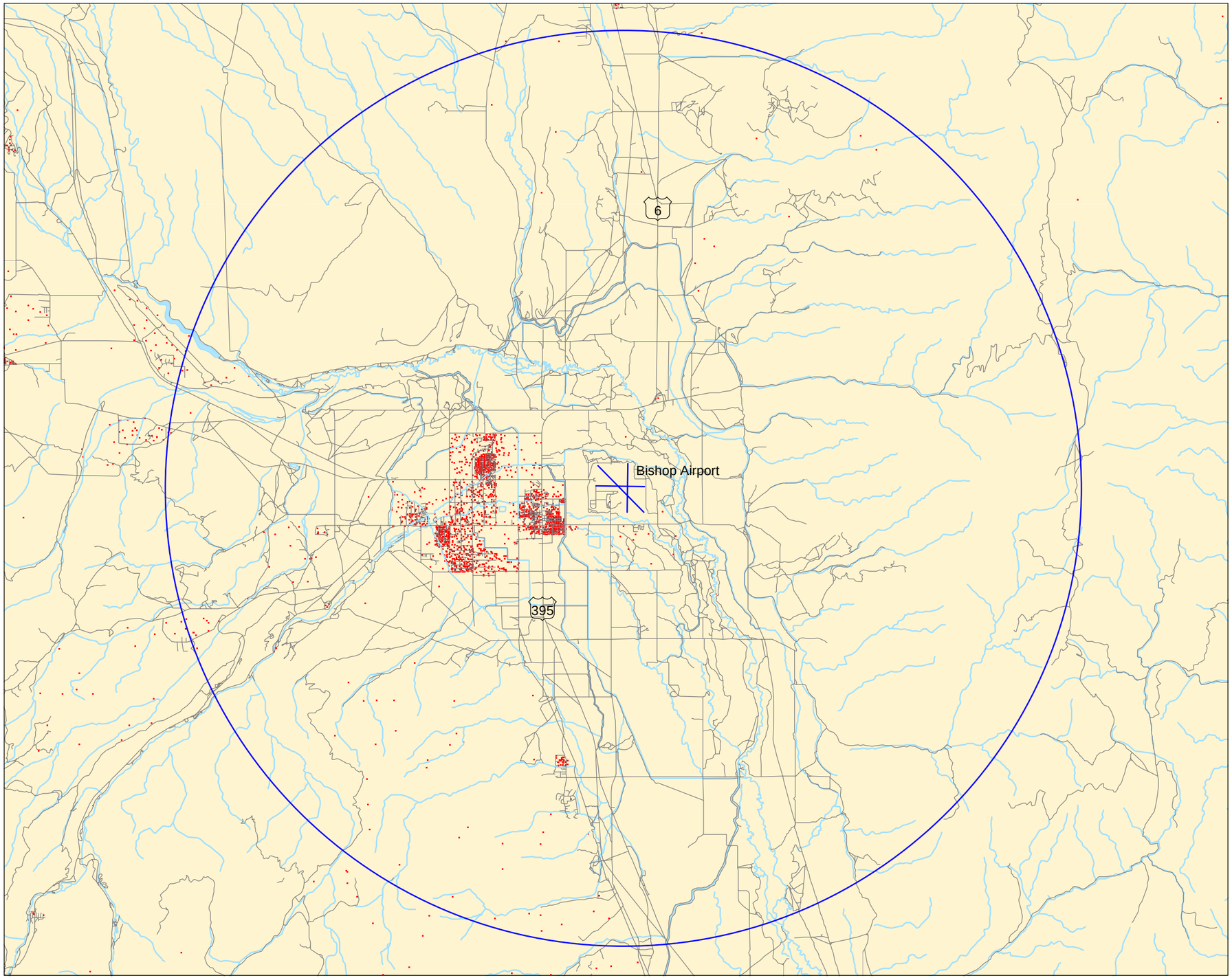
Based on this information and information previously documented in the Section 3.3.3 of the EA, Bishop Airport is not considered to be a prudent and feasible alternative for the accommodation of air carrier aircraft operations.

4. **Summary of Comment:** Mammoth Yosemite Airport should be developed to accommodate commuter aircraft only.

   Commenter: S-D, L-F, L-H, I-E, I-I, I-J, I-S, P-I, P-QQ, P-VV

   Response: Developing the Airport to accommodate only commuter turboprop aircraft would not meet the purpose and need of the project. A primary reason for improving the Airport to accommodate air carrier turbojet aircraft is the demonstrated demand for such operations per the agreement with American Airlines to provide such service at Mammoth Yosemite Airport. The Airport improvements would also permit regional operations. Many of the major national commuter airlines are transitioning a large percentage of their fleets to regional jets. The development of the proposed action would also provide facilities to support regional/commuter service as well as air carrier service. As stated in Section 4.2 of the EA, it is anticipated that, as has been the case at other similar airports initiating commercial service, both air carrier and commuter service would develop. Most of the Airport improvements required for the air carrier service would also be required for regional/commuter service. These improvements include the terminal building facilities for passenger processing associated with larger commuter or regional jet aircraft operations typically used by the nationwide commuter operators, ticketing, passenger and baggage processing security requirements, and concessions. The terminal building developed as part of the Airport improvement program is consistent with these requirements.

   American Eagle, a national commuter operator, has also specified that, as a company policy, they would require the same 150-foot wide runway width as the air carrier operators, although, they may initiate service at an airport with only a 100-foot wide runway if there are



LEGEND

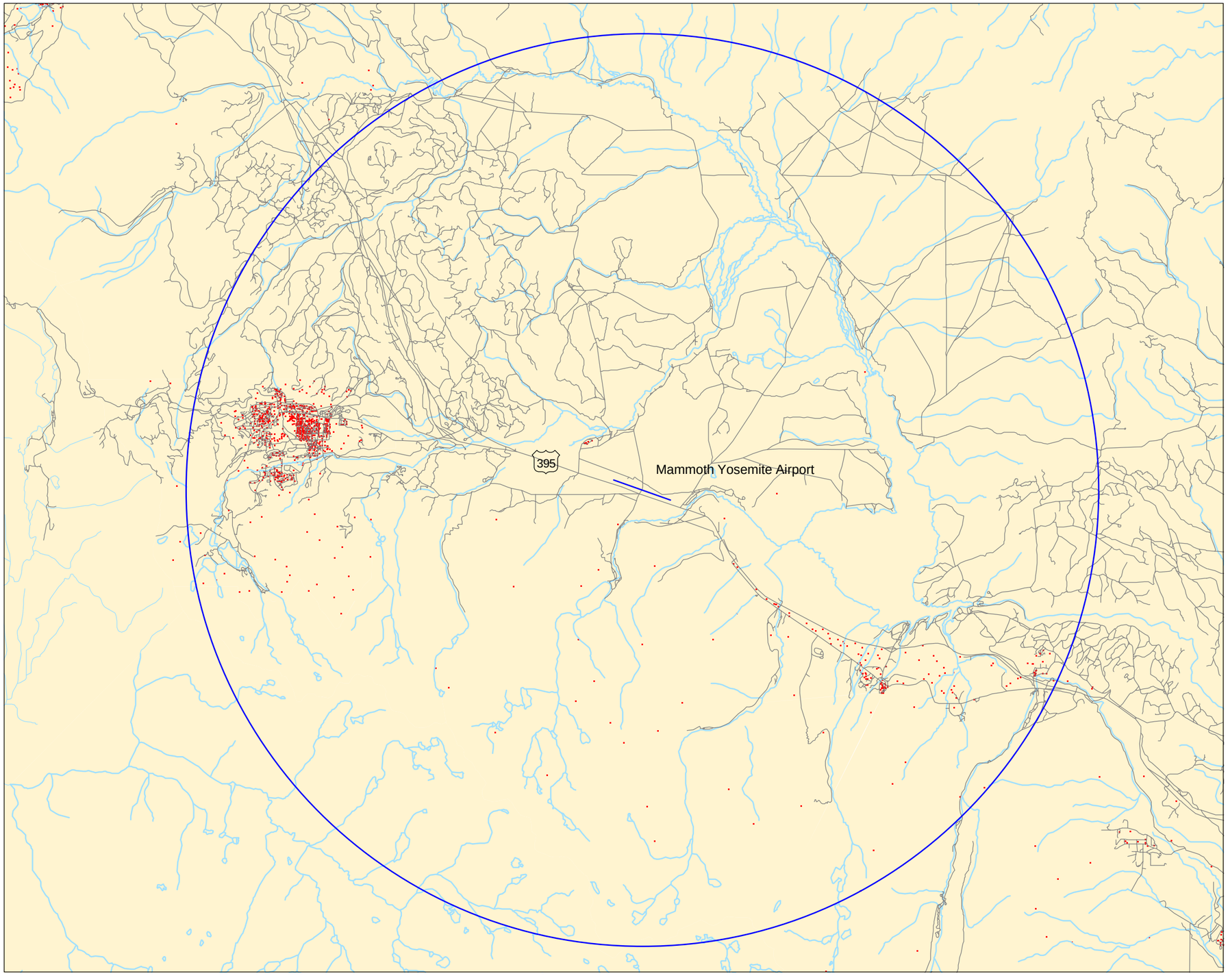
10-Mile Radius

1 Dot = 5 persons

Source: U.S. Census Bureau, 1990 Census
Prepared by: Ricondo & Associates, Inc.

north
0 12,000 Feet

Exhibit L-1
Bishop Area Population Density Map



LEGEND

10-Mile Radius

1 Dot = 5 persons

Source: U.S. Census Bureau, 1990 Census
Prepared by: Ricondo & Associates, Inc.

north
0 12,000 Feet

Exhibit L-2
Mammoth Lakes Area Population Density Map

near-term plans to widen the runway to 150 feet. The FAA airport design criteria requires a minimum runway width for aircraft such as the B-737 and B-757 aircraft of 150 feet.

The FAA has published a notice of proposed rulemaking for changes in the 14 CFR Part 139 airport certification requirements. Under the existing 14 CFR Part 139, the FAA requires airport operators to comply with certain safety requirements prior to serving operations of air carrier aircraft with more than 30 seats. Recent changes in the FAA airport 139 certification requirements have also specified that the eight-foot high security fencing, or six-foot with three strand barbed wire on top (CFR 139.335), around the perimeter of the airfield is required to accommodate scheduled turboprop aircraft of more than 30 seats.

In addition, in order to respond to market demands, many commuter operators are increasingly expanding or replacing their fleets with regional jets, which have similar performance requirements as other narrow-body turbojet aircraft. Appendix B provides runway length requirements for the EMB-145 regional jet used by a number of commuter operators. Therefore, many of the improvements required for air carrier service would also be required for commuter airline service.

L.3 Forecasts

5. **Summary of Comment:** Air service from Mammoth Yosemite Airport should be provided to cities such as Los Angeles or Las Vegas rather than to Dallas and Chicago.

   Commenter: S-D, P-T

   Response: Based on the comparisons with the case study airports presented in Section 4.2 of the EA, future service is anticipated to develop from other hub airports, such as Los Angeles, San Francisco, and/or Denver by other air carrier/commuter operators that have hubs at these airports such as United Airlines and United Express. However, as may be the case with air service from Denver or some of the other hub airports, only a small percentage of the passengers may originate from those locations. The majority of passengers would be connecting from other originating points.

   Airline operations in the national airspace system largely operate using a "hub and spoke" system. Major air carriers establish central hub airports where passengers can arrive from outlying or spoke airports, transfer or connect with another flight, and continue to their destination airport. In the case of the proposed service from American Airlines to and from Mammoth Yosemite Airport, initial service would be provided from two of American Airlines' hubs: Chicago and Dallas/Fort Worth. Service from these two airports would carry passengers that connect from locations throughout the Eastern, Southern, and Midwest United States, in addition to international passengers from Europe, South America, Canada, and Mexico. As discussed in the EA, many of the current visitors traveling from these locations to or from the Mammoth Lakes area use Los Angeles or Reno airports and drive between the Mammoth Lakes area and these airports.

6. **Summary of Comment:** The aviation demand forecasts presented in the EA do not reflect the population base of the comparison airports used and are only for summer and winter months. The operations also represent a significant increase in large aircraft operations.

   Commenter: L-H, I-K, L-H

   Response: The aviation demand forecasts presented in Section 4.2 of the EA have been accepted by the FAA as the forecasts for Mammoth Yosemite Airport. These forecasts were developed based on a comparative case study analysis of five similar airports, as recommended in the FAA *Airport Benefit-Cost Analysis Guidance* (December 1999), for airports without a history of similar service. The comment received indicated that the forecasts should be based a comparison of regional population base. However, the majority of the enplanements at the comparative airports, and those anticipated at Mammoth Yosemite Airport, are derived from visitors to the region. The number of skier-days was found to provide a strong correlation to the winter activity levels at each comparable airport. Therefore, skier-day activity was used as the basis for winter enplanements. Likewise, summer season enplanements at the Airport are assumed to be a function of the number of visitors to the region's national parks. It is acknowledged, however, that residents in the region would also take advantage of the air service.

   It is also important to note that the "summer" and "winter" seasons refer to the general visitor patterns at these airports and extend beyond the summer and winter months to include operations during the spring and fall months as well.

   These forecast passenger service operations, as well as forecast increases in general aviation activity, were used as the basis for the analyses documented in the EA, including the evaluation of cumulative impacts.

L.4 Agency Coordination

7. **Summary of Comment:** Coordination with the communities in the vicinity of the Airport, the Long Valley Fire Protection District, and the Town of Bishop was not performed.

   Commenter: S-D, P-T

   Response: Coordination with the Fire Chief of the Long Valley Fire Protection District (LVFPD) has been ongoing throughout the planning of the Airport improvements. A letter from the Fire Chief is provided in Appendix D of the EA addressing emergency access issues. A lease is being drafted to provide a LVFPD fire truck at the Airport to help if there is a structural fire. This comment was not submitted from the Fire Chief.

   An early coordination meeting was held with representatives of Bishop on January 31, 2000, and a copy of a letter to the FAA Airports District Office, Burlingame, California, documenting the discussions at that meeting is provided in Appendix D of this EA. Representatives from Bishop indicated their potential plans to attract commuter aircraft service to Bishop Airport. It was agreed that the use of Mammoth Yosemite Airport as an air carrier airport and Bishop Airport as a commuter airport would be complimentary in nature

rather than competitive. Each jurisdiction is planning in areas that meet the needs of their respective communities and the region as a whole. This comment was not submitted from either the Town of Bishop or representatives from the Bishop Airport.

L.5 Ground Transportation

8. **Summary of Comment:** A traffic intersection operation study needs to be completed to assess the potential impact on, and remediation measures required for, the intersection of Hot Creek Ranch Road due to the combined impact of the proposed Airport project, proposed Hot Creek Resort project, and proposed Sierra Business Park.

   Commenter: S-B, L-F, L-H, I-I, I-J, I-K, P-C, P-M, P-W

   Response: A traffic study has been prepared to assess the Airport specific short-range and long-range impacts and to consider the cumulative impact of two adjacent development projects: Hot Creek Resort (the on-Airport commercial development project) and the Sierra Business Park (formerly referred to as the Morgan Industrial Park). Section 5.4 of the EA has been updated to reflect this information. The traffic study is provided in Appendix M. The study examines conditions in 2000 and 2020 and considers growth in through traffic on U.S. 395.

   The results of the study indicate that mitigation in the short-range and long-range is necessary only in the case of the construction of all three projects. Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes or construction of a connector road to Benton Crossing Road from the Airport would be required to reduce impacts.

   If the connector road from the existing Airport access road to Benton Crossing road is constructed, then no additional mitigation to the interchange of U.S. 395 and Hot Creek Ranch Road is required. Included in the Hot Creek Resort project is the construction of the connector road to Benton Crossing Road to minimize traffic impacts of Hot Creek Resort project. The Hot Creek Resort project, including the connector road received environmental clearance upon the 1997 certification of the *Subsequent Environmental Impact Report and Updated Environmental Assessment, Mammoth Lakes Airport Expansion,* 1997.

   The costs of either improvement should be spread to the contributing projects on a proportionate basis to their respective peak hour trip generation.

   If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short-range or long-range for the Airport and Hot Creek Resort.

   Continued coordination and consultation with Caltrans would be maintained during design of this project on all areas that relate to Transportation Corridor Plans.

9. **Summary of Comment:** The Convict Lake Road emergency access should be closed.

   Commenter: S-B

   Response: The Convict Lake Road is a direct emergency access point to the midpoint of the airfield from U.S. 395. This access is currently gated, thereby restricting access to only emergency or maintenance vehicles. Discussions have taken place with Caltrans representatives (personal communication: Carolyn Yee) regarding the Convict Lake Road emergency access. Agreement has been reached that the emergency access point can remain for use only during emergency responses to the Airport. However, rather than a gated access, a knock-down fence would be utilized to discourage access by non-emergency vehicles. Such knock-down fencing is common at many airports and can reduce response time during an emergency since a gate does not have to be unlocked to gain access. This access point would be used only in the case of an aircraft emergency on the Airport. Such aircraft emergencies are extremely rare.

10. **Summary of Comment:** The increased air traffic and noise and the increased width of the runway could result in the potential for motorist accidents on U.S. 395.

    Commenter: S-B, I-I, I-K, P-QQ

    Response: The separation of the runway and U.S. 395 meets both FAA requirements and Caltrans requirements as presented in the Highway Design Manual Topic 207 Airway-Highway Clearances as presented in Section 5.2.2 of the EA. These separation requirements are established to protect both the aircraft occupants and persons on the ground and on the roadways. In the 1970s and 1980, the Airport had significantly higher operations levels (approximately 37,000 annual operations [FAA Terminal Area Forecasts, 1999]) than 1999 operations levels (6,050 operations levels). As presented in Section 4.2.9 of the EA, the 20-year forecast period (23,650 annual operations) would not achieve the level of historic annual operations levels at the Airport. Such operations levels have not been reported to be a significant distraction to drivers over the years. The Town, in consultation with Caltrans, would consider installation of signage along U.S. 395 warning motorists of low flying aircraft to help reduce the "surprise factor" to motorists near the Airport.

11. **Summary of Comment:** Since U.S. 395 is designated as a scenic highway, the project would need to meet all specifications within the Highway Design Manual Topic 109.

    Commenter: S-B, P-DD, P-QQ

    Response: The potential visual impacts as they relate to the State Scenic Highway are presented in Section 5.21 of the EA. The proposed project has been developed to ensure that scenic highway design standards would not be violated. The embankment required for the extension of the runway would be at or below roadway elevation and would be contoured and planted to appear natural. Guidance from the U.S. Forest Service would be provided to enable this objective to be met and would resemble the Morraine that exists east of the Airport. All new buildings constructed in this project will be designed to blend into the local Alpine environment. The setback for the passenger terminal building and parking lot is over

1,100 feet from U.S. 395. To minimize any institutional look to the facility, an eight-foot chain link fence without the barbed wire is recommended. The chain link security fence can be seen through, and therefore, minimizes obstruction of the view. The use of neutral colored fencing material would aid in making the fence more aesthetically pleasing. It has been recommended that this be incorporated into the specifications and has been agreed to by the Town.

12. **Summary of Comment:** The Airport Design Plans and the State Facilities map seem to overlap.

    Commenter: S-B

    Response: The discrepancy between Airport design plans and the State Facilities map has been reviewed with Caltrans. The Town of Mammoth Lakes would coordinate with Caltrans to resolve the discrepancies and update the appropriate maps.

L.6 Lighting and Signage

13. **Summary of Comment:** The property lighting and signs would need to meet specifications within the Highway Design Manual and Vehicle Code. Night lighting standards must be enforced.

    Commenter: S-B, L-F, L-G, P-J

    Response: Property lighting and signs associated with the proposed alternative would be designed to conform to State Highway Standards as set forth in the Highway Design Manual Topic 207 and the Vehicle Code Section 21466.5 unless superceded by FAA requirements for safety and security.

    The existing general aviation aircraft parking apron lighting is a legal non-conforming use to current local zoning ordinances. As indicated in Section 5.18 of the EA, when the new terminal and air carrier ramp areas are constructed, ramp lighting that meets current Town codes would be installed at the air carrier ramp and the existing general aviation apron area lighting would also be replaced.

L.7 Visual Impacts

14. **Summary of Comment:** Visual impacts of the fence and the passenger terminal building need to be minimized.

    Commenter: S-B, L-G, P-J

    Response: As discussed in Section 5.21 of the EA, fencing and buildings associated with the proposed action would be painted with neutral colors to minimize any visual impacts. Selection of final colors, as well as the design of the terminal building, would be determined

through the design review process carried out by the Town of Mammoth Lakes Planning Commission.

Fencing will be designed to meet State Highway Standards as set forth in Highway Design Manual Topic 201 and 14 CFR Part 107 FAA requirements for Airport security. Fences will not be located on highway right of way and will be placed far enough away from the road to protect against damage from snow accumulation resulting from snow removal operations.

L.8 Air Quality

15. **Summary of Comment:** The potential degradation of air quality due to increased air traffic and the increased motorized traffic needs to be examined.

    Commenter: S-B, P-VV, L-H

    Response: The air quality analysis presented in this EA was performed in accordance with the General Conformity Requirements (40 CFR Part 39, Subpart A) of the *Clean Air Act*. Based on an emissions analysis, it was determined that no significant impacts to air quality would occur with the implementation of the proposed project. As stated in Section 5.5 of the EA, implementation of the proposed project would reduce motor vehicle traffic in the region rather than "increase" traffic. With the proposed project, many visitors to the Mammoth Lakes region would be accommodated by high occupancy vehicles, including buses, and the number of "car" trips would be reduced.

    The amount of pollution created by an aircraft varies depending on its engine type and other factors. Emissions factors for aircraft are documented in the Emissions and Dispersion Modeling System (EDMS) database, but actual emissions may vary depending on the time an aircraft spends taxiing and idling at an Airport.

    Air pollution estimates presented in Section 5.5 of the EA represent Airport traffic activity levels for the years noted. Pollution estimates were developed using the FAA and U.S. EPA preferred air quality modeling software for airports, EDMS. The emissions inventory module incorporates EPA approved methodologies for calculating aircraft emissions, on-road and off-road vehicle emissions, and stationary source emissions. Airport elevation is one of the global parameters specified in EDMS emissions analysis.

    Based on coordination with the California Air Resources Board, the changes were made to the Section 5.5 of the EA. These changes did not significantly change the results of the analysis. These changes are as follows:

    - Section 5.5.2 "Environmental Consequences" was revised accordingly to indicate that the project will not cause or contribute to violations of state ozone standards or state and federal standards for PM10.
    - Section 5.5.3 "Mitigation Measures" was revised to include a discussion of potential mitigation measures to minimize emissions even though there is not a significant air quality impact.
    - Section 5.5.2 "Environmental Consequences" was revised to include more information on emissions modeling and modeling assumptions and methodologies.

- Section 5.5.2, "Project Related Emissions and De Minimis Threshold Criteria" was amended to reflect the need to include an analysis of project-related vehicle miles traveled (VMT) for comparison to the VMT limit in the PM-10 SIP.

16. **Summary of Comment:** There would be large percentage increases in emissions because the current levels in the area are so low. The pristine condition of our region is our most valuable asset. An arbitrary level of emissions set by the EPA for the entire nation is not appropriate for consideration of environmental impact in this location. Further analysis is required.

    Commenter: L-F

    Response: Federally funded and approved actions or projects are subject to the "General Conformity" regulations (40 CFR Part 39, Subpart A) of the Clean Air Act if the proposed project occurs in a nonattainment or maintenance area for a criteria pollutant. In accordance with the General Conformity requirements, an air quality evaluation was performed for the proposed project. In this evaluation, total direct and indirect emissions associated with the project were compared to annual *de minimis* emissions levels as specified in 40 CFR 93.153. The results of this analysis indicated that no de minimis thresholds would be exceeded as a result of the project, nor would the project be considered regionally significant. An action is regionally significant of the emissions associated with the project are 10 percent or more of the regions emissions for that pollutant. Therefore in accordance with 40 CFR Part 93.153(b) a conformity determination is not required for the project as discussed in Section 5.5.4 of the EA.

    Mono County is both a federal and State designated nonattainment zone for PM-10, and a state designated nonattainment zone for ozone which is comprised of the measurable pollutants of Volatile Organic Compounds (VOCs), and NOx. As depicted in Table V-15, the California Air Resources Board estimates that 4,745 tons of VOC and 3,285 tons of NOx were emitted in the Great Basin Valley Air District in 1996. Project related emissions represent a very small fraction of basin wide emissions of NOx and VOC and would not constitute a large percentage increase in emissions as stated in the comment.

17. **Summary of Comment:** What is the estimate for pollution of the wetlands to the west from exhaust fumes?

    Commenter: L-H

    Response: The air pollution impact to the region as determined using Federal and State criteria is not significant. The pollution created is not concentrated in any one area, such as the wetlands. The limited increase in pollution in the region would be dispersed across a large region and therefore the impact to the wetlands is not significant.

L.9 Construction

18. **Summary of Comment:** Dust mitigation measures need to be employed during construction.

Commenter: S-B, L-A

Response: During construction, dust mitigation would be addressed in all construction specifications. FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction at Airports* [5-34], indicates procedures to restrict the emission of dust (particulate matter) and provides a series of measures that can be taken to prevent particulate matter from becoming airborne. All contracts would include detailed specifications requiring the contractors to utilize "Best Management Practices" to control dust and other potential pollutants during construction. The contractors will be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and air quality (dust prevention) plan before beginning any construction. The Town, the Engineer, and the FAA would approve these plans before a Notice to Proceed is issued. The Resident Engineer on the project will enforce the requirements of these plans.

As presented in Section 5.20.3 of the EA, in addition to these dust control measures the Town of Mammoth Lakes would require any contractor working on the Airport to communicate with the Mono County Sheriffs Department Dispatch Center and Long Valley Fire Department as to the time of day activities could generate clouds of dirt or dust. This coordination would help prevent false alarm responses.

19. **Summary of Comment:** During construction, dewatering water cannot be discharged into any drainage, stream or wetlands area.

Commenter: S-C

Response: There is no dewatering that would be required for any of the proposed construction. All of the soil in the construction area is very pervious sand and gravel, which would readily absorb any discharge water. If any plans change such that dewatering becomes necessary, the California Regional Water Quality Board requirements, including a discharge permit, would be obtained and any dewatering water would be discharged to land in the immediate area.

L.10 Wetlands

20. **Summary of Comment:** The Army Corps of Engineers has not determined that the dry meadow east of the Airport is not a wetland. A previous determination or a new wetlands study would be required before expansion can be undertaken.

Commenter: S-C

Response: The dry meadow on the eastern portion of the study area is not classified by the Army Corps of Engineers as a wetland. In addition, the dry meadow would not be affected by the construction associated with the proposed action. Encroachment into the dry meadow would only be required with Alternative 5, the extension of the runway to the east, which was not selected as the preferred alternative. The proposed action would avoid disturbance of this dry meadow.

L.11 Water Quality

21. **Summary of Comment:** The California Regional Water Quality Control Board requests to review the spill prevention, containment, and cleanup plan to insure adequate protection for all areas.

    Commenter: S-C

    Response: The California Regional Water Quality Control Board staff has concurred with the measures indicated in the EA for the handling of stormwater runoff and septic systems. To prevent accidental spills of fluids, such as aviation gasoline, the Town of Mammoth Lakes has adopted a Spill Prevention Plan for the Airport, a copy of which is provided in Appendix D. In addition, the Town would obtain the necessary equipment, absorptive planks, etc., to control and clean up any spill that may occur as a result of an accident.

22. **Summary of Comment:** The California Regional Water Quality Control Board needs to review and approve a ground water sampling plan for the remediation plan for the underground tanks that were removed at the Airport.

    Commenter: S-C

    Response: As part of a previous and unrelated action at the Airport, underground tanks were removed and soils and groundwater tests were conducted when these tanks were removed. There was a leak in at least one of the tanks and some hydrocarbon contamination of subsurface soil. The Town has a remedial plan submitted and approved and a request in to obtain State funding for the remedial work. As part of this remedial work it will be necessary to meet State and federal requirements to provide testing and monitoring to determine the extent of any impact on the groundwater. If the groundwater is affected, a remedial plan would be required. However, as discussed above, this action is separate and unrelated to the proposed action. This information has been provided to the appropriate Airport staff.

23. **Summary of Comment:** The size of the oil/water separator should be able to accommodate water flows associated with storm conditions at the Airport.

    Commenter: L-H

    Response: The oil/water separator would be designed to accommodate the demand. Designs for the system would be submitted to California Regional Water Quality Control Board, Lahontan Region for approval.

24. **Summary of Comment:** An oil or fuel spill at the Airport could significantly impact both the environment and the water supply.

    Commenter: L-F, L-H, P-DD

    Response: Surface water from aircraft parking aprons, automobile parking lots, and the roadway in front of the terminal will be collected and an oil/water separator installed on the outfall. The oil/water separator would be equipped with a port for sampling discharge. The resultant water

will be allowed to infiltrate into the ground. The monitoring wells installed to monitor the potential hydrocarbon contamination from the underground tanks that have already been removed would also be used to monitor the outfall from the storm water runoff.

The Airport would develop a detailed plan and provide the necessary equipment to control and clean up any spill that does occur on the airport as a result of a major accident or spill. The Airport would stockpile on the site absorptive planks and absorptive loose materials that can be used to control and clean up potential spills. They will develop standard procedures whereby, as soon as a spill occurs, the planks and absorptive material would be applied to contain the spill within the area of the accident and proper agency coordination procedures would be conducted to ensure proper cleanup of the site.

25. **Summary of Comment:** The Draft EA mentions that deicing fluids could be collected and transported off site for treatment but does not mandate that they be collected and kept out of the soil and groundwater.

    Commenter: I-I, P-QQ

    Response: Section 5.6.3 of the EA, Mitigation Measures, indicates that deicing fluid would be collected on the air carrier ramp in a holding tank and removed from the site and suitably disposed. Section 5.6.4 of the EA, Summary of Findings, has been revised to indicate that deicing fluid would be contained and removed from the site for appropriate treatment and disposal.

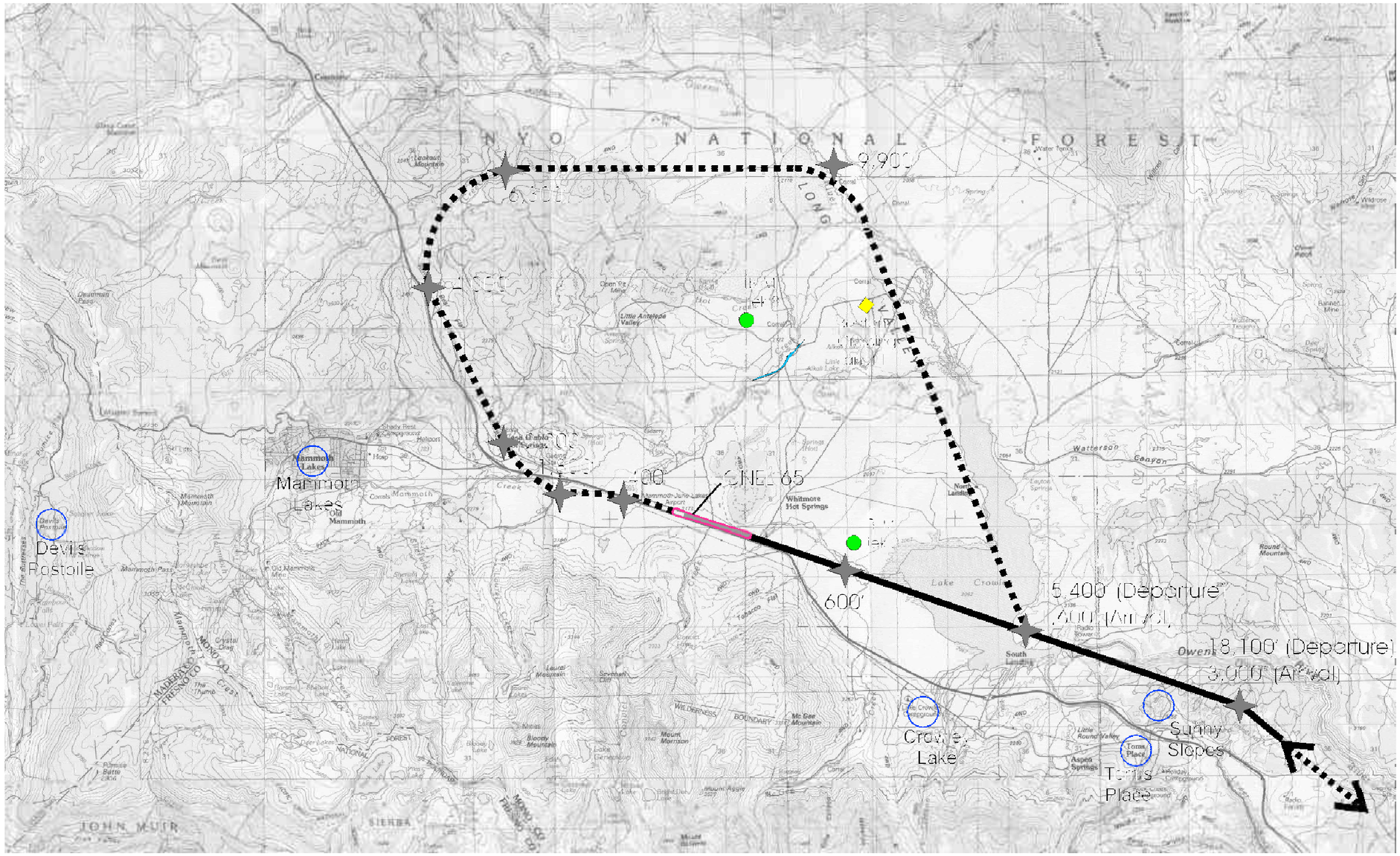
L.12 Safety

26. **Summary of Comment:** The comment states that the EA does not address bird strikes. The flight path is considered a heavily used migratory path for large flocks of a variety of birds including white pelicans, ducks, grebes, and smaller numbers of turkey vultures, bald eagles, and other raptors. The Mono County/Benton Crossing landfill to the northeast of the project attracts large numbers of ravens and gulls into the general area, which should be considered.

    Commenter: S-D

    Response: A review of FAA records indicate that there are no reported birdstrikes for aircraft arriving to or departing from Mammoth Yosemite Airport indicating that there is not a significant birdstrike problem in the vicinity of the Airport.

    Exhibit L-3 and **L-4** show the proposed arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the Mono County Landfill. Aircraft altitudes in the vicinity of this portion of the landfill are also depicted on these exhibits. Copies of these exhibits are included in Section 5.1 of the EA. The landfill is located approximately 6 miles northeast of the Airport. FAA Order 5050.4A, *Airport Environmental Handbook* required that the location of landfills be no closer than 5,000 feet of any runway end used only by piston powered aircraft and 10,000 feet of any runway end used or planned to be used by turbojet aircraft.



Legend

- Arrival Track
- Departure Track
- Runway
- Way Point (All height are above ground level.)
- BLM lek
- Wild Scenic River Eligible
- 2022 CNEL 65 Noise Exposure Level with Proposed Action
- Landfill

Source: AmericanAirlinesFlightTrack, Brown-Buntin Associates,Inc. Noise Contours, BureauofLandManagement leks & WildandScenicRiver,LandfillTownofMammothLakes.
Prepared by: Ricondo &Associates, Inc.

Exhibit L-3

north

Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 27

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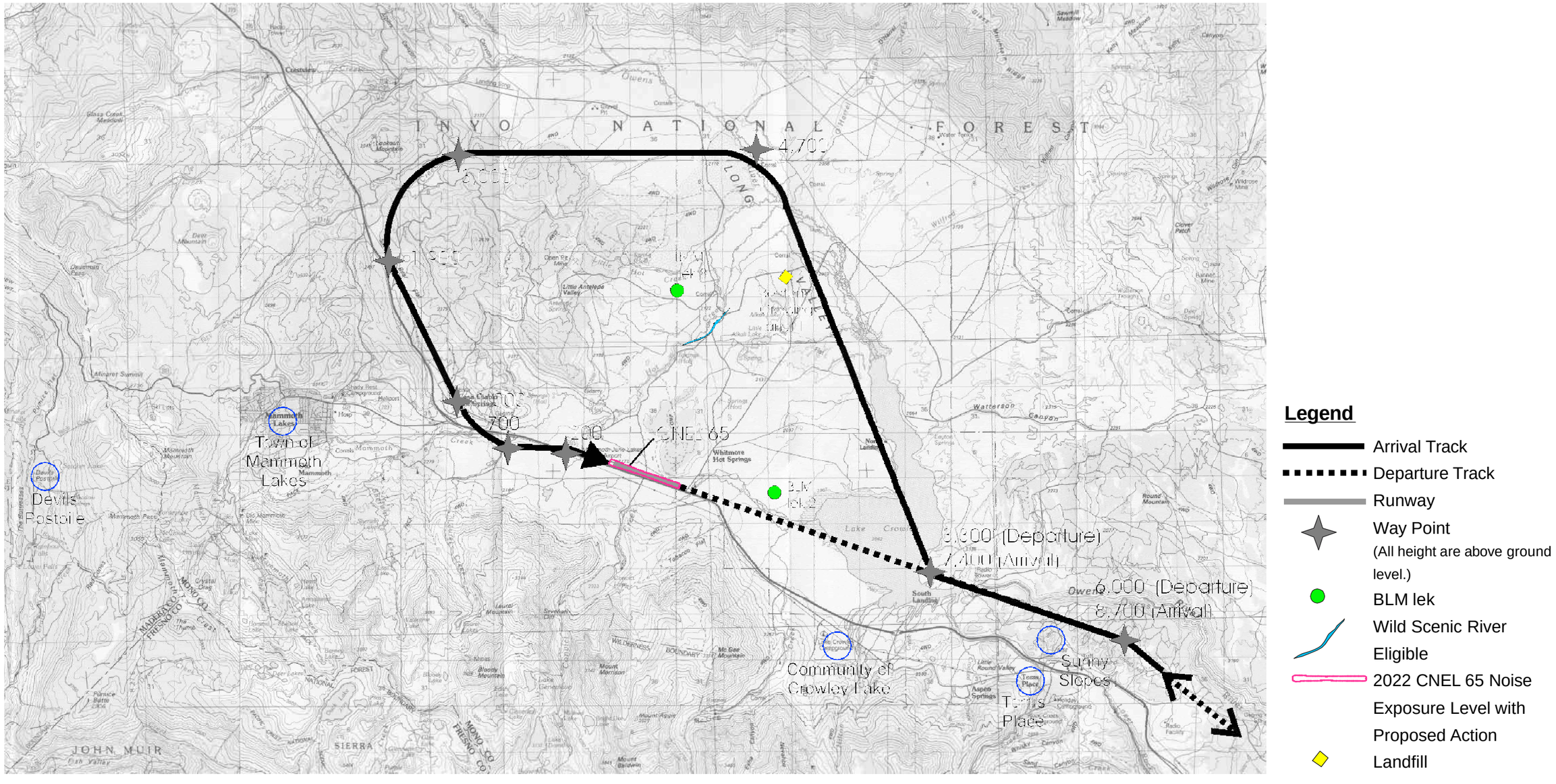

Source: AmericanAirlinesFlightTrack, Brown-Buntin Associates,Inc. Noise Contours, BureauofLandManagement leks & WildandScenicRiver,LandfillTownofMammothLakes.
Prepared by: Ricondo &Associates, Inc.

Exhibit L-4

north

Scale 1" = 12,000'

Proposed Air Carrier Flight Tracks - Runway 9

P:\Mmh\WP1.Draft\Exhibits\current_tracks.cdr

Bald eagles are known to winter in the project area. There have been no incidents of any bird strikes as mentioned above in the last eight years. Bald eagle use in the project area is primarily north of the project area, along Hot Creek, the Alkali Lakes, and Crowley Reservoir. Based on the low number of eagles in the project area, the primary location of bald eagle use outside the flight path, and the relatively low demand level forecast for the Airport, the potential for an incidental take of bald eagles is extremely remote. Based on a conversation with George Walker, biologist with the USFWS Barstow field office, the USFS would make a determination on the potential for effect from the proposed project and the USFWS would concur or not concur with their finding.

27. **Summary of Comment:** Implementation of the proposed action would result in unsafe conditions at the Airport given the airspace obstructions, crosswinds, weather, mix of general aviation and air carrier operations, and uncontrolled airspace.

    Commenter: L-H, I-E, I-J, I-K, I-L, I-N, I-O, I-S, P-M, P-Q, P-W, P-Y, P-VV

    Response: Mammoth Yosemite Airport currently is certificated for air carrier charter operations by the FAA under 14 CFR Part 139. The proposed action would enable the Airport to be certified for scheduled air carrier operations under 14 CFR Part 139. An 14 CFR Part 139 certification is a determination from the FAA that the Town of Mammoth Lakes operates the Airport in a safe manner.

    There is not an Airport Traffic Control Tower (ATCT) nor does the level of traffic allow the Airport to be a candidate for a federally funded one. FAA Order 7031.2C *Airway Planning Standard Number One – Terminal Air Navigational Facilities and Air Traffic Control Services* provides the criteria for identifying sites for the establishment of an ATCT. The Phase I criteria are a ratio sum derived from annual operations that are input into a FAA formula. The formula applicable to Mammoth Yosemite Airport is as follows:

    Air Carrier-Commuter/38,000 + Itinerant GA/160,000

    If the sum of this formula greater than or equal to 1, then the site would become a candidate for an ATCT. The traffic that is forecasted for the year 2002 as presented in Table IV-11 would result in a sum of .09 while forecasted traffic for year 2022 as presented in Table IV-11 would result in a sum of .39. Neither of these sums would allow the Airport to be a candidate. While the Airport does not meet the requirements for a federally funded ATCT should aircraft traffic demand dictate, the Town of Mammoth Lakes would consider the construction of an ATCT in the future. This ATCT would probably not be a FAA-manned tower but rather manned by FAA certified air traffic control specialists employed by private companies. The Airport has appropriate sites available for an ATCT if required in the future.

    Procedures for the operation of aircraft at non-towered airports are described in FAA Advisory Circular (AC) 90-42F, *Traffic Advisory Practices at Airports Without Operating Control Towers,* and AC 90-66A *Operations at Airports Without Operating Control Towers.* AC 90-42F states that "the key to communicating at an airport without an operating control tower is the selection of the correct common frequency". This common frequency is called a Common Traffic Advisory Frequency (CTAF). The Mammoth Yosemite Airport CTAF is 122.8. Personnel employed by the local Fixed Based Operator (FBO - Hot Creek Aviation),

monitor this frequency. This type of operation is called a UNICOM and provides airport information.

AC 90-66A states that "The FAA believes that observance of standard traffic patterns and CTAF procedures as detailed in AC 90-42F will improve the safety and efficiency of aeronautical operations at airports without operating control towers." The traffic patterns at Mammoth Yosemite Airport are published in the Airport Facility Directory and the Airport has a CTAF. The Airport is operated in accordance with all applicable FAA recommendations for operations at non-towered airports.

The Airport is equipped with an Automated Weather Observing System (AWOS). This system consists of various sensors, a processor, a computer-generated voice subsystem, and a transmitter to broadcast local, minute-by-minute weather data directly to the pilot. This weather data consists of altimeter setting, wind data, temperature, dew point, density altitude, visibility, and cloud/ceiling data. The information is transmitted over VHF radio frequency 118.05. The AWOS transmissions from Mammoth Lakes are receivable to a maximum of 10 nautical miles (NM) from the AWOS site and at a maximum altitude of 12,000 feet above ground level (AGL). This weather reporting system would allow inbound and outbound aircraft to receive weather information in a timely manner so as to safely plan for their landing or takeoff at the Airport or possible diversion to an alternate airport.

The existing terrain around the airport has been assessed for hazards to air navigation. While it is acknowledged that some terrain features, such as Doe Ridge penetrate FAR Part 77 imaginary surfaces, aeronautical studies have determined these obstructions are *not* a hazard to air navigation. The Global Positioning System (GPS) Standard Instrument Approach Procedure (SIAP) to Runway 27 has FAA-certified descent and visibility requirements designed to avoid surrounding terrain.

All aircraft, including but not limited to some of the large corporate jets and non-scheduled air carrier aircraft that have operated at the Airport in the past, generate wake turbulence. UNICOM would warn inbound aircraft to the presence of large aircraft such as a B-757 operating in the vicinity of the Airport. Procedures for wake turbulence avoidance can be found in FAA AC 90-23E, *Aircraft Wake Turbulence* and these procedures are part of every pilot's training. These procedures would enable the safe operations of both general aviation aircraft and air carrier aircraft.

The variable wind conditions at the Airport are noted in the Airport/Facility Directory published by the U.S. Department of Commerce and this document is available to pilots.

28. Summary of Comment: Comments were received regarding potential alternative airports that could be utilized if aircraft were required to divert as a result of winds or weather at Mammoth Yosemite Airport. .

Commenter: I-E, I-K, I-L

Response: The selection of an alternate airport is a joint decision between the pilot in command and the airline aircraft dispatcher made on a individual flight basis. While Reno or Bishop could be used as possible alternates, the use of either of these would have to be evaluated on a case by case basis. Consideration would be given, but not limited, to weather

conditions at the alternate airport, passenger service capability, airfield and equipment compatibility, remaining fuel, and the airline's operational needs. The range of turbojet aircraft is significantly greater than the turboprops and private piston powered aircraft that are currently or have previously operated at the Airport. The greater range capability of turbojet equipment would makes locations such as San Francisco, Sacramento, Los Angeles or Las Vegas viable potential alternates.

Analysis of AWOS weather data shows that the Airport is below air carrier minimums approximately 2.9% annually during daytime hours when air carrier operations would typically occur. This time period ranges from approximately 5% during the winter ski season to less than 1% during the summer season. Diversion could occur during these periods depending on the duration of the weather event. Average duration of weather phenomena of this type ranges from 2.5 hours in the winter to 1.3 hour in the summer.

AWOS data was also compiled for wind conditions at the Airport. AWOS data shows crosswinds of greater than 20 knots could occur approximately 1.2% of the time. The maximum crosswind limitation of the Boeing 757 is 30 knots. Based on the data and the capability of the aircraft, flight diversions due to high crosswind conditions would not be significant. Review of the AWOS data also indicates that crosswinds are most likely to occur during the summer evening hours. Air carrier operations would typically schedule flights to avoid these time periods.

Wind and weather information has been provided to American Airlines to assist in their flight scheduling operations.

29. **Summary of Comment:** There is not a sufficient stopway provided at the east end of the runway to accommodate air carrier aircraft.

    Commenter: P-DD

    Response: Although useful, stopways are not required for air carrier operations. A stopway, a paved area beyond the end of a runway, can be designated by the airport owner for use in decelerating aircraft during an aborted takeoff. However, their limited use and high construction costs, when compared with a full strength runway makes their construction less cost effective. The stopway provided at the west end of the runway was part of original airport prior to the shifting of the facility and runway to the east. The proposed runway length of 8,200 feet was determined to be adequate to accommodate B-757 aircraft as presented in Section 2.3 of the EA.

L.13 Cumulative Impacts

30. **Summary of Comment:** The name of the Morgan Industrial Park has been changed to reflect the new name of that proposed project, Sierra Business Park.

    Commenter: S-B

Response: References to Morgan Industrial Park have been changed to reflect the new name of that proposed project, Sierra Business Park.

31. Summary of Comment: Cumulative impacts of all projects in the region should be included in the evaluation of biotic communities impacts.

Commenter: S-D, L-F, P-C

Response: The comment pertains to the potential cumulative impacts of the project related to wildlife associated with the project. A commentor requests that the EA include analysis of the project's cumulative impacts associated with the Sherwin/Snowcreek Ski Area (Sherwin Bowl Ski Area), Intrawest resort development, Eastern Sierra College Center, Lakeridge Ranch Estates, Rimrock Ranch, INAJA Land Company Use permit, Sierra Business Park and the proposed residential development (Pacific Residential Development) in Round Valley. Section 5.23 of the EA contains a discussion of the projects potential cumulative impacts, specifically a discussion of the potential cumulative impacts associated with the two projects closest to the airport (Mammoth Lakes Airport Commercial Development Plan aka Hot Creek Resort, and Morgan Business Park aka. Sierra Business Park). Exhibit V-23 shows the relationship of the project site to the other projects listed in the comments.

Sherwin/Snowcreek Ski Area. This project is currently on hiatus and has an uncertain future. The 1997 Record of Decision for the project determined that the project would result in an unavoidable loss of habitat, but concluded that the impacts were reduced to an acceptable level by mitigation measures including: restrictions on construction timing; vegetative screening; restrictions on fencing; offsite habitat improvements; and monitoring.

Intrawest Resort developments. These projects are located within the urbanized area of Mammoth Lakes are not anticipated to significantly impact the deer herd.

Eastern Sierra College Center. This project is within the urbanized area of Mammoth Lakes and is not anticipated to significant impact the deer herd.

Lakeridge Ranch Estates. This is a 119-lot subdivision on 80 acres in Crowley Lake. The EIR for the project concluded that the project would not impact existing deer herd habitat and therefore would not contribute to cumulative impacts.

Rimrock Ranch. This 180 acre project includes the sale of 100 acres of land to the Department of Fish and Game for habitat purposes with development on the remaining 80 acres. The 100 acres provides for the protection of the most important habitat on the project site.

INAJA Land Company. The impacts of this project on the deer herd are unknown at this time.

Sierra Business Park. This is a light industrial development located on 36 acres which were previously used as a borrow site for aggregate materials. The EIR for this project concluded that the project would not impact existing deer herd habitat and would therefore not contribute to cumulative impacts.

Pacific Residential Development. The impacts of this project on the deer herd are unknown at this time.

Additionally, the deer herd may be cumulatively impacted by the conversion of U.S. 395 to a four-lane facility in the general area and due to recent fires on the herd winter range.

The analysis contained within the EA in conjunction with the Biological Study, and responses to comments identify that the project would have a less than significant impact on biological resources and would provide adequate mitigation for the loss of mule deer and sage grouse habitat associated with the project. As a result of the proposed mitigation, the project would not cumulatively add to any negative impacts on mule deer or sage grouse habitat associated with potential habitat losses for the other projects within the area.

With regard to disruption of the mule deer migration routes, the projects which are located in the immediate vicinity of the project site, Mammoth Lakes Airport Commercial Development Plan and Sierra Business Park affect the same general migration area as the proposed project. The development of the Airport Commercial Development Plan does not increase the length of disturbance, which would be created by the project and was evaluated in the EA and therefore would not result in a cumulative impact. The Sierra Business Park site affects the south side of U.S. 395 and is located near the vicinity of the western end of the projects runway and fencing improvements. The type and scope of the likely development within the Sierra Business Park is unlikely to result in substantial additional unbroken fencing and would not contribute to the disruption caused by the Airport expansion project which has been determined by the EA to be less than significant. As a result it will not result in a potentially significant cumulative impact.

32. Summary of Comment: The Draft EA frequently refers to the 1997 EIR prepared for the approved hangar, condominium, and retail commercial project (Hot Creek Resort), at the Airport but consistently fails to consider the cumulative impact of that project and the proposed project.

Commenter: L-F, P-C

Response: The Airport Commercial Development Plan, which included the Hot Creek Aviation development, Hot Creek Resort, as well as the Airport improvements associated with the proposed action but with a longer runway extension, was environmentally reviewed in 1997 pursuant to the California Environmental Quality Act Guidelines Section 15162. This Environmental Impact Report (EIR) was certified as adequate in 1997. Cumulative impacts of the proposed Airport improvements, the Hot Creek Aviation development, and other projects are evaluated in Section 5.23 of this EA. Additional cumulative impacts analyses of biotic communities and traffic have also been included in the EA.

Comments were received regarding signage associated with the Hot Creek Aviation development. The proposed signs would be located on Airport property along U.S. 395. The signs are not part of the proposed action and were approved as part of the previous EIR prepared by the Town of Mammoth Lakes.

L.14 Emergency Services

33. Summary of Comment: The Town of Mammoth Lakes needs to develop a plan addressing the emergency response requirements for the Airport and sources of funding.

Commenter: L-A, I-J, I-K, P-M, P-Z

Response: The Town of Mammoth Lakes would develop an emergency response plan to address both the proposed actions and commercial developments currently taking place on Airport property. This plan would meet not only the aircraft rescue and firefighting (ARFF) needs of the Airport, but would also address the fire protection needs of the hotel-condominium complex, aircraft hangars and retail areas of the commercial development. A facility to house fire apparatus appropriate for these services would be identified. The Town of Mammoth Lakes would develop in conjunction with area emergency service providers would develop a unified emergency response/disaster plan. The Town currently provides for CFR training for Airport employees. A lease is being drafted to make available a LVFPD fire truck at the Airport to help fight structural fires. The capital improvement plan for the Airport also includes the acquisition of an additional ARFF vehicle to meet FAA Part 139 certification requirements for air carrier operations. The Town would fund the emergency response equipment and training.

34. Summary of Comment: The Town of Mammoth Lakes needs to develop a plan addressing the security requirements for the Airport and sources of funding.

Commenter: L-A, I-J, I-K, P-M, P-Z

Response: The Code of Federal Regulations, Title 14, Part 107 "Airport Security," Section 107.3 requires the operator of an airport serving scheduled passenger operations of carriers required to have a security program, to produce a written security program to be approved by the Director of Civil Aviation Security, which provides for "the safety of persons and property traveling in air transportation and intrastate air transportation against acts of criminal violence and aircraft piracy." The security program must include a detailed description of each air operations area, any areas on or adjacent to the airport affecting security of any air operations area, and each exclusive area and its pertinent establishing agreement. The security program must also delineate security procedures, facilities and equipment used by both the airport operator and by each air carrier in its exclusive area, and the notification procedures by which air carriers would alert the airport operator to any inadequacies. Any alternate emergency or unusual condition-procedures the airport operator intends to use must be outlined in the security program and law enforcement requirements and training must also be reviewed. Finally, the program must clearly describe a records maintenance system for security purposes.

All questions of security, personnel, training, screening, access control, security jurisdiction in specific airport areas, and unusual situations requiring security would be covered under such a security program. Section 107.5 details the approval of such a security program and the timeframe necessary to obtain such approval. This section requires the submittal of the proposed program to the Director of Civil Aviation Security at least 90 days before any

scheduled passenger operations requiring the security program are expected to begin. The Airport would comply with the requirements of FAR Part 107.

L.15 Sprawl

35. **Summary of Comment:** The proposed Airport expansion project would contribute to or encourage "urban sprawl".

    Commenter: L-G, I-J, I-K, I-N, I-T, P-J, P-O, P-AA

    Response: The New Illustrated Book of Development Definitions (Moskowitz and Lindbloom, 1993) defines sprawl as:

    > Uncontrolled growth, usually of a low-density nature in previously rural areas and some distance from existing development and infrastructure.

    The Airport improvements are additions, to an existing facility already served by public infrastructure. They concentrate improvements in a single location. Elimination of Alternative 10 from further consideration also avoids the possibility of encouraging urban sprawl.

    Prevention of sprawl is a matter of local land use control. Currently, the Town of Mammoth Lakes has adopted an urban limits policy, designed to limit the expansion of commercial, industrial, and residential development to the immediate vicinity of the existing community. The private uses proposed at the Airport are consistent with the zoning that existed prior to the annexation of the Airport by the Town and constitute a concentrated high-density development.

    All lands surrounding the Airport are located within the local jurisdictional control of Mono County. The vast majority of the land in the vicinity of the Airport is controlled by three public agencies; The Bureau of Land Management, the Forest Service, and the City of Los Angeles. In order for urban sprawl to occur, development would have to take place on lands now owned or managed by one of these agencies. This would require changes to the current policies of the subject agencies, which is not considered likely, because the two agencies and the Town have been working to decrease existing fragmentation of public lands.

    The size of the improvement project and the air traffic projections are based upon projected demand from the existing private land base. Acquisition and development of public lands is not required by or facilitated by the proposed action.

L.16 Aircraft Noise

36. **Summary of Comment:** The proposed Airport expansion project would result in increased noise exposure over (1) communities such as Sunny Slopes, Tom's Place, and Crowley Lake, (2) the SNARL facility, and (3) the leks northeast of the Airport. A single-event aircraft noise analysis is needed to consider peak noise at the SNARL facility.

Commenter: L-F, L-H, I-I, I-J, I-N, I-O, P-C, P-M, P-O, P-W, P-QQ, P-VV

Response: A comment was received requesting that a single-event aircraft noise analysis be performed for the SNARL facility. The aircraft noise analysis in this EA was conducted in accordance with the requirements of FAA Order 5050.4A, *Airport Environmental Handbook,* Chapter 5, paragraph 47(e)(1). Pursuant to FAA Order 5050.4A, the need to conduct supplemental noise analysis such as single-event and other types of noise analysis are determined on a case-by-case basis. It is also not anticipated that such analyses would change the conclusions of this EA. A noise grid analysis, presented in Section 5.1.2 of the EA, was conducted to confirm that potential noise-sensitive land uses in the vicinity of the Airport would not exceed the FAA's criteria for level of significance for aircraft noise exposure. At the SNARL facility, it was determined that, assuming the 2022 forecast demand level, aircraft noise exposure may reach approximately CNEL 41, well below the FAA's CNEL 65 criterion for significant impact.

Air carrier aircraft operations are anticipated to comprise a small percentage of the overall aircraft operations at the Airport. The air carrier aircraft operated by the major airlines that typically operate in similar high altitude airports include some of the quieter aircraft in the U.S. fleet. These aircraft include the B-757, newer B-737, and Bae-146 aircraft. Commuter aircraft and regional jets are also anticipated to enter the fleet mix at Mammoth Yosemite Airport. There are business jet and turboprop aircraft, such as the Gulfstream II and other older aircraft, that can currently operate and have been operating at Mammoth Yosemite Airport that are as loud or louder than these air carrier passenger aircraft.

As shown on Exhibits L-3 and L-4, the communities of Sunny Slopes, Crowley Lake, and Tom's Place are well outside the area of significant aircraft noise exposure, but some people in those communities have expressed concerns regarding the flight patterns for air carrier aircraft. Currently, some general aviation pilots follow flight paths near U.S. 395 when approaching the Airport from the south. Air carrier aircraft would utilize a straight-in approach and departure east of the Airport following the GPS procedure, and would remain over the unpopulated areas of Crowley Lake, northeast of these communities.

Two flight track exhibits, Exhibits V-11 and V-12**,** have been added in Section 5.1 of the EA showing the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the communities in the region. Also depicted are the portion of Hot Creek that is potentially eligible for the National Wild and Scenic Rivers System, the land fill site, Devils Postpile National Monument, and the Bureau of Land Management (BLM) lek sites of concern. Aircraft altitudes in the vicinity of these areas are also depicted on the exhibits.

Aircraft noise levels at the outlying areas would be well below the level of significance. General aviation aircraft would be the primary source of aircraft noise in the vicinity of the lek sites north and east of the Airport because the downwind and base legs of the general aviation approach patterns and earlier turns on departure. The flight patterns north of the Airport are depicted on Exhibit C-4 in Appendix C.

37. Summary of Comment: The Airport must ensure that engine runups will not occur in front of Doe Ridge because of the noise impacts on the SNARL facility from the sound reflecting off of Doe Ridge.

Commenter: L-F, P-C

Response: The design of the supporting systems on turbojet and turboprop aircraft do not require that these aircraft runup, as piston powered aircraft do, prior to commencing takeoff roll. Therefore, there are no anticipated noise impacts from turbojet or turboprop runups.

L.17 Green Church

38. Summary of Comment: Moving the Green Church building is not a viable option. The EA should reflect that a replacement building will need to be constructed at the main SNARL campus..

Commenter: L-F

Response: Section 5.3.3 of the EA indicated that the Green Church would either be relocated to a different site or another comparable facility would be constructed. As indicated in the comment from the current owner of the Green Church, SNARL, it is unlikely that the structure would be able to be moved. Therefore, the Town of Mammoth Lakes would be required to fund the replacement building. It is noted that the preferred site for the replacement building is at the main SNARL campus. In providing the replacement facility, the Town would comply with the provisions of the Uniform Relocation Assistance and Real Acquisition Policies Act of 1970.

L.18 Financial

39. Summary of Comment: The project does not pass a benefit-cost test for the use of public funds. The beneficiary of the project is the ski resort operator.

Commenter: L-F, L-H, I-E, I-S, P-I

Response: On December 15, 1999, the FAA issued the *Federal Aviation Administration Policy and Final Guidance Regarding Benefit Cost Analysis (BCA) on Airport Capacity Projects for FAA Decisions on Airport Improvement Program (AIP) Discretionary Grant and Letters of Intent*. This policy transfers the official responsibility for conducting benefit-cost analyses from the FAA to airport sponsors. The FAA BCA Policy specifies that benefit-cost analyses should be performed in accordance with the FAA *Airport Benefit-Cost Analysis Guidance*, dated December 15, 1999 (BCA Guidance). The FAA BCA Guidance methods for demonstrating benefits to the traveling public (primarily the reduced travel time savings for visitors to the region) were compared with the project costs. The Town of Mammoth Lakes prepared a report, *Benefit Cost Analysis (BCA) for Mammoth Lakes Airport Expansion Project* (March 2000). The BCA report followed the guidelines established by the FAA for conducting such analyses. Sensitivity tests were conducted evaluating reduced forecast demand levels as presented in Appendix F of this EA, reduced project benefits, increased project costs, and changes in project implementation schedule. The report was submitted to the FAA and the proposed improvements at the Airport were determined by the FAA to be economically justified.

The Town has also prepared a business plan indicating the sources and uses of funds for the proposed project using he low forecast assumptions presented in the EA. The business plan, which was submitted to the FAA as part of the request for federal funding, demonstrates that the financial resources are available to the Town to finance the proposed project.

Based on the responses from local residents who commented on this EA, there is local support for the Airport expansion project to improve access to the community not only for vacationers but also for the local area residents and their friends and family.

L.19 Fueling

40. Summary of Comment: Aircraft fueling facilities at the Airport are inadequate to accommodate refueling of air carrier aircraft.

Commenter: L-H, I-J, P-M, P-W, P-DD

Response: Unlike automobiles, aircraft not do completely fill their fuel tanks before they depart to their destinations. Fuel adds weight to the aircraft and this added weight itself causes increased fuel consumption. Airlines seek to minimize the carriage of non-required fuel. The components of a typical fuel requirements for an air carrier aircraft is as follows:

1. Fuel Burn: Enough fuel to fly between the destination and arrival airport.
2. Alternate Fuel: Enough fuel to fly to an alternate airport should an alternate airport is required.
3. Reserve Fuel: Enough fuel to fly for 45 minutes at normal cruising fuel consumption.

Additionally, airlines at their option, may put fuel on for possible contingencies such as changes in forecast winds aloft and possible air traffic control delays.

A normal operating flight terminating at Mammoth Yosemite Airport would only require the fuel to fly from Mammoth Lakes and Chicago and/or Dallas. The aircraft, because it successfully landed at Mammoth Yosemite Airport, would not have needed to utilize it's alternate or reserve fuels and these quantities would still be on board the aircraft. The only fuel that should normally be uplifted at Mammoth Yosemite Airport would be the fuel burn required for the aircraft to proceed to its next destination.

It is anticipated that fuel burns to Chicago and Dallas would range from approximately 3,700 gallons to 4,500 gallons depending on the time of year. Winter season would require less fuel burn due to the presence of high velocity west to east winds aloft while the summer season would require a increased fuel burn due to the absence of these same winds aloft.

The daily fuel uplift requirements for the year 2002 are estimated to range from 7,400 gallons to 9,000 gallons, and 14,800 gallons to 18,000 gallons are estimated by 2007. The current fueling plan calls for a capacity of 20,000 to 24,000 gallons stored in a combination of above ground storage tanks and trucks and would be able to accommodate the projected demand.

The number of fuel trucks required to supply fuel to the Airport would depend on the size of the delivery vehicle. Currently the fuel supplier to the Airport utilizes an 8,000-gallon transport. The largest transport available from this supplier is 14,000 gallons. Depending on the size of the vehicle, 1 to 2 daily round trips would be anticipated.

L.20 Biotic Communities

Response to comments regarding potential impact to wildlife were developed through phone coordination with California Department of Fish Game (DFG) biologist Denyse Racine, and Bureau of Land Management (BLM) biologist Steve Nelson on November 28, 2000 and through a meeting held at the BLM office in Bishop on November 29, 2000. Attendants at the meeting included DFG biologist Denyse Racine, BLM biologist Steve Nelson, U. S. Forest Service (USFS) biologist Richard Perloff, Airport Manager William Manning, City of Mammoth Senior Planner Bill Tayler, Mammoth Ski Area Planner Tom Heller, and Jones & Stokes biologist Steven Avery.

41. Summary of Comment: The proposed flight paths are of concern. The area east of the Airport and north U.S. 395 includes critical winter range, breeding and summer habitat for sage grouse. Grouse almost invariably leave when small planes fly over leks in Lang Valley (Gibson pers. comm.). Aircraft may disturb flocks of sage grouse that use the area in winter and early spring. Radio-telemetry data shows that this area is a key area to sage grouse during the winter and spring when areas further north and west are under deep snow. Repeated disturbance from aircraft could significantly increase predation rates and contribute to the decline in the population. The proposed flight path could disturb birds east of the project site that use irrigated pastures and adjacent sagebrush in summer. The area north and west of the airport includes important nesting and leking areas (Lek #8). Lek # 8 is one of two major lek sites actively used by birds in the last 2-3 years. These birds are vulnerable to disturbance from aircraft noise.

Commenter: F-B, S-D

Response: There will be no change in flight path from existing conditions at the Airport. Lek number 2 is located approximately 2.75 miles southeast of Airport and lek number 8 is located approximately 3.7 miles northeast of the Airport. BLM and Dr. Gibson's data show that the area east of the runway including the dry meadow and the area north of the runway (east of Doe Ridge) are important winter and spring areas for grouse (Racine and Russi pers. comm.). As stated in the Biological Study (Appendix G), Jones & Stokes survey in the October 1994 confirmed that large numbers of grouse were using the area north of the Airport (and south of the Hot Creek Hatchery). There would be no circling of air carrier aircraft as part of the flight path over lek # 8. The proposed project would include flights of larger aircraft that would predominantly use the Airport between the months of December through April (Manning pers. comm.) although flights of larger air carrier aircraft would not be precluded during other times of the year. Discussions with American Airlines have indicated that larger turbojet arrivals are expected to be between 11:00 a.m. and 2:00 p.m. (Manning pers. comm.).

Exhibits L-3 and L-4 (and Exhibits V-11 and V-12 in Section 5) show the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the communities in the region. The exhibits also depicted the portion of Hot Creek that is

potentially eligible for the National Wild and Scenic Rivers System, the landfill site, Devils Postpile National Monument, and the Bureau of Land Management (BLM) lek sites of concern. Aircraft altitudes in the vicinity of these areas are also depicted on the exhibits. Aircraft noise levels at the outlying areas would be well below the level of significance. General aviation aircraft would continue to be the primary source of aircraft noise in the vicinity of the lek sites north and east of the Airport because of their closer proximity to these sites during the downwind and base leg portions of the general aviation approach patterns and earlier turns on departure. The flight patterns north of the Airport are depicted on Exhibit C-4 in Appendix C. Arriving aircraft would be approximately 600 feet above ground level at their closest point (approximately 0.5 mile) to lek number 2.

Based on the timing of flights, potential noise levels of the B-757 and B737, and distance of the flight path from lek number 2, noise and visual impacts by lekking grouse are not expected to be significant.

42. Summary of Comment: Sage grouse often fly rather low especially when moving short distances. Cattle fences have been a problem around Lek #2 because they intercept birds moving between feeding/roosting and lekking sites. Data shows that sage grouse will abandon leks found in close proximity to overhead transmission lines and power poles, which provide perches for raptors who prey on adult grouse, grouse eggs, and chicks.

Commenter: S-D, L-F , L-H, I-J

Response: As indicated in Section 5.9.1 of the EA, information provided by the BLM indicates that barbed wire fences and power lines have a negative effect on sage grouse. Thirty-seven sage grouse mortalities were recorded along a cattle fence located north of lek # 2 between April 1997 and February 1999 (Russi pers. comm.). Sage grouse abandoned a known lek site after construction of a five-strand wire fence in the Bodie hill adjacent to a lek site in 1995. Grouse returned to the historic lek site in fewer numbers after relocation of the fence and continued to use other areas as strutting grounds (Russi pers. comm.).

As indicated in Section 5.9.3 of the EA, based on the information provided by the BLM documenting the hazard of rangeland fences and the concern raised by BLM and DFG about potential grouse mortality resulting from fencing of the Airport runway, the fence around the runway would be constructed of chain link which should be more visible to grouse than single strand barbed wire rangeland fences. There would be no barbed wire located at the top of the fence. Fence posts will have rounded or pointed caps to discourage use by raptors and ravens as perch sites. The portion of the fence located along the north side of the runway east and west of existing buildings would be constructed using methods developed in consultation with the USFS and DFG so that the fence would be more visible to grouse. The portion of the fence located along the south side of the runway (adjacent to Hwy 395) would not include any additional fencing material to make it more visible to grouse.

43. Summary of Comment: The EA refers the deer herd as the Round Valley herd. The Casa Diable herd is also found in the project site.

Commenter: S-D

Response: Section 5.9.1, Environmental Setting, of the EA has been changed to reflect the comment.

44. Summary of Comment: No data is presented in the Biological Study in Appendix G to support the statement that vehicle traffic would not significantly impact the Round Valley or Casa Diablo herds.

Commenter: S-D, L-H, I-J

Response: As indicated in Section 5.9.1 of the EA, deer mortality studies indicate that 11% of the radio-collared deer were killed due to vehicle collisions on U.S. 395 and Hwy 205. Within the study area 16 deer mortalities from vehicle collisions have been recorded by Caltrans during a ten-year period, from May 1990 to November 2000 (no data was available for 1997). During the same time period as above 218 deer mortalities were recorded from Post Mile 0.0 to 40.0.

As indicated in Section 5.9.3 of the EA, to reduce the potential for deer mortality due to the construction of the deer proof fence around the runway, a deer biologist would assist with the placement of the east and west portions of the chain link fence so that the fence is located in areas that minimize the potential for funneling deer into areas that have the potential to increase deer vehicle collisions.

45. Summary of Comment: Mitigation measures offered for the removal of mule deer habitat are not adequate by definition under NEPA. First the additional sites to mitigate for six acres have not been identified. Furthermore, of the sites that have been identified, none have been evaluated for the likelihood that they are suitable for rehabilitation. Commitments must be made by landowners that the rehabilitation areas will be fenced to prevent grazing by livestock during the rehabilitation process.

Commenter: S-B, S-D,

Response: Based on the meeting held at the BLM office, the consensus was that the quarry site would be the preferred restoration site for mule deer and sage grouse to compensate for the removal of high quality big sagebrush habitat at the project site. This site has already been approved for restoration activity by the USFS and the site lacks the potential controversy associated cattle exclusion or road closures at other sites.

As stated in Section 5.9.3, the USFS gravel pit located north of the Airport is the primary area being considered for restoration activity for Alternative 1, no action, and Alternative 2, the proposed action. This site currently has little vegetation and restoration activities including reseeding and planting of bitterbrush and big sagebrush would provide additional forage opportunities for mule deer and sage grouse. A temporary fence would be installed around the restoration site to allow for the establishment of vegetation. The temporary fence that would exclude cattle would be designed in coordination with the USFS and DFG to minimize the potential for sage grouse mortality.

L.21 Endangered and Threatened Species

46. Summary of Comment: The EA does not mention the nearby presence of Owns tui chub. Unanticipated changes in groundwater and spills of materials could have an impact on this species habitat at Hot Creek Headsprings.

Commenter: S-D

Response: As discussed in the Bishop meeting the ground water flow does not travel in the direction of the habitat occupied by the Tui chub. Please refer to Section 5.6 of the EA for additional hydrology information.

L.22 Wild and Scenic Rivers

47. Summary of Comment: A 1.5 miles segment of Hot Creek on Bureau of Land Management lands is eligible to be considered for the National Wild and Scenic Rivers System as a Recreational Segment. Aircraft noise as it affects eligibility of the river for designation should be considered.

Commenter: F-B

Response: Exhibits L-3 and L-4 show the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the portion of Hot Creek that may be eligible for designation as a Wild and Scenic River. Hot Creek is not listed on the Nationwide Rivers Inventory. Aircraft altitudes in the vicinity of this portion of Hot Creek are also depicted on these exhibits. Aircraft noise levels at the segment of Hot Creek would be well below the level of significance. General aviation aircraft presently is and would be the primary source of aircraft noise in the vicinity of the segment of Hot Creek because the downwind and base legs of the general aviation approach patterns and earlier turns on departure. The flight patterns for the general aviation traffic north of the Airport are depicted on Exhibit C-4 in Appendix C. The addition of air carrier service would follow flight tracks different than those presently utilized by general aviation. These air carrier flight tracks would be approximately two to three miles north of the segment of Hot Creek that may be eligible to be considered for the National Wild and Scenic Rivers System and the proposed action would not introduce any visual, audible, or other sensory intrusions which are out of character with the river segment or alter its setting, as indicated in Section 5.15 of the EA.

L.23 Park Service Overflights

48. Summary of Comment: The proposed project has the likelihood of increasing flights over the Devils Postpile National Monument. This is an impact that needs to be identified and analyzed.

Commenter: F-C

Response: Exhibits L-3 and L-4 show the arrival and departure flight paths for air carrier operations from Runway 9 and 27 in relation to the Devils Postpile National Monument. The currently are no general aviation arrival or departure patterns over the Devils Postpile National Monument. The flight patterns for the general aviation traffic north of the Airport are depicted on Exhibit C-4 in Appendix C. As illustrated in Exhibits L-3 and L-4 the proposed air carrier arrival and departure flight paths would not fly over the Devils Postpile National Monument. The closest that air carrier aircraft would come to the Devils Postpile National Monument would be approximately 12 miles.

L.24 Miscellaneous

49. Summary of Comment: The developer has applied for a variance to the building code to erect the terminal building above the height allowed by code.

Commenter: I-K

Response: The Town of Mammoth Lakes has not completed the design of the terminal building and the height of the a structure has not been determined. The Town of Mammoth Lakes has not applied for a variance to the building code to erect the terminal building above the height allowed by code and is unaware of any need for increased height.

50. Summary of Comment: The plan does not address or show the size and scope of airline maintenance hangars.

Commenter: I-K

Response: There are no maintenance hangers planned for air carrier aircraft and such hangers are not required for air carrier service.

51. Summary of Comment: A bike trail from the Town of Mammoth Lakes to the Airport should be provided..

Commenter: I-M

Response: A bike trail may be a desirable amenity; however, the proposed action does not require a bike path between the main part of the Town of Mammoth Lakes and the Airport although the proposed action does not preclude the development of such a bike path at a future date.

52. Summary of Comment: Lack of sufficient passenger demand was the cause of the bankruptcy of Alpha Air, not the bankruptcy of TWA itself.

Commenter: L-H, I-K

Response: The cessation of TWA Express service being provided by Alpha Air was started by the Chapter 11 reorganization of Trans World Airlines that caused Alpha Air to attempt to reorganize under Chapter 11 as well. Alpha Air had served the Town of Mammoth Lakes for 13 years - the last 3 years as a TWA Express carrier. As part of the reorganization effort the aircraft fleet was to be upgraded to larger 30-passenger aircraft. Alpha Air was operating while in Chapter 11 bankruptcy proceedings but had to cease operations when the airline's aircraft leasing agency also went bankrupt and the fleet leased to Alpha Air was repossessed. The delay in finding another leasing agency and financing caused the airline's operating certificate to be unused for 30 days. FAA regulations require that the certificate be revoked if the airline has not flown in 30 days.

53. **Summary of Comment:** Additional airport employees would be needed with the addition of air carrier service. How would housing for these employees be accommodated?

    Commenter: I-J, I-K, P-W, P-RR

    Response: The Town would comply with the Town of Mammoth Lakes Ordinance 00-10 regarding providing affordable housing for moderate and lower income employees for any additional Airport employee hired as a result of the proposed action and resulting air service. If moderate and lower income Airport employees are hired by the Town, then the Town would acquire housing units that would be converted to affordable housing or construct new affordable housing units within the Town boundary.

Appendix M – Traffic Impact Analysis

MAMMOTH LAKES - YOSEMITE VALLEY AIRPORT TRAFFIC IMPACT ANALYSIS

November 28, 2000

Prepared for:

Mammoth Lakes Airport
Route 1 Box 209
Mammoth Lakes, California 93546

Prepared by:

LSA Associates, Inc.
One Park Plaza, Suite 500
Irvine, California 92614
(949) 553-0666

This traffic study has been prepared under the supervision of Leslie E. Card, P.E.

Signed

MAMMOTH LAKES - YOSEMITE VALLEY AIRPORT
TRAFFIC IMPACT STUDY
NOVEMBER, 2000

EXECUTIVE SUMMARY

This traffic study has been prepared to assess the airport specific short-range and long-range impacts, and to consider the cumulative impacts of two adjacent development projects: Hot Creek Resort and Sierra Business Park. The study examines conditions in 2000 and 2020 and considers growth in through traffic on US-395. Information for the Sierra Business Park is taken from the traffic study dated May, 2000, and November, 2000, prepared by Traffic Safety Engineers.

Several different development combinations are considered in order to isolate substantial impacts and to consider proportionate share responsibilities. An additional access to US-395 at the existing Benton Crossing intersection is considered with the Hot Creek Resort project only.

When the intersection of US-395 at Hot Creek Road drops below level of service (LOS) D, mitigation is recommended. In this case, a traffic signal is not considered acceptable by Caltrans due in part to the high vehicular speeds; therefore, either minor intersection channelization is recommended or alternative access locations on US-395.

The following tables illustrate the various land use and access alternatives and provide the LOS results.

YEAR 2000

	Route 395 (US-395) / Hot Creek Fish Hatchery Road[1]			
	Northbound		**Southbound**	
Scenario	**Delay [2]**	**LOS**	**Delay**	**LOS**
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 1999/2000 Conditions [3]	13.3 sec.	B	9.6 sec.	A
Existing + Airport	15.2 sec.	C	10.7 sec.	B
Existing + Airport + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Industrial Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport + Hot Creek + Industrial Park	**36.8 sec.**	E	21.9 sec.	C
- with Mitigation	19.6 sec.	C	--	--
WITH CONNECTION TO BENTON CROSSING [4]				
Existing + Airport + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport + Hot Creek + Industrial Park	23.4 sec.	C	17.6 sec.	C

Note: See Table A for footnotes.

YEAR 2020

Scenario	Route 395 (US-395) / Hot Creek Fish Hatchery Road[1] Northbound Delay [2]	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Year 2020 Baseline [3]	14.8 sec.	B	9.9 sec.	A
2020 + Airport	17.4 sec.	C	11.0 sec.	B
2020 + Airport + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Industrial Park	13.8 sec.	B	14.4 sec.	B
2020 + Airport + Hot Creek + Industrial Park	**58.7 sec.**	**F**	24.7 sec.	C
- with Mitigation	24.0 sec.	C	--	--
WITH CONNECTION TO BENTON CROSSING [4]				
2020 + Airport + Hot Creek	19.2 sec.	C	12.3 sec.	B
2020 + Airport + Hot Creek + Industrial Park	31.7 sec.	D	19.8 sec.	C

Note: See Table C for footnotes.

In summary, mitigation in the short range is necessary only in the case of all three projects without a Benton Crossing access. Similarly, mitigation in the long range is necessary when all three projects are developed without access to Benton Crossing.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes or construction of a connector road to Benton Crossing from the airport would be required to reduce the impacts. The costs of either improvement should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation.

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short range and long range for the Airport and Hot Creek Resort.

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INTRODUCTION

Project Description and Location

The proposed project consists of the expansion of the existing Mammoth Lakes-Yosemite Valley Airport. Figure 1 illustrates the location of the project.

The Mammoth Lakes-Yosemite Valley Airport Expansion project would occur in conjunction with the tourist/skier developments planned in the Town of Mammoth Lakes. These developments partially rely on the expansion of the existing airport to add to the transportation infrastructure and bring additional business to these resort developments. The airport is currently located on the east side of US-395, with primary access at Hot Creek Fish Hatchery Road. Based on discussions with airport staff, the airport expansion would allow for 702 passengers on a daily basis during the peak winter season.

In addition, two other development projects surrounding the existing Mammoth Lakes-Yosemite Valley Airport are proposed: the Hot Creek Aviation Mixed-Use Development and the Sierra Business Park Specific Plan. Figure 1 illustrates the locations of these projects.

The Hot Creek Aviation Mixed-Use Development is an approved mixed retail/residential use development. This project would occur only with the expansion of the existing airport. Planned land uses include: 24 pump gasoline service station, 188 units of townhouses, a 62 room hotel, a recreation vehicle park with 100 sites, and sit-down restaurants totaling 100 seats. This project would be located north of and adjacent to the airport. In addition to the land uses planned, this project is considering the construction of a roadway connection from the airport area, south to Benton Crossing (which also has access to US-395).

The proposed Sierra Business Park Specific Plan is planned to be developed as a light industrial use park; the existing concrete batch plant would remain as part of the development. The entire Specific Plan area will consist of 36 acres. This project is located directly across from the airport, on the west side of US-395. This project will upgrade its current access on US-395 to Caltrans' standards. Traffic data used for the Sierra Business Park Specific Plan are based on the traffic analysis and the addendum traffic analysis for this project prepared by Traffic Safety Engineers in May and November, 2000.[1]

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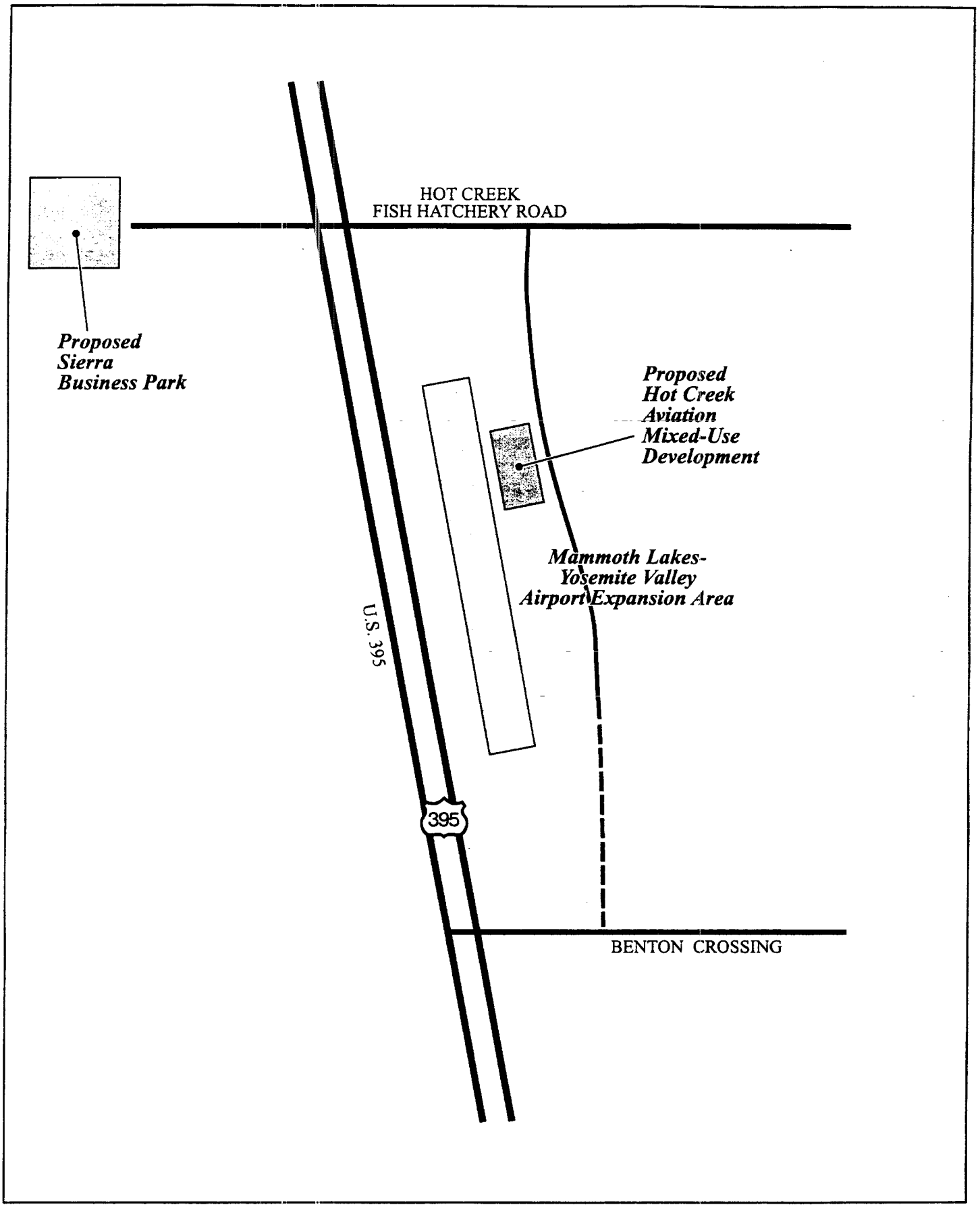
[1] Traffic Impact Study for the Sierra Business Park Specific Plan, Traffic Safety Engineers (TSE), May, 2000.

Addendum to the Traffic Impact Study for the Sierra Business Park Specific Plan, TSE, November, 2000.



11/30/00(TML030)

Figure 1

N

LSA

Schematic - Not to Scale

Project Study Area and
Future Project Locations

METHODOLOGY

The traffic analysis for the Mammoth Lakes-Yosemite Valley Airport Expansion has been prepared to be generally consistent with the Guide for the Preparation of Traffic Impact Studies (Caltrans, October, 2000). The TRAFFIX level of service software (Release 7.1, Dowling Associates, 1999) was utilized to determine the intersection levels of service at the unsignalized US-395/Hot Creek Road intersection. The TRAFFIX software is consistent with the 1997 *Highway Capacity Manual* (HCM) methodology for the analysis of unsignalized intersections.

Based on review of the existing configuration of the median at the study intersection (US-395/Hot Creek Road), two separate intersections have been analyzed: 1) US-395 northbound/Hot Creek Road and 2) US-395 southbound/Hot Creek Road. The time period analyzed is the winter Friday p.m. peak hour, since this period would yield the greatest amount of traffic from all three projects as a whole.

Additional LOS analysis was conducted for the intersection of Benton Crossing and US-395 in both existing and year 2020 conditions. These analyses indicate that LOS is not significantly affected and will not exceed LOS C in the year 2020 plus project condition. The worksheets for these analyses are provided in Appendix B.

Project impacts for the proposed project (airport), Hot Creek Development, Sierra Business Park, and all three developments were analyzed for the following scenarios:

Existing + Project Scenario

1. Existing conditions
2. Existing + airport expansion
3. Existing + airport expansion + Hot Creek Aviation (with and without connection to Benton Crossing)
4. Existing + Sierra Business Park
5. Existing + airport expansion + Hot Creek Aviation + Sierra Business Park (with and without connection to Benton Crossing)

Year 2020 + Project Scenario

1. Year 2020 baseline conditions
2. Year 2020 + airport expansion
3. Year 2020 + airport expansion + Hot Creek Aviation (with and without connection to Benton Crossing)
4. Year 2020 + Sierra Business Park
5. Year 2020 + airport expansion + Hot Creek Aviation + Sierra Business Park (with and without connection to Benton Crossing)

According to Caltrans' guidelines, the minimum acceptable level of service for intersections is LOS D. Therefore, when an intersection is forecast to operate at LOS E or LOS F, mitigation would be required to bring the intersection level of service to LOS D or better.

EXISTING CONDITIONS

Circulation Network

Figure 1 illustrates the local and regional circulation networks of the project area. Regional access to the proposed project is from US-395. North of the project site, US-395 provides access to the Town of Mammoth Lakes and the Lake Tahoe region. South of the project site, US-395 provides access to Crowley Lake, Bishop, and Southern California. Local access to the airport is provided via Hot Creek Fish Hatchery Road (Hot Creek Road). Hot Creek Road is an undivided, two lane road with an at-grade intersection with US-395. An approximately 70 foot wide median exists on US-395 at its intersection with Hot Creek Road. This intersection is characterized with high vehicle speeds on US-395 (60 to 70 mph), and stop control along Hot Creek Road, including the vehicle storage lanes within the median.

Volumes and Levels of Service

Figure 2 presents the existing intersection geometrics and weekday p.m. peak hour traffic volumes for a typical winter condition. The existing traffic volumes for the US-395 mainline were provided by Caltrans staff (Tom Meyers, District 9, 11/17/00). Peak hour traffic volumes on Hot Creek Road were based on a manual count collected by LSA on November 16, 2000, and are provided in Appendix A. Table A presents the existing intersection levels of service for the northbound and southbound intersections of US-395 at Hot Creek Road. According to the table, the US-395 northbound and southbound intersections at Hot Creek Road currently operate with satisfactory levels of service at LOS B (13.3 seconds) and LOS A (9.6 seconds), respectively. Appendix B contains the level of service worksheets.

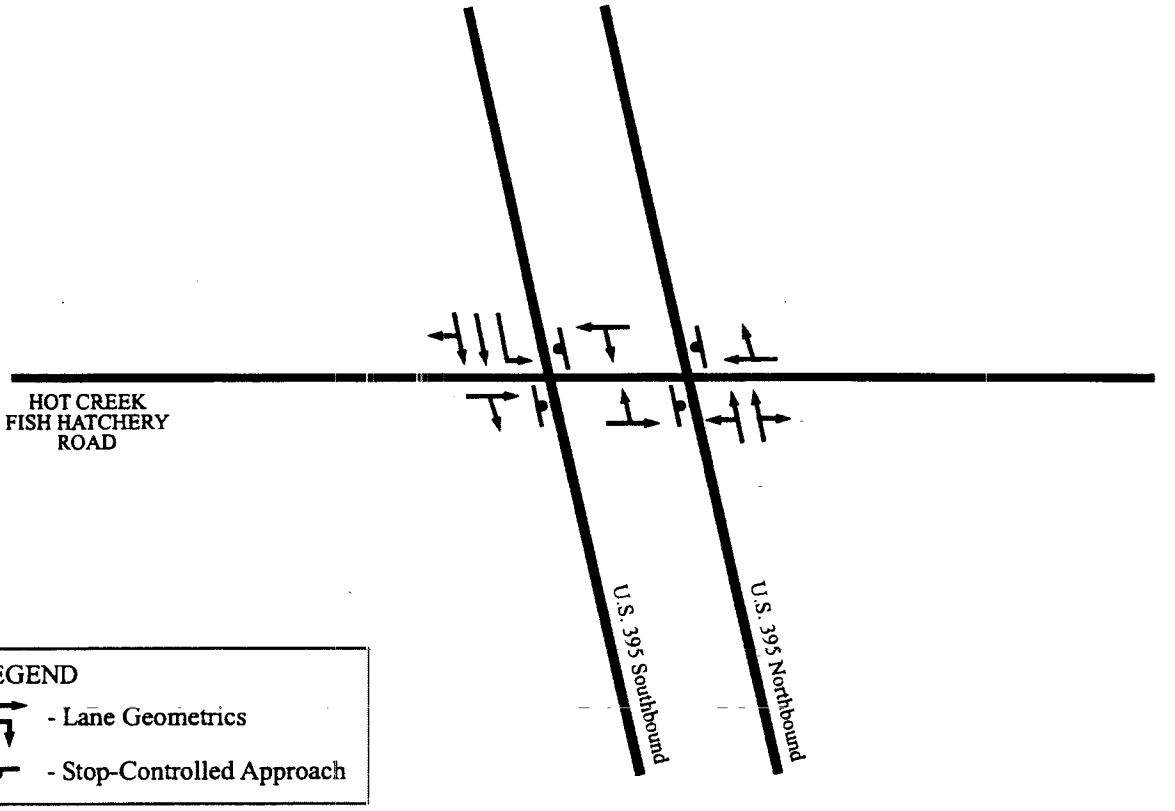
PROJECT TRIP GENERATION AND ASSIGNMENT

Mammoth Lakes-Yosemite Valley Airport

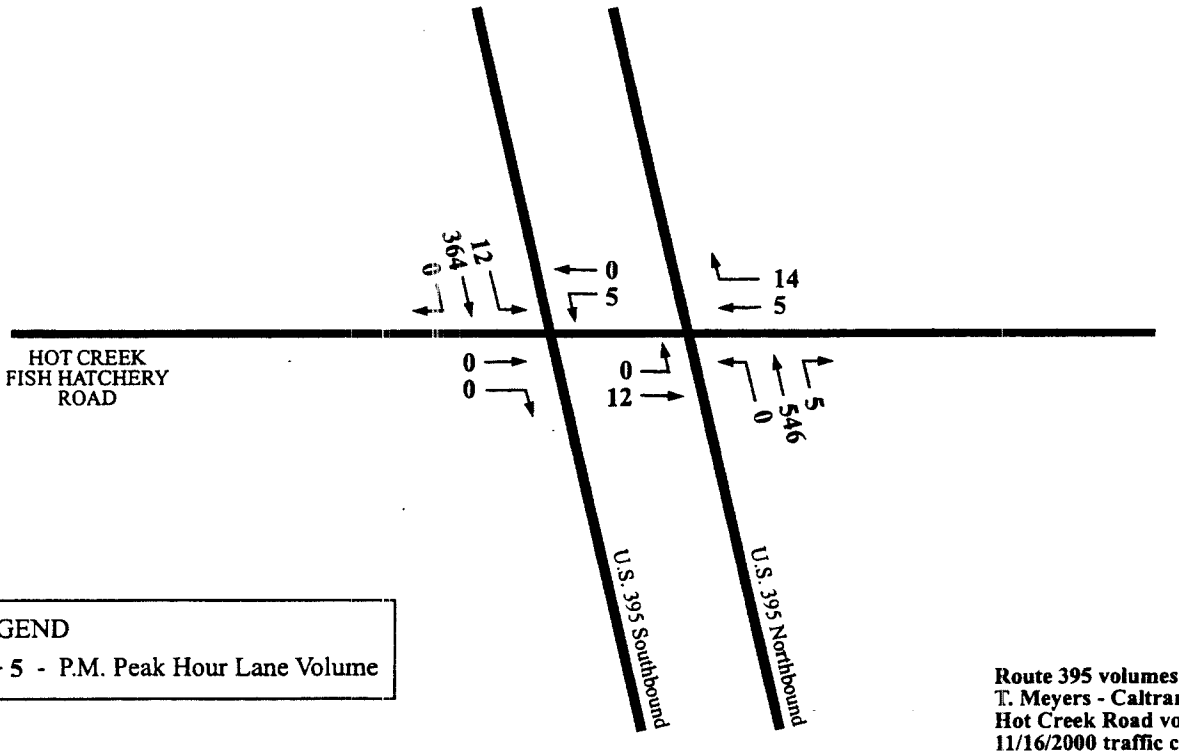
Table B presents the trip generation for the three projects within the airport area (airport expansion, Hot Creek Resort, and Sierra Business Park). Trip generation data for the Mammoth Lakes-Yosemite Valley Airport were furnished by airport staff (Tom Cornell, Ricondo & Associates) and are provided in Appendix C. According to airport staff, the airport expansion project would generate approximately 898 daily trips and 158 p.m. peak hour trips. The p.m. peak hour trip generation indicates that 79 vehicles (shuttles, taxis, buses, etc.) would be entering and exiting the airport once during the p.m. peak hour. Each vehicle would generate an inbound and an outbound trip; therefore, a total of 158 trips would occur in the p.m. peak hour (79 vehicles trips x 2 trips per vehicle = 158 trips).

Figure 3 illustrates the airport's trip assignment. It is anticipated that all p.m. peak hour trips associated with the airport would originate from and be destined to the Town of Mammoth Lakes.

EXISTING GEOMETRICS



EXISTING P.M. PEAK HOUR VOLUMES



Route 395 volumes provided by T. Meyers - Caltrans District 9. Hot Creek Road volumes per 11/16/2000 traffic count.

11/28/00(TML030)

Figure 2

LSA Schematic - Not to Scale

Existing Geometrics and Weekday P.M. Peak Hour Traffic Volumes for Typical Winter Conditions

Table A - Existing and Existing Plus Project Intersection Level of Service Summary

Scenario	Route 395 (US-395) / Hot Creek Fish Hatchery Road [1] Northbound Delay[2]	Northbound LOS	Southbound Delay	Southbound LOS
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 1999/2000 Conditions[3]	13.3 sec.	B	9.6 sec.	A
Existing + Airport	15.2 sec.	C	10.7 sec.	B
Existing + Airport + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Sierra Business Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport + Hot Creek + Sierra Business Park	**36.8 sec.**	**E**	21.9 sec.	C
- with Mitigation	19.6 sec.	C	---	---
WITH CONNECTION TO BENTON CROSSING [4]				
Existing + Airport + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport + Hot Creek + Sierra Business Park	23.4 sec.	C	17.6 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service.

[3] Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November, 2000.

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour In	Out	Total
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport[1]	*based on data provided by Mammoth Lakes-Yosemite Valley Airport*					
Hot Creek Aviation Mixed-Used Development[2]						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)		162.78	6.69	6.69	13.38
Residential High Density (MF) Seasonal	per dwelling unit (DU)		8.00	0.50	0.25	0.75
Hotel	per occupied room		8.92	0.35	0.36	0.71
Campground/Recreational Vehicle Park	per occupied campsite		4.00	0.20	0.20	0.39
High Turnover Sit-Down Restaurant	per seat		4.83	0.24	0.18	0.42
Morgan Industrial Park Specific Plan[3]	*based on data provided in Morgan Industrial Park Specific Plan TIA*					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	702	passengers	898	79	79	158
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24	FPs	3,907	161	161	321
Residential High Density (MF) Seasonal[4]	150	DUs	1,203	76	37	113
Hotel[4]	50	rooms	442	17	18	35
Campground/Recreational Vehicle Park[4]	80	campsites	320	16	16	31
High Turnover Sit-Down Restaurant	100	seats	483	24	18	42
Morgan Industrial Park Specific Plan	36	acres	1,487	48	181	229
Total Trip Generation			**8,740**	**420**	**509**	**929**
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market[5]	(90 percent reduction)		-3,516	-145	-145	-289
Residential High Density (MF) Seasonal[6]	(60 percent reduction)		-722	-45	-22	-68
Hotel[7]	(75 percent reduction)		-332	-13	-13	-26
Campground/Recreational Vehicle Park	*no trip reductions anticipated*					
High Turnover Sit-Down Restaurant[8]	(100 percent reduction)		-483	-24	-18	-42
Total Trip Reductions			**-5,053**	**-227**	**-198**	**-425**
NET EFFECTIVE TRIP GENERATION			**3,688**	**193**	**311**	**504**

[1] Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).

[2] Trip rates for Hot Creek Mixed-Use Development provided in *Trip Generation* , 6th Edition, Institute of Transportation Engineers (ITE), 1997. Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM). Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

[3] Trip generation data provided in *Traffic Impact Study Addendum for Morgan Industrial Park Specific Plan* , Traffic Safety Engineers (TSE), Nc

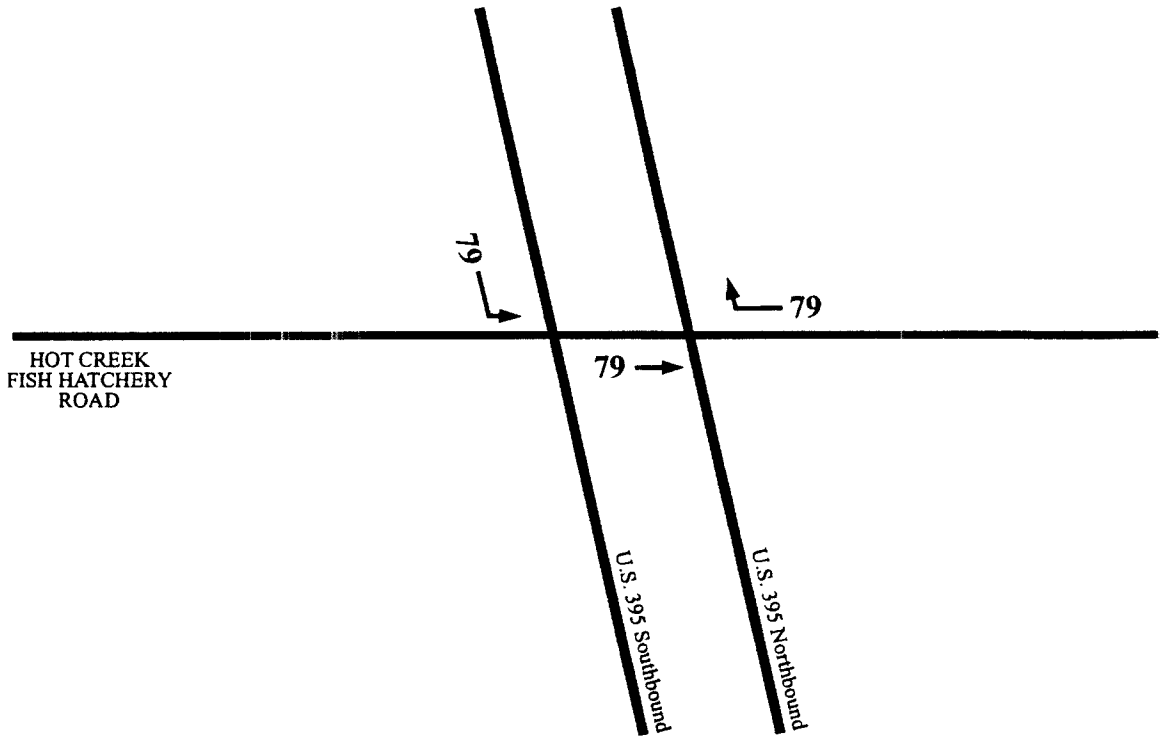
[4] Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.

[5] A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.

[6] A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[7] A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[8] A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.



LEGEND
← 5 - P.M. Peak Hour Trip Assignment

11/28/00(TML030)

Figure 3

LSA

Schematic - Not to Scale

Mammoth Lakes-Yosemite Valley
Airport Trip Assignment

Hot Creek Aviation Mixed-Use Development

The trip generation estimates for the approved Hot Creek Development are based on trip rates provided in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 6th Edition (1997). Based on the project description of the lodging component of the Hot Creek resort, a total of 188 multifamily townhomes, a 62 room hotel, and a 100 site RV park would be developed. An 80 percent occupancy rate was factored for these lodging type land uses to account for the "typical" winter conditions consistent with Town of Mammoth Lakes methodology. Therefore, trips were generated for Hot Creek resort's lodging component, which consisted of 150 multifamily townhomes, a 50 room hotel, and an 80 site RV park during the "typical"winter condition. According to Table B, the approved Hot Creek resort would generate a total of 6,355 daily trips and 542 p.m. peak hour trips.

In addition to the 80 percent occupancy factor for the lodging components, trip reductions for the multifamily rental townhomes and hotel were applied due to the available shuttle service for residents of the townhomes and hotel guests to the resort areas of the Town (i.e., Mammoth Mountain Ski Area - MMSA). The planned shuttle service would be available to guests of the townhomes and hotel on a regular basis throughout the day, and would be operated to minimize passenger vehicle traffic between the Hot Creek resort and the MMSA. A 60 percent reduction was applied to the trip generation of the townhomes; a 75 percent reduction was applied to the hotel's trip generation estimates.

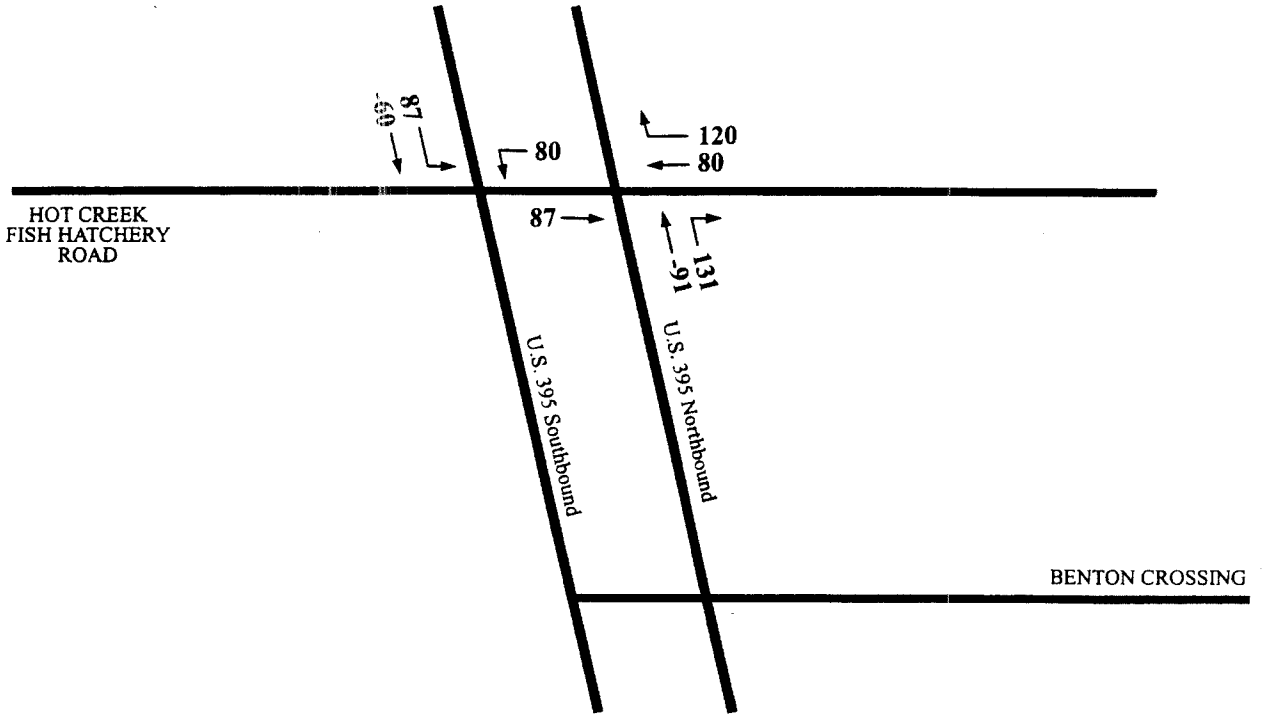
To account for the pass-by trip making for the retail components of Hot Creek, a 90 percent reduction in new trips generated by the gas station and a 25 percent reduction in new trips generated by the restaurant were applied. In addition, a 75 percent reduction in restaurant trips was applied for the internal trip capture of lodging residents and airport patrons who would utilize the restaurants on site. It should be noted that 100 percent of the restaurant trips were removed from the overall trip generation (75 percent via internal trip capture and 25 percent via pass-by trips). Based on the reductions for occupancy, shuttle service, pass-by trip making, and internal trip capture, a total of 5,053 daily and 425 p.m. peak hour trips were removed from the total Hot Creek resort total trip generation. Therefore, according to Table B the Hot Creek resort would generate approximately 1,302 new daily trips and a 117 new p.m. peak hour trips.

Figure 4 illustrates the trip assignment for the Hot Creek Development with and without the connection to Benton Crossing. It should be noted that reductions on the northbound and southbound through movements on US-395 were made to account for the pass-by trips of the gas station and restaurant components. In other words, a pass-by trip is a through trip that is diverted into the project via southbound left or northbound right turn and then reassigned to US-395 via another right or left turn back onto US-395.

Sierra Business Park

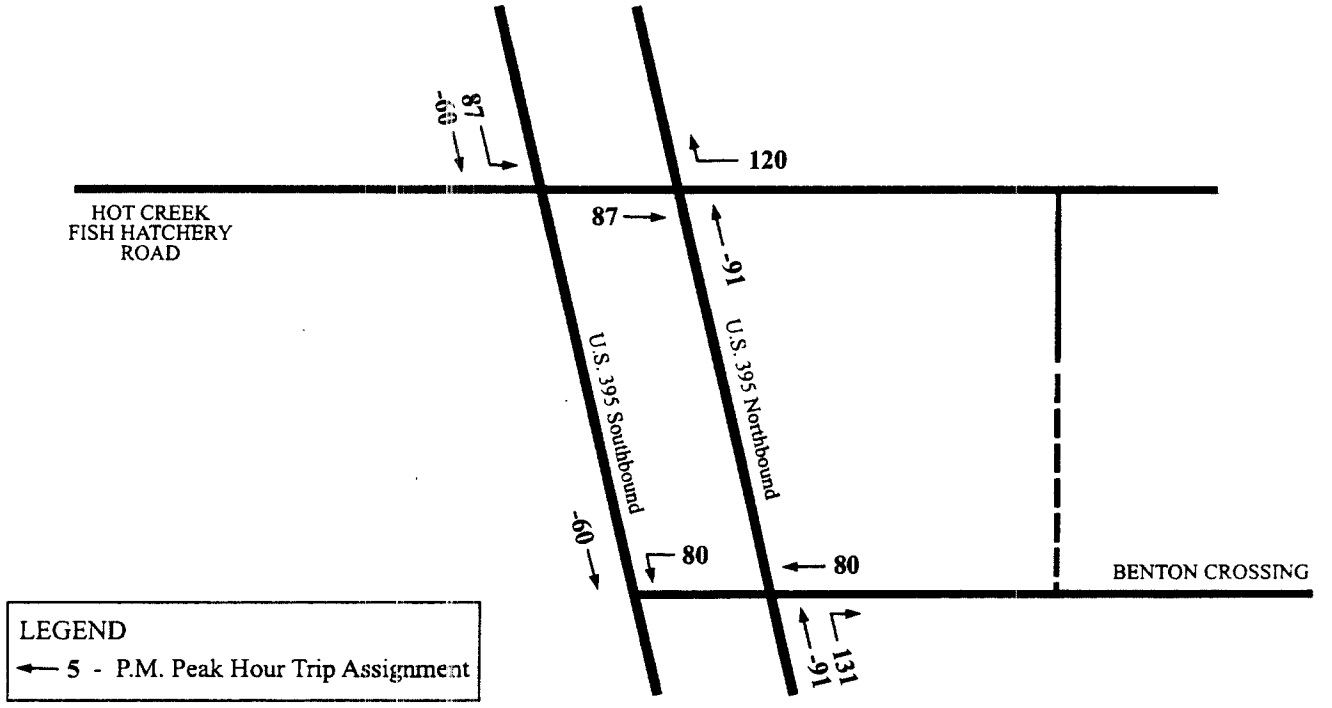
Trip generation estimates and the trip assignment for the Sierra Business Park were obtained from the traffic impact study addendum completed by Traffic Safety Engineers (TSE). Appendix D contains the trip generation and trip assignment completed by TSE for this specific project. Based on

HOT CREEK AVIATION TRIP ASSIGNMENT



Negative volumes represent diverted trips.

HOT CREEK AVIATION TRIP ASSIGNMENT WITH BENTON CROSSING CONNECTION



Negative volumes represent diverted trips.

11/28/00(TML030)

Figure 4

LSA Schematic - Not to Scale

Hot Creek Aviation Mixed-Use Development
Trip Assignment

Table B, the Sierra Business Park would generate 1,487 daily trips, and 229 p.m. peak hour trips. Figure 5 presents the trip assignment as prepared by TSE.

According to Table B, when trip generation estimates for all three development projects are added together, the projects would generate a total of 8,740 daily trips and 929 p.m. peak hour trips (420 inbound and 509 outbound). With the trip reductions for the occupancy, shuttle service, pass-by trip making, and internal trip capture for the components of the Hot Creek resort development applied to the total trip generation, the new trips generated by all three projects are 3,688 daily trips and 504 p.m. peak hour trips (193 inbound and 311 outbound). Figure 6 illustrates the trip assignment for all three development projects.

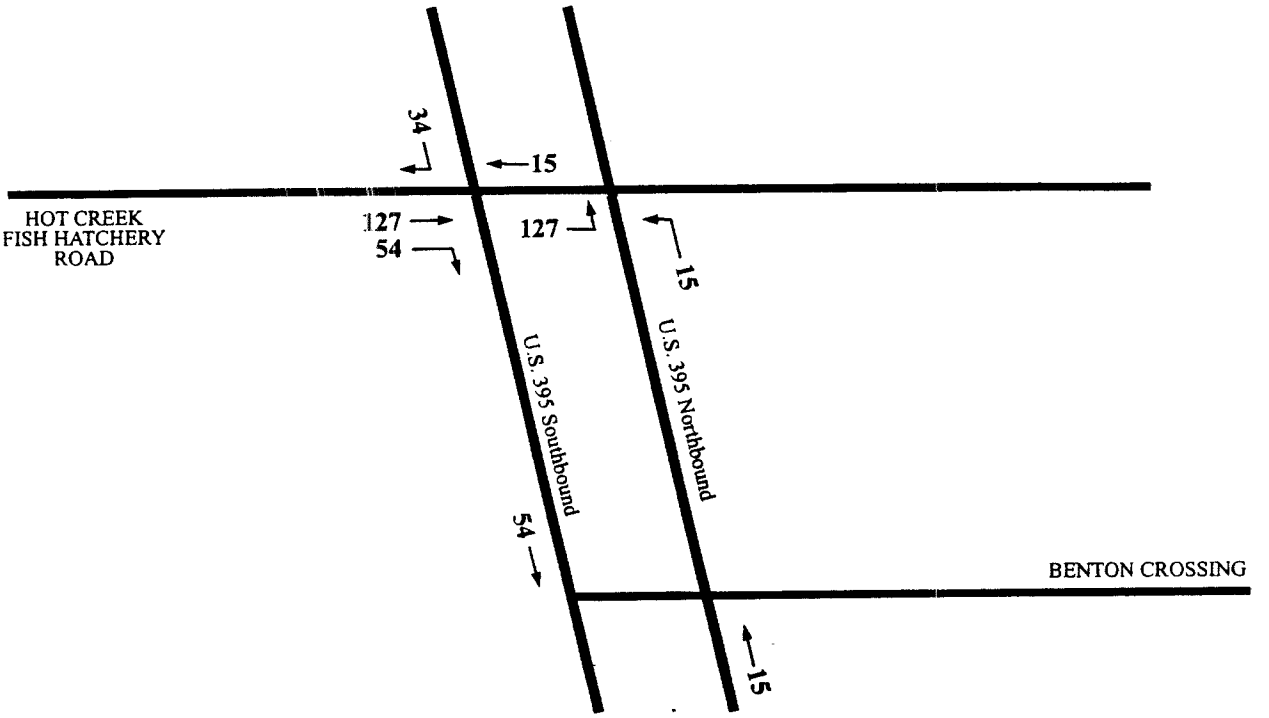
EXISTING + PROJECT LEVELS OF SERVICE

The existing traffic volumes at the US-395/Hot Creek Road intersection were added to the project trip assignments discussed above, and intersection levels of service were determined for the existing + airport expansion; existing + airport expansion + Hot Creek resort (with and without connection to Benton Crossing); existing + Sierra Business Park; and existing + airport expansion + Hot Creek resort + Sierra Business Park (with and without connection to Benton Crossing) scenarios. Figures 7, 8, 9, and 10 illustrate the existing plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Table A also presents the results of the existing + project(s) level of service analysis, with and without Benton Crossing. Appendix B contains the level of service worksheets.

Based on the level of service analysis results provided in Table A, most of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the existing conditions, except for the existing + airport expansion + Hot Creek resort (without Benton Crossing) + Sierra Business Park scenario. This scenario is forecast to operate at LOS E (36.8 seconds) at the northbound intersection due to the volume and delay of eastbound left turning vehicles from the Sierra Business Park and eastbound through traffic volumes destined to the airport and the Hot Creek resort. Mitigation measures are required for this scenario to bring the northbound US-395/Hot Creek Road intersection to LOS D or better.

YEAR 2020 BASELINE CONDITIONS

Per direction by Caltrans staff (Tom Meyers - District 9), a 1.0 percent annual growth rate, compounded, was applied to the northbound and southbound through volumes for US-395. This rate constitutes a growth of 22 percent from 2000 to 2020. Figure 11 presents the 2020 weekday p.m. peak hour traffic volumes for a typical winter condition. Existing geometrics were assumed for the 2020 baseline scenario. Table C presents the 2020 baseline intersection levels of service for the northbound and southbound intersections of US-395 at Hot Creek Road. According to the table, the US-395 northbound and southbound intersections at Hot Creek Road are forecast to continue to operate with satisfactory levels of service at LOS B (14.8 seconds) and LOS A (9.9 seconds), respectively. Appendix B contains the level of service worksheets.



LEGEND
← 5 - P.M. Peak Hour Trip Assignment

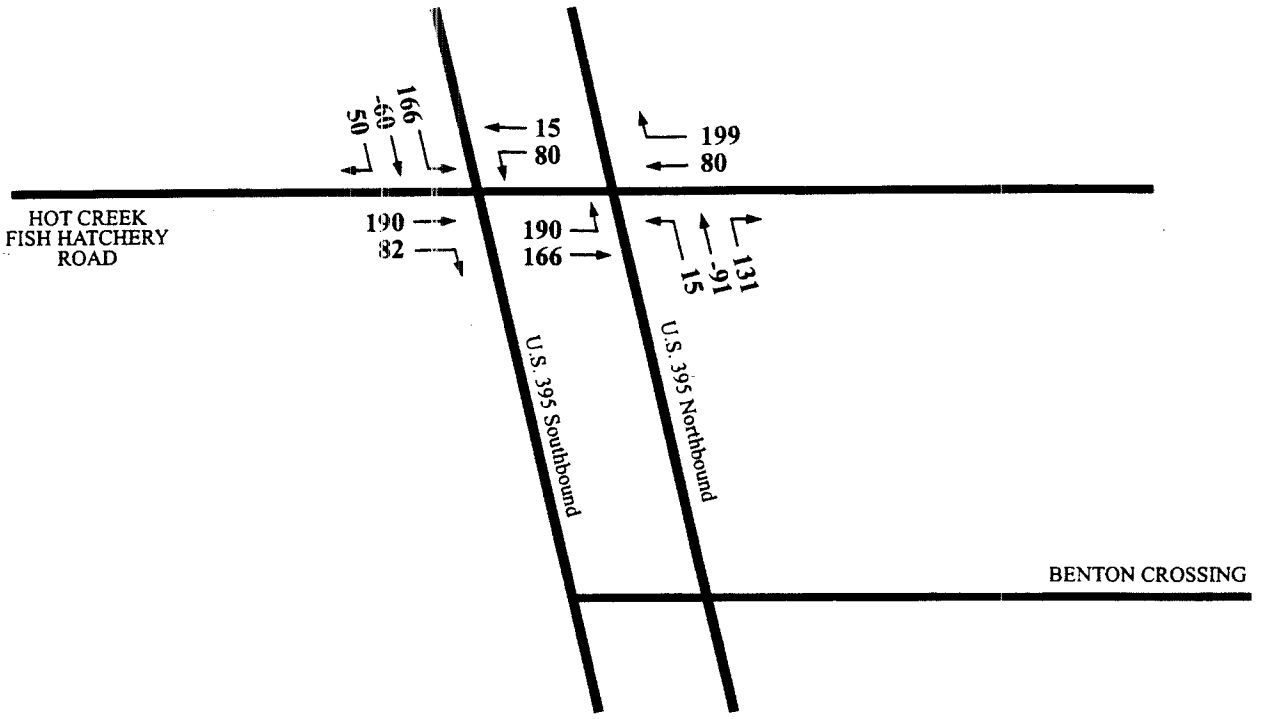
11/30/00(TML030)

Figure 5

LSA Schematic - Not to Scale

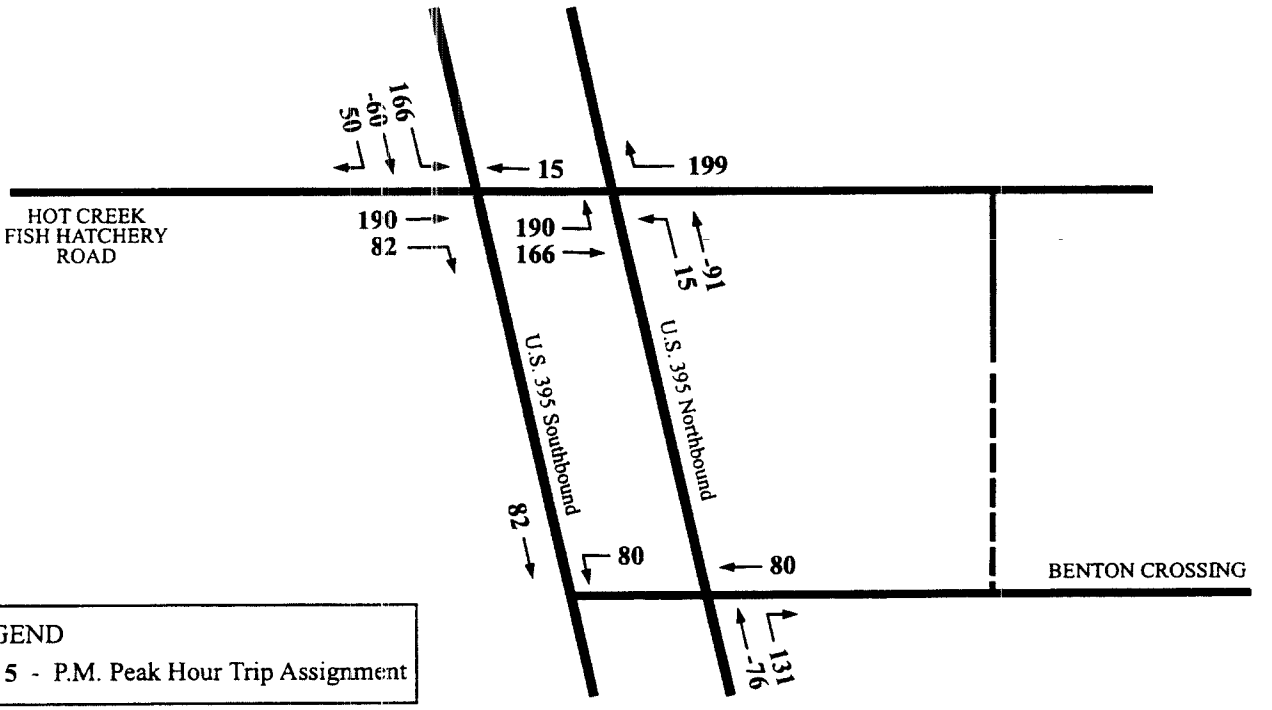
Sierra Business Park Trip Assignment

AIRPORT + HOT CREEK + INDUSTRIAL TRIP ASSIGNMENT



Negative volumes represent diverted trips.

AIRPORT + HOT CREEK + INDUSTRIAL TRIP ASSIGNMENT WITH BENTON CROSSING CONNECTION

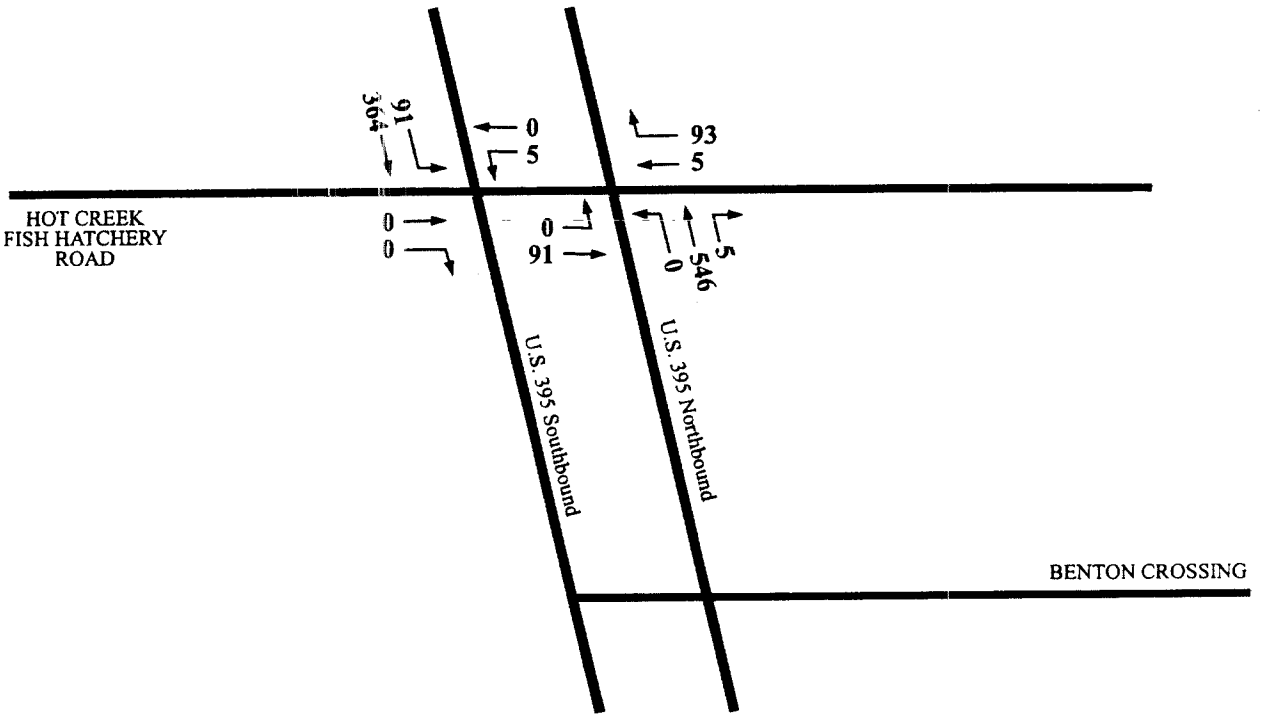


Negative volumes represent diverted trips.

11/28/00(TML030)

Figure 6

Cumulative Projects Trip Assignment



LEGEND
← 5 - P.M. Peak Hour Lane Volume

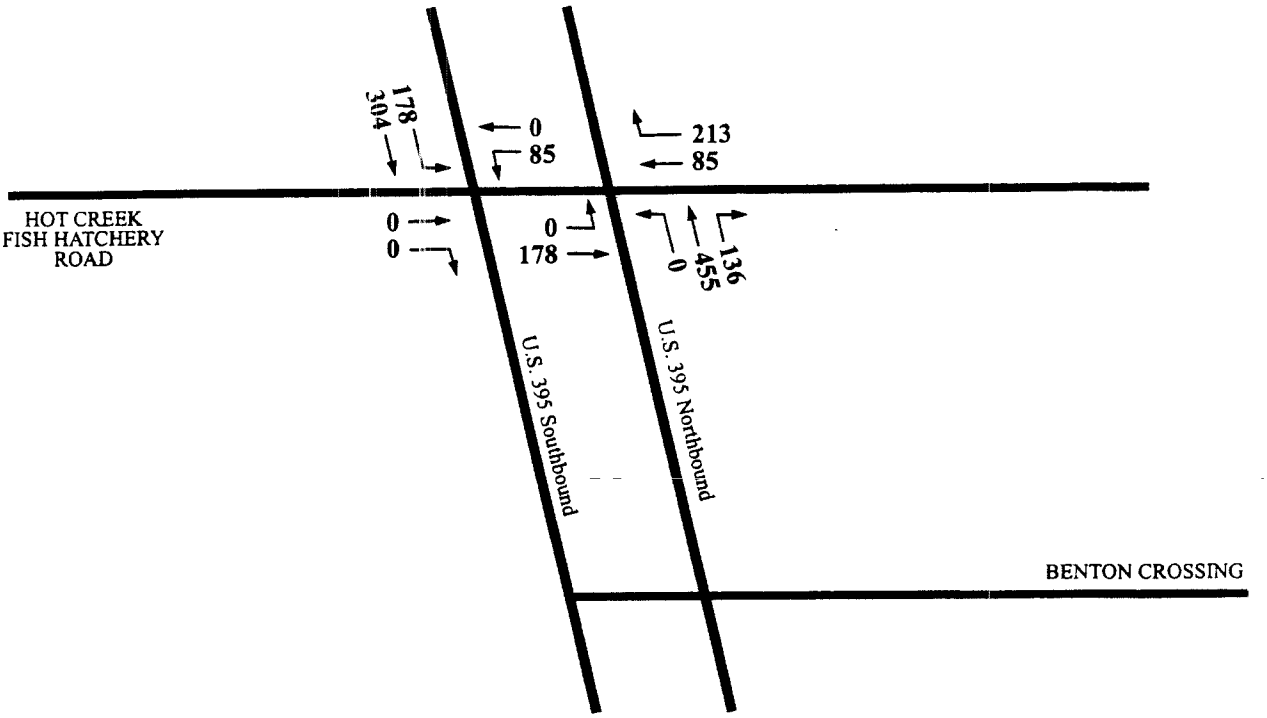
11/28/00(TML030)

Figure 7

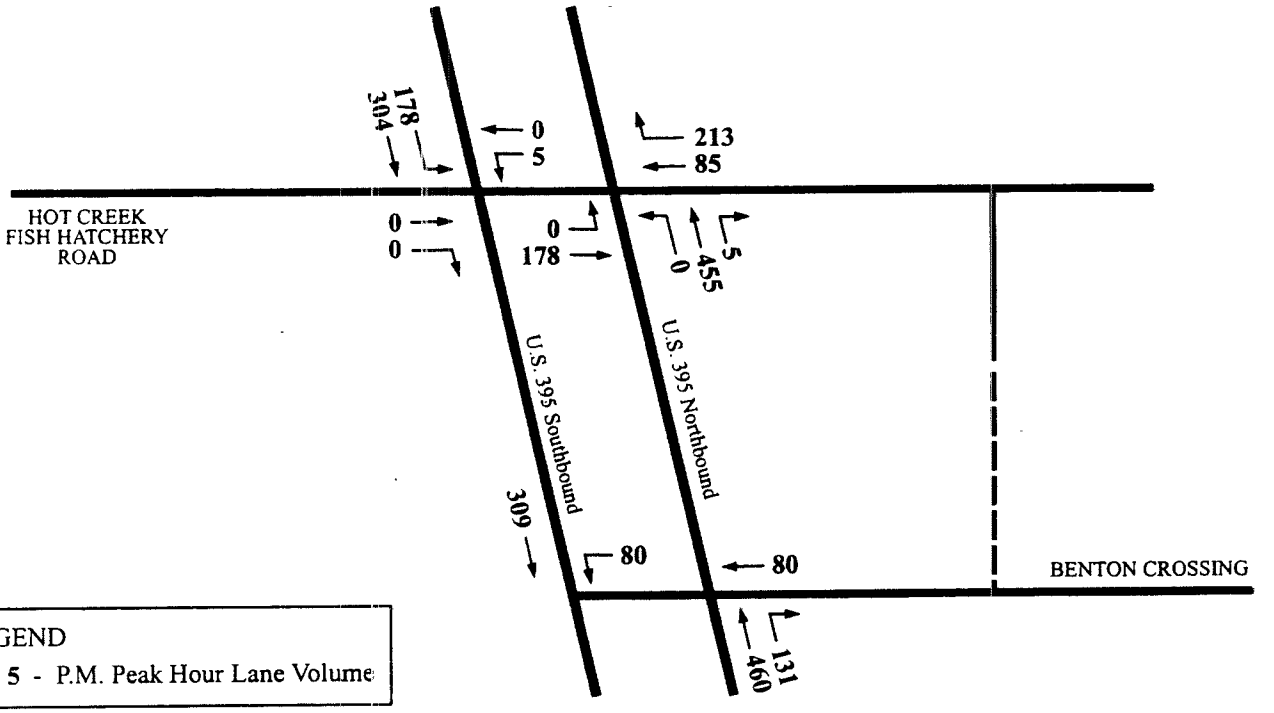
LSA Schematic - Not to Scale

Existing + Airport P.M. Peak Hour Traffic Volumes

EXISTING + AIRPORT + HOT CREEK TRAFFIC VOLUMES



EXISTING + AIRPORT + HOT CREEK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION

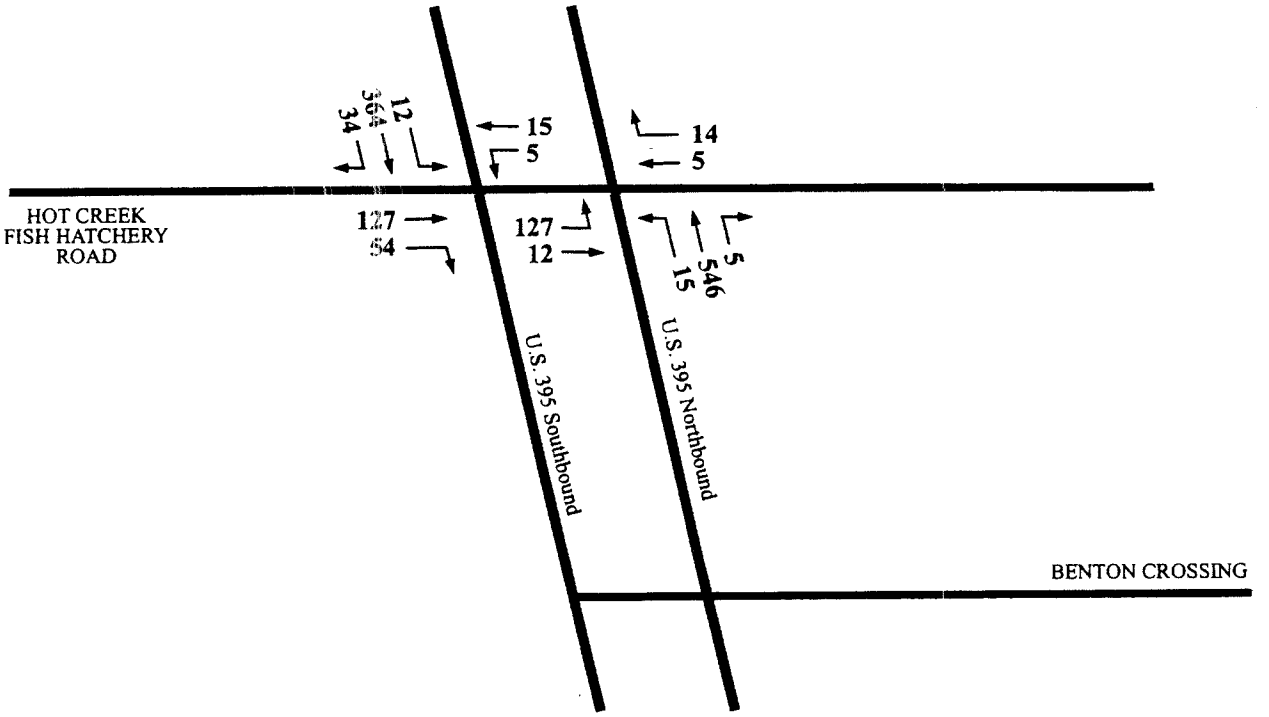


11/28/00(TML030)

Figure 8

LSA Schematic - Not to Scale

Existing + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

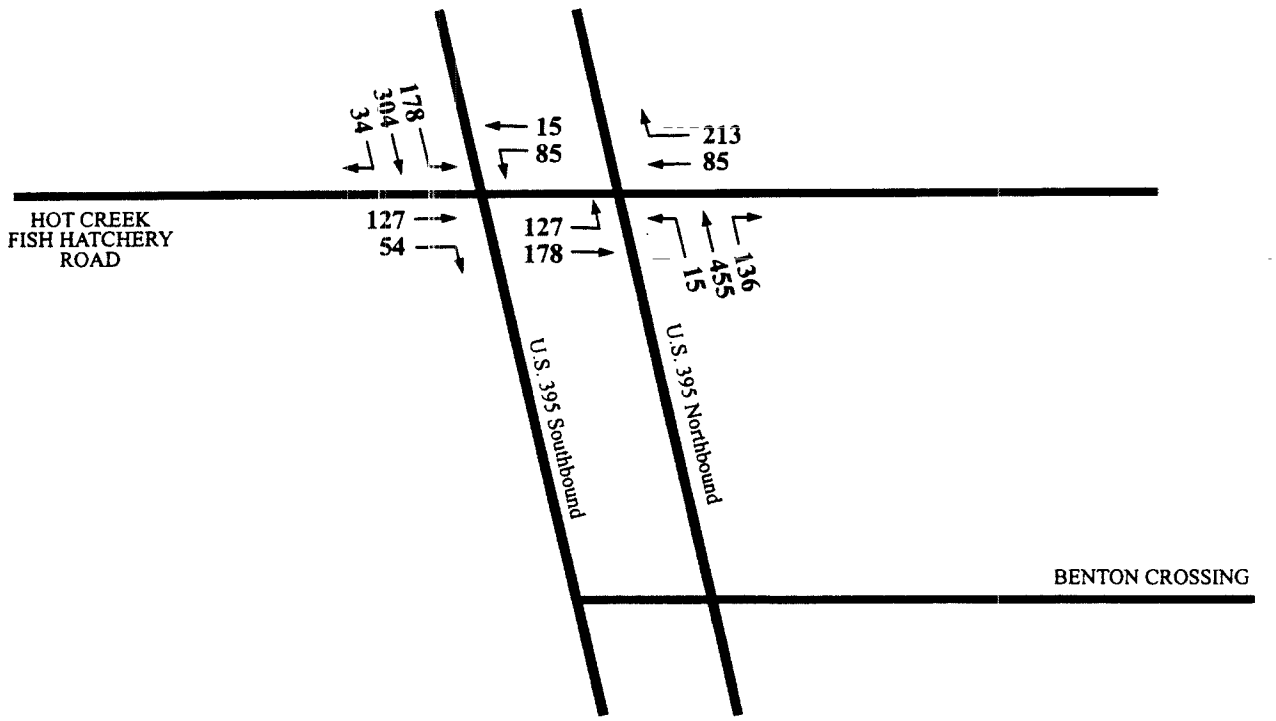
11/28/00(TML030)

Figure 9

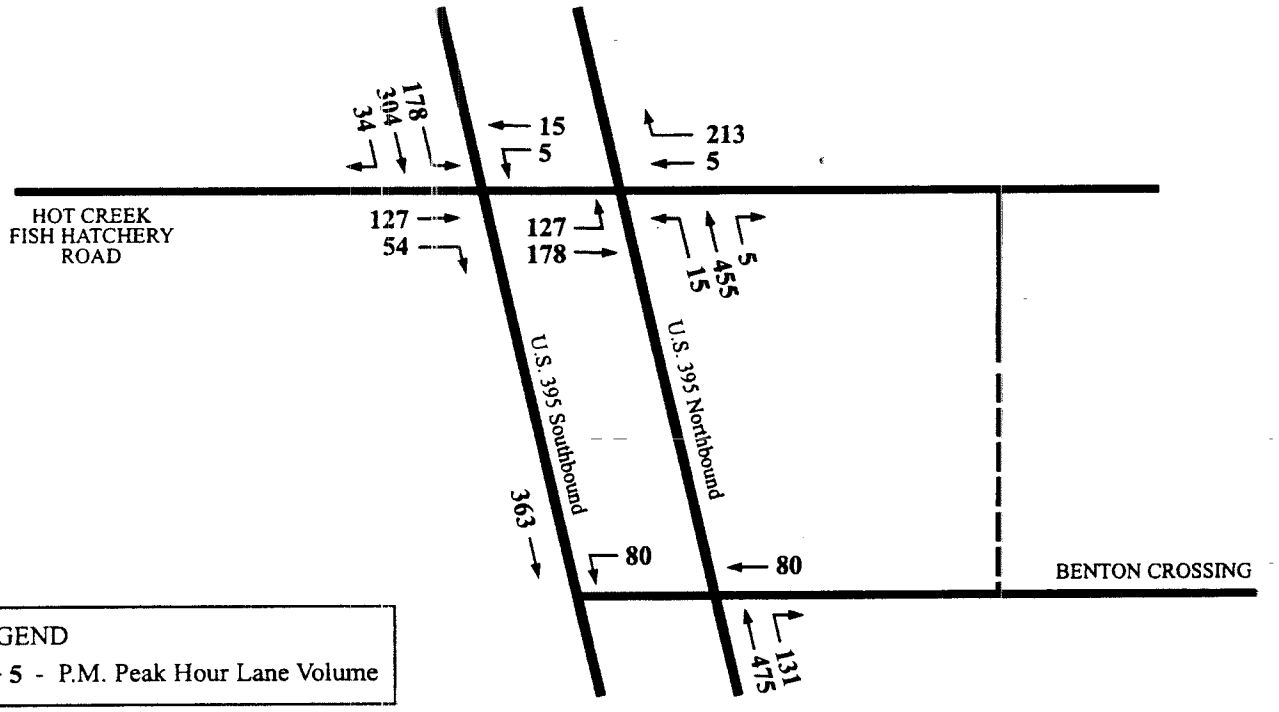
LSA Schematic - Not to Scale

Existing + Industrial Park
P.M. Peak Hour Traffic Volumes

EXISTING + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES



EXISTING + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



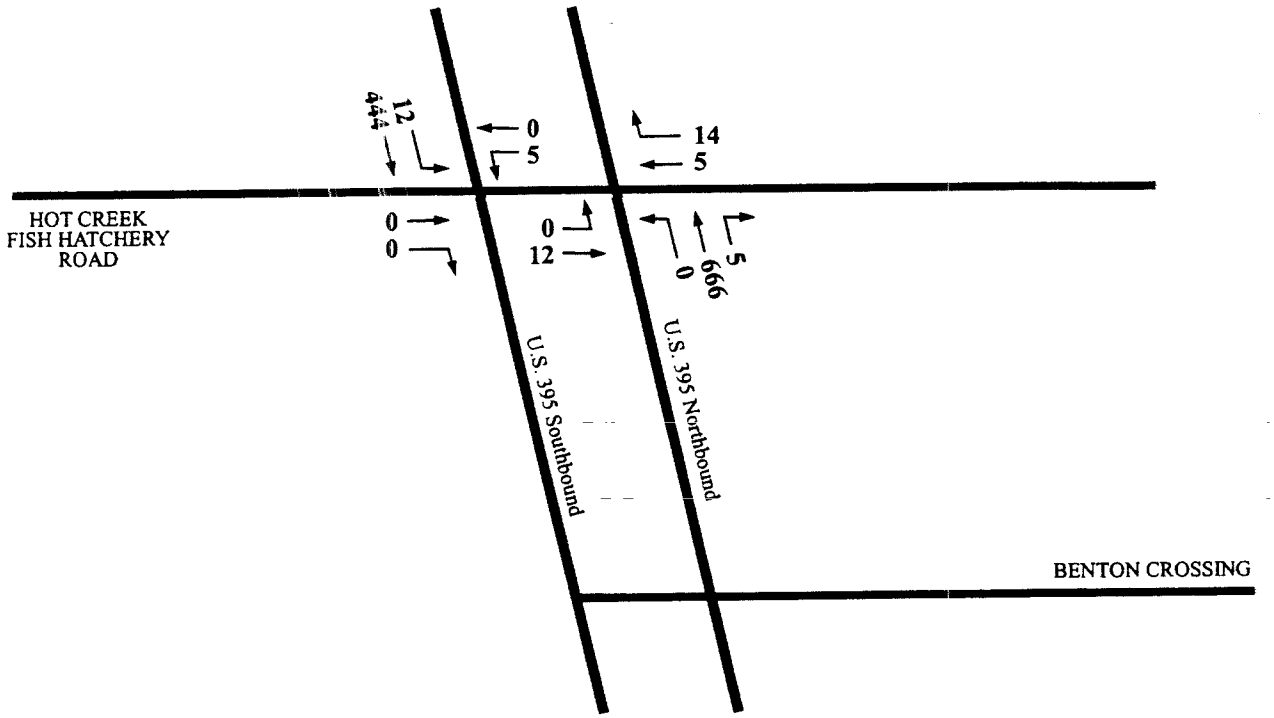
11/28/00(TML030)

Figure 10

LSA

Schematic - Not to Scale

Existing + Airport + Hot Creek + Industrial Park
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

Figure 11

N

LSA Schematic - Not to Scale

Year 2020 Baseline P.M. Peak Hour Traffic Volumes for Typical Winter Conditions

Table C - Year 2020 Baseline and Year 2020 Plus Project Intersection Level of Service Summary

	Route 395 (US-395) / Hot Creek Fish Hatchery Road [1]			
	Northbound		Southbound	
Scenario	Delay[2]	LOS	Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Year 2020 Baseline[3]	14.8 sec.	B	9.9 sec.	A
2020 + Airport	17.4 sec.	C	11.0 sec.	B
2020 + Airport + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Sierra Business Park	13.8 sec.	B	14.4 sec.	B
2020 + Airport + Hot Creek + Sierra Business Park	**58.7 sec.**	**F**	24.7 sec.	C
- with Mitigation	24.0 sec.	C	---	---
WITH CONNECTION TO BENTON CROSSING [4]				
2020 + Airport + Hot Creek	19.2 sec.	C	12.3 sec.	B
2020 + Airport + Hot Creek + Sierra Business Park	31.7 sec.	D	19.8 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle. LOS = Level of Service.

[3] Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation and Airport projects.

YEAR 2020 + PROJECT LEVELS OF SERVICE

The 2020 baseline traffic volumes at the US-395/Hot Creek Road intersection (northbound and southbound) were added to the project trip assignments discussed previously, and intersection levels of service were determined for the 2020 + airport expansion; 2020 + airport expansion + Hot Creek resort (with and without connection to Benton Crossing); 2020 + Sierra Business Park; and existing + airport expansion + Hot Creek resort + Sierra Business Park (with and without connection to Benton Crossing) scenarios. Figures 12, 13, 14, and 15 illustrate the year 2020 plus project(s) scenarios p.m. peak hour traffic volumes at the US-395/Hot Creek Road intersection. Table C also presents the results of the year 2020 + project(s) level of service analysis, with and without Benton Crossing. Appendix B contains the level of service worksheets.

Based on the level of service analysis results provided in Table C, most of the analysis scenarios are forecast to operate with satisfactory levels of service (LOS D or better) in the cumulative conditions except for the 2020 + airport expansion + Hot Creek resort (without Benton Crossing) + Sierra Business Park scenario. This scenario is forecast to operate at LOS F (58.7 seconds) at the northbound intersection due to the volume and delay of eastbound left turning vehicles from the Sierra Business Park, and eastbound through traffic volumes destined to the airport and the Hot Creek resort. Mitigation measures are required for this scenario to bring the northbound US-395/Hot Creek Road intersection to LOS D or better.

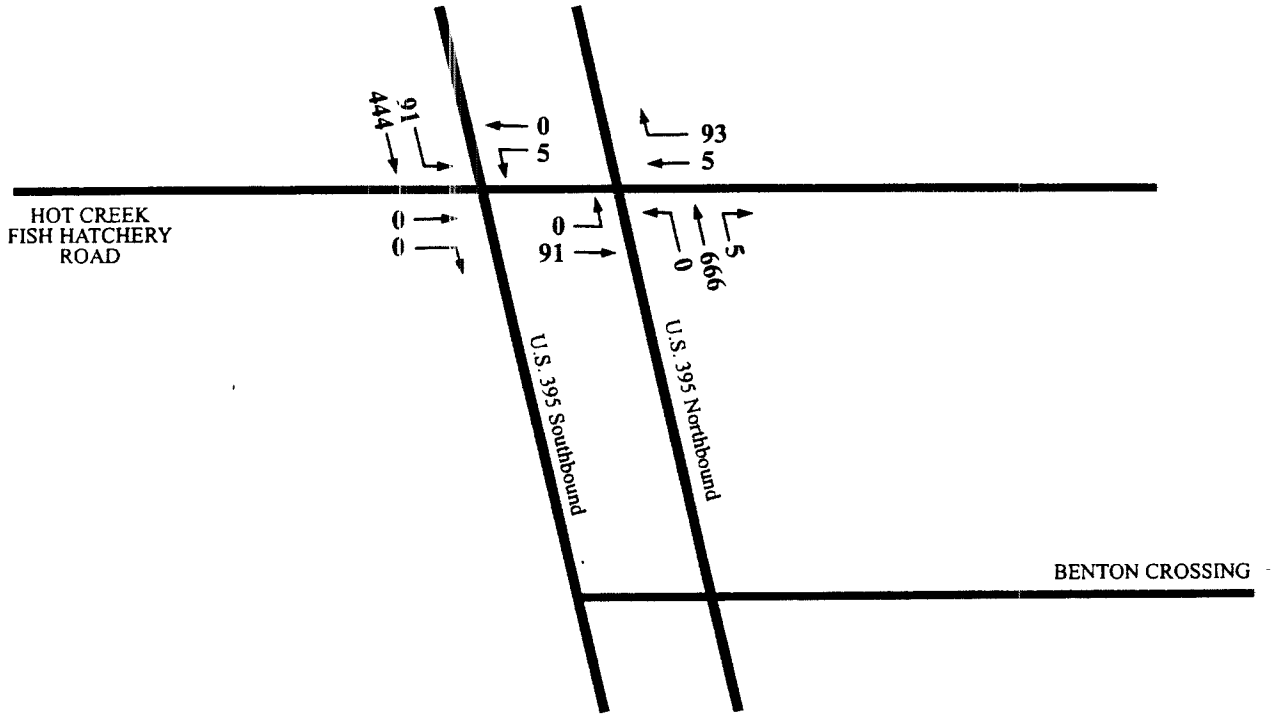
CONCLUSIONS AND MITIGATION MEASURES

In summary, in the short range (existing conditions) mitigation measures are necessary only in the case of all three projects without a Benton Crossing access. Similarly, in the long range (2020) mitigation measures are also necessary when all three projects are developed without access to Benton Crossing.

Mitigation in the form of restriping the center median lanes to provide separate eastbound and westbound left and through lanes, or constructing a connector road to Benton Crossing from the airport developments, would be required to reduce the impacts. The resultant LOS in the full project development scenario is shown on Tables A and C.

A minimum nose to nose width of 48 feet in the median is required to provide separate eastbound and westbound left and through lanes. A figure illustrating the median lanes is provided in Appendix E. The costs of either improvements should be spread to the contributing projects on a proportionate basis in relation to their respective peak hour trip generation. With either mitigation measure constructed, short-term and long-term levels of service for the baseline + airport expansion + Hot Creek Aviation + Sierra Business Park scenarios would operate with satisfactory levels of service (LOS D or better).

If the Sierra Business Park is not approved or otherwise is not developed, no mitigation is necessary in the short range and long range for the Airport and Hot Creek Resort.



LEGEND
← 5 - P.M. Peak Hour Lane Volume

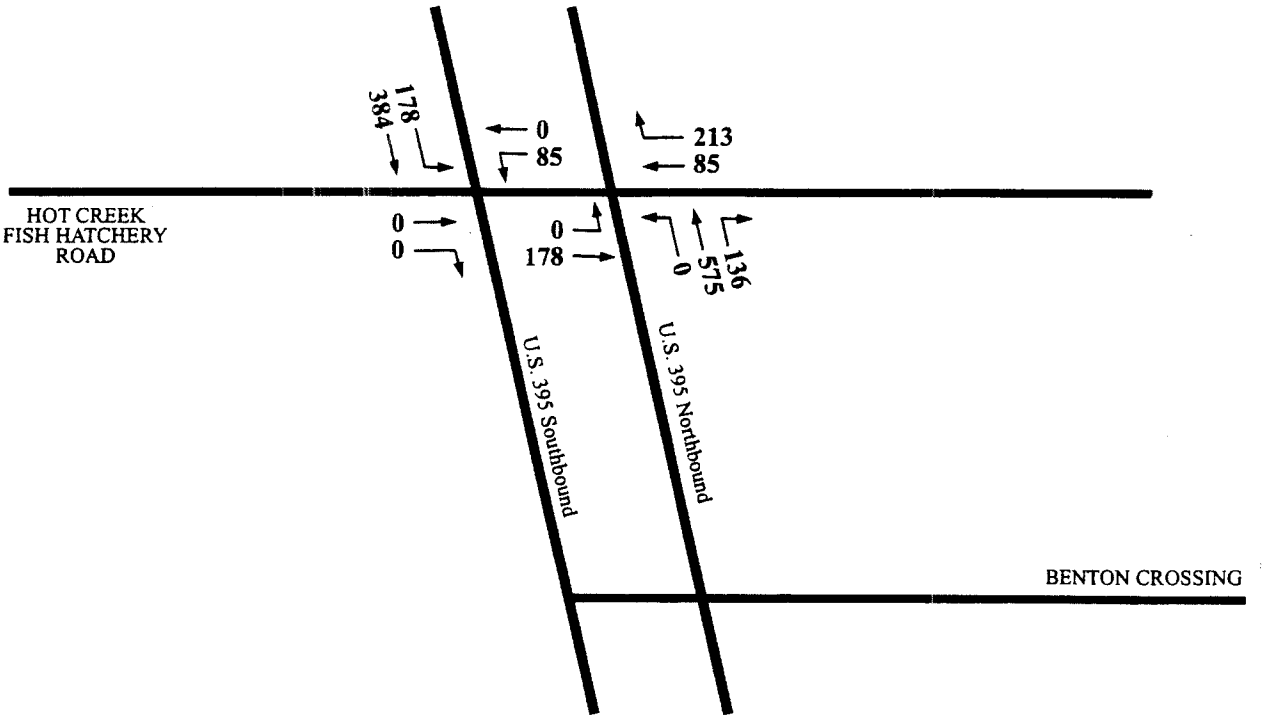
11/28/00(TML030)

Figure 12

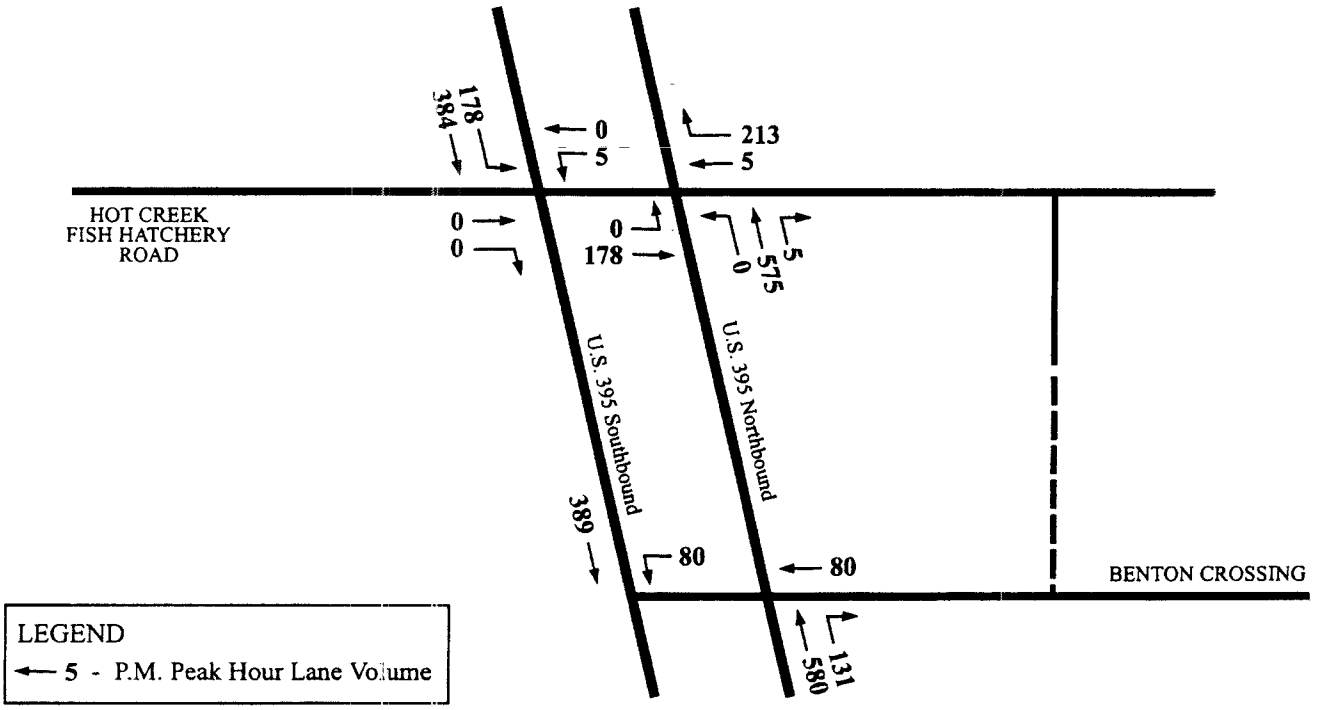
LSA Schematic - Not to Scale

Year 2020 + Airport P.M. Peak Hour Traffic Volumes

YEAR 2020 + AIRPORT + HOT CREEK TRAFFIC VOLUMES



YEAR 2020 + AIRPORT + HOT CREEK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



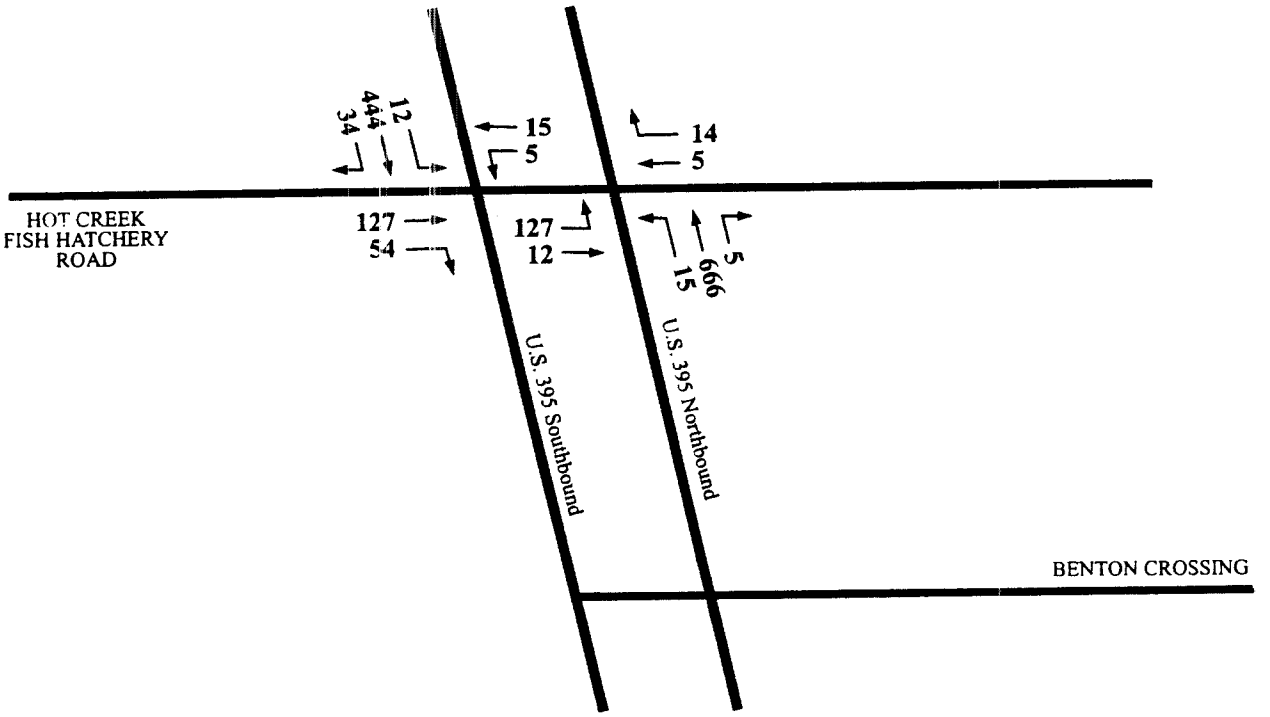
11/28/00(TML030)

Figure 13

LSA

Schematic - Not to Scale

Year 2020 + Airport + Hot Creek
P.M. Peak Hour Traffic Volumes



LEGEND
← 5 - P.M. Peak Hour Lane Volume

11/28/00(TML030)

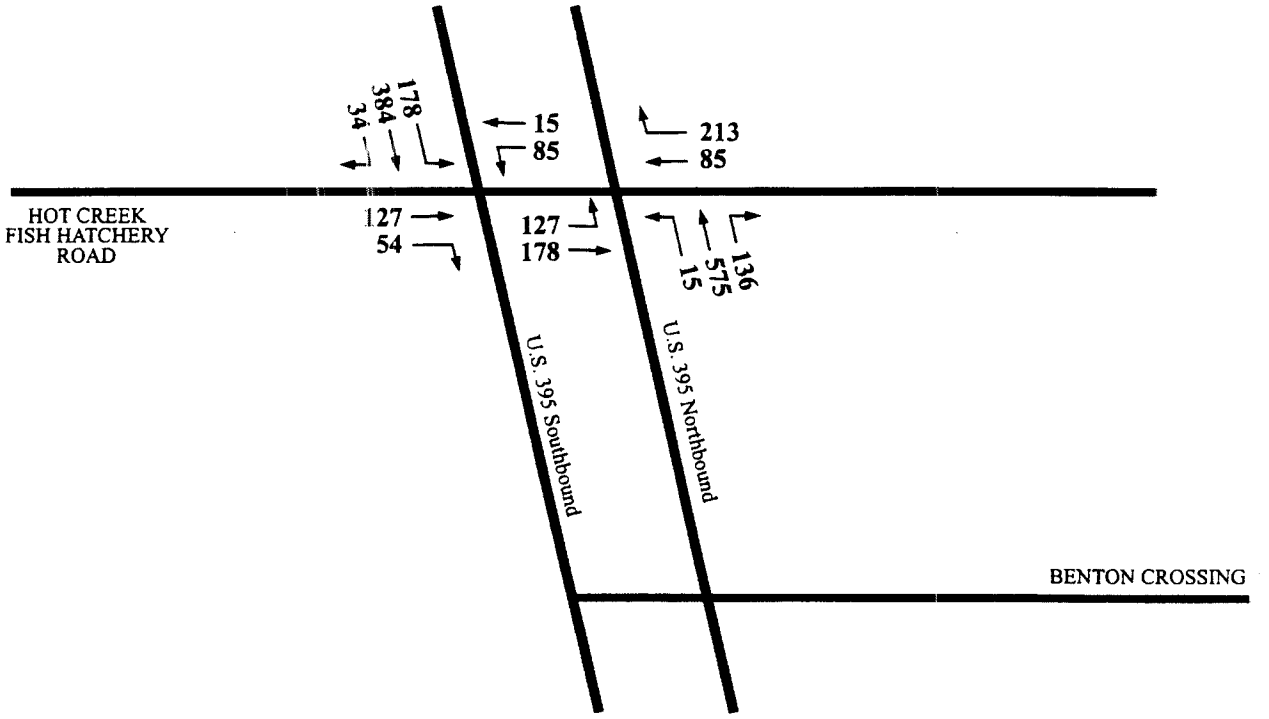
Figure 14

LSA

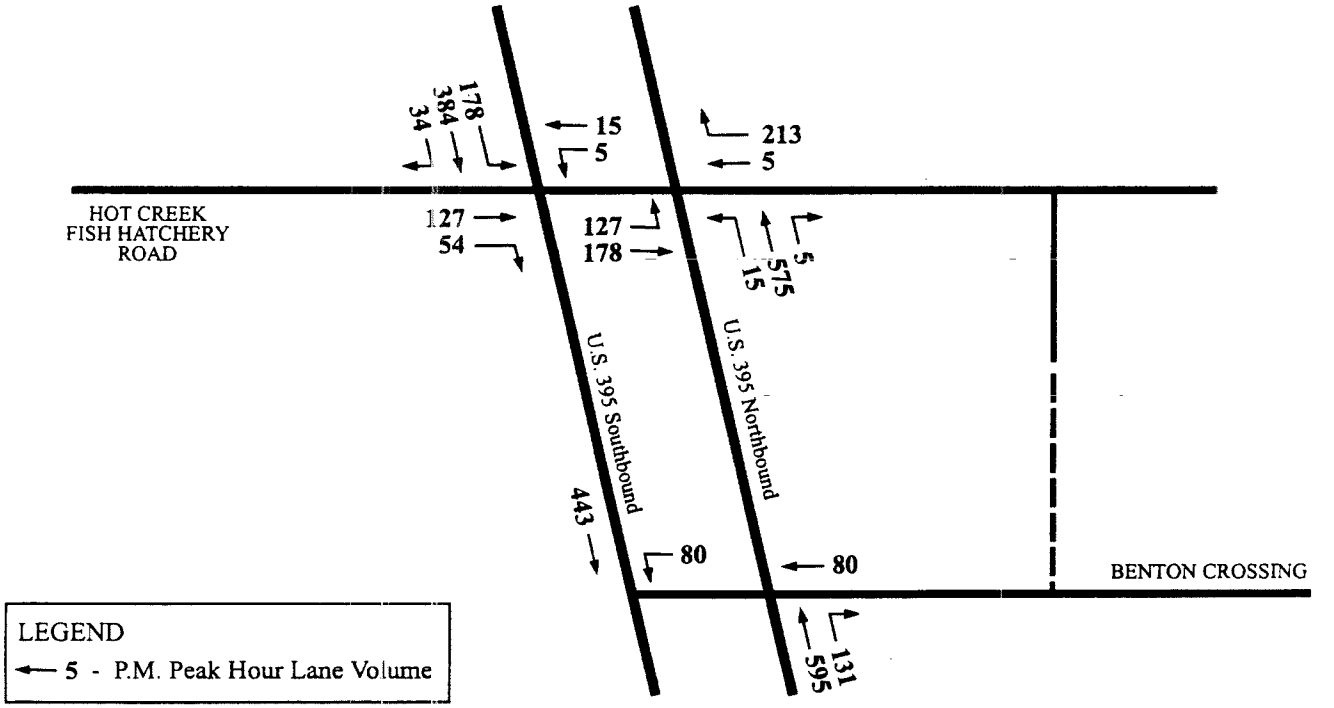
Schematic - Not to Scale

Year 2020 + Industrial Park
P.M. Peak Hour Traffic Volumes

YEAR 2020 + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES



YEAR 2020 + AIRPORT + HOT CREEK + INDUSTRIAL PARK TRAFFIC VOLUMES WITH BENTON CROSSING CONNECTION



11/28/00(TML030)

Figure 15

N

LSA Schematic - Not to Scale

Year 2020 + Airport + Hot Creek + Industrial Park
P.M. Peak Hour Traffic Volumes

APPENDIX A

HOT CREEK ROAD TRAFFIC COUNTS

4 to 6 pm 11/16/00

TYPE OF VEH L or R.

N

S

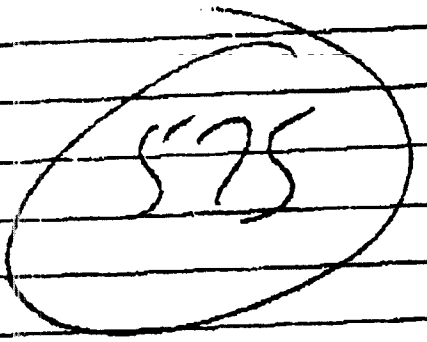
INTERSECTION

328	R	Bus
	L	CAR
	L	CAR
	R	CAR
	R	TRUCK
	L	BUS
	L	CAR
	L	CAR
	L	CAR
	L	CAR
	L	Bus
	R	CAR
	R	TRUCK
	R	TRUCK
	R	TRUCK
	R	CAR
	R	TRUCK
	R	TRUCK
	L	CAR
	L	CAR
	R	CAR
	L	TRUCK
	R	CAR
	R	TRUCK
	L	TRUCK
	L	CAR
	R	CAR

Type of VEH
2 DRR

N S

INTERSECTION



R CAR
R CAR
L TRUCK
L TRUCK
L CAR
L BUS
L TRUCK
R TRUCK
R TRUCK
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R CAR
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L TRUCK
L CAR

23 R = NORTH
24 L = SOUTH

441-553-8076

APPENDIX B

LEVEL OF SERVICE WORKSHEETS

EXISTING AND EXISTING + PROJECT(S) SCENARIOS

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 13.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	546	5	0	0	0	0	12	0	0	5	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	546	5	0	0	0	0	12	0	0	5	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:	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 Volume:	0	546	5	0	0	0	0	12	0	0	5	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	546	5	0	0	0	0	12	0	0	5	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	551	xxxxx	xxxx	549	276
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	446	768
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	446	768
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.3	xxxxx	xxxxx	13.2	9.8
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.3			10.7		
ApproachLOS:	*			*			B			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 9.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1 0	2	0 1	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	12	364	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	364	0	0	0	0	5	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:	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 Volume:	0	0	0	12	364	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	364	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	206	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	787	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	787	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.6	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	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.6		
ApproachLOS:	*			*			*			A		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 15.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	546	5	0	0	0	0	91	0	0	5	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	546	5	0	0	0	0	91	0	0	5	93
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:	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 Volume:	0	546	5	0	0	0	0	91	0	0	5	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	546	5	0	0	0	0	91	0	0	5	93
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	551	xxxxx	xxxx	549	276
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	446	768
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	445	xxxxx	xxxx	446	768
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	15.2	xxxxx	xxxxx	13.2	10.3
LOS by Move:	*	*	*	*	*	*	*	C	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			15.2			10.5		
ApproachLOS:	*			*			C			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 10.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1 0	2	0 1	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	91	364	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	91	364	0	0	0	0	5	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:	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 Volume:	0	0	0	91	364	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	91	364	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	364	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	639	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	639	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.7		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 19.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	455	136	0	0	0	0	178	0	0	85	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	455	136	0	0	0	0	178	0	0	85	213
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:	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 Volume:	0	455	136	0	0	0	0	178	0	0	85	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	455	136	0	0	0	0	178	0	0	85	213
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	591	xxxxx	xxxx	523	296
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	422	xxxxx	xxxx	462	749
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	422	xxxxx	xxxx	462	749
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	19.6	xxxxx	xxxxx	14.6	11.7
LOS by Move:	*	*	*	*	*	*	*	C	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			19.6			12.5		
ApproachLOS:	*			*			C			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 13.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 0 2 0 1			0 0 0 1 0			1 0 0 0 0		
Volume Module:												
Base Vol:	0	0	0	178	304	0	0	0	0	85	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	304	0	0	0	0	85	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:	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 Volume:	0	0	0	178	304	0	0	0	0	85	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	304	0	0	0	0	85	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	508	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	528	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	528	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.1		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 12.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 1 0	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	15	546	5	0	0	0	127	12	0	0	5	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	546	5	0	0	0	127	12	0	0	5	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:	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 Volume:	15	546	5	0	0	0	127	12	0	0	5	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	546	5	0	0	0	127	12	0	0	5	14
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	306	581	xxxxx	xxxx	579	276
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	651	428	xxxxx	xxxx	429	768
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	633	428	xxxxx	xxxx	429	768
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.5	9.8
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	608	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			12.7			10.8		
ApproachLOS:	*			*			B			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 13.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1 0	2	0 1	0 0	0	1 0	0 1	0	0 0
Volume Module:												
Base Vol:	0	0	0	12	364	34	0	127	54	5	15	0
Growth Adj:	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 1.00
Initial Bse:	0	0	0	12	364	34	0	127	54	5	15	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 1.00
PHF Adj:	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 1.00
PHF Volume:	0	0	0	12	364	34	0	127	54	5	15	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	364	34	0	127	54	5	15	0
Critical Gap Module:												
Critical Gp:	xxxxx xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	xxxxx
FollowUpTim:	xxxxx xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx xxxx	xxxxx		0	xxxx	xxxxx	xxxx	388	182	270	422	xxxxx
Potent Cap.:	xxxx xxxx	xxxxx		0	xxxx	xxxxx	xxxx	550	866	687	526	xxxxx
Move Cap.:	xxxx xxxx	xxxxx		0	xxxx	xxxxx	xxxx	550	866	530	526	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx xxxx	xxxxx		0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT		LT - LTR	- RT	
Shared Cap.:	xxxx xxxx	xxxxx		xxxx	xxxx	xxxxx	xxxx	xxxx	617	527	xxxx	xxxxx
Shrd StpDel:	xxxxx xxxx	xxxxx		xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.2	12.1	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	B	B	*	*
ApproachDel:	xxxxxx			xxxxxx			13.2			12.1		
ApproachLOS:	*			*			B			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 36.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 1 0	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	15	455	136	0	0	0	127	178	0	0	85	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	455	136	0	0	0	127	178	0	0	85	213
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:	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 Volume:	15	455	136	0	0	0	127	178	0	0	85	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	455	136	0	0	0	127	178	0	0	85	213
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	300	621	xxxxx	xxxx	553	296
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	656	406	xxxxx	xxxx	444	749
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	400	406	xxxxx	xxxx	444	749
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	15.0	11.7
LOS by Move:	*	*	*	*	*	*	*	*	*	*	C	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	404	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	36.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	E	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			36.8			12.7		
ApproachLOS:	*			*			E			B		

Existing + Airport + Hot Creek + Industrial Park w/ Mitigation

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 19.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	0 0	0 0	0	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	15	455	136	0	0	0	127	178	0	0	85	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	455	136	0	0	0	127	178	0	0	85	213
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:	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 Volume:	15	455	136	0	0	0	127	178	0	0	85	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	455	136	0	0	0	127	178	0	0	85	213
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	300	621	xxxxx	xxxx	553	296
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	656	406	xxxxx	xxxx	444	749
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	400	406	xxxxx	xxxx	444	749
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	18.1	20.6	xxxxx	xxxxx	15.0	11.7
LOS by Move:	*	*	*	*	*	*	C	C	*	*	C	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			19.6			12.7		
ApproachLOS:	*			*			C			B		

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 21.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0	2 0	1	0 0	0 1	0	0	1 0	0 0
Volume Module:												
Base Vol:	0	0	0	178	304	34	0	127	54	85	15	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	304	34	0	127	54	85	15	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:	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 Volume:	0	0	0	178	304	34	0	127	54	85	15	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	304	34	0	127	54	85	15	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	660	152	572	694	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	386	900	434	369	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	386	900	304	369	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	465	312	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	17.6	21.9	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	C	C	*	*
ApproachDel:	xxxxxx			xxxxxx			17.6			21.9		
ApproachLOS:	*			*			C			C		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 16.1 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	455	5	0	0	0	0	178	0	0	5	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	455	5	0	0	0	0	178	0	0	5	213
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:	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 Volume:	0	455	5	0	0	0	0	178	0	0	5	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	455	5	0	0	0	0	178	0	0	5	213
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	460	xxxxx	xxxx	458	230
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	501	xxxxx	xxxx	503	814
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	501	xxxxx	xxxx	503	814
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	16.1	xxxxx	xxxxx	12.2	11.0
LOS by Move:	*	*	*	*	*	*	*	C	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.1			11.0		
ApproachLOS:	*			*			C			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 11.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	0	1 0 2	0	1	0 0 0	1	0	1 0 0	0	0
Volume Module:												
Base Vol:	0	0	0	178	304	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	304	0	0	0	0	5	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:	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 Volume:	0	0	0	178	304	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	304	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	508	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	528	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	528	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT	LT - LTR		RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.9		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 I-395 N / Benton Crossing

Average Delay (sec/veh): 14.5 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1	1 0		0 0 0	0 0		0 1 0	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	460	131	0	0	0	0	0	0	0	80	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	460	131	0	0	0	0	0	0	0	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
PHF Adj:	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 Volume:	0	460	131	0	0	0	0	0	0	0	80	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	460	131	0	0	0	0	0	0	0	80	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	526	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	460	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	460	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.5	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			14.5		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #6 I-395 S / Benton Crossing

****

Average Delay (sec/veh): 9.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 0 2 0 0			0 0 0 1 0			1 0 0 0 0		
Volume Module:												
Base Vol:	0	0	0	0	309	0	0	0	0	80	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	309	0	0	0	0	80	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:	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 Volume:	0	0	0	0	309	0	0	0	0	80	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	309	0	0	0	0	80	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	155	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	842	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	842	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.7	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	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.7		
ApproachLOS:	*			*			*			A		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 23.4 Worst Case 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:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	15	455		5		0	0		0		127	178		0		0	5		213	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	15	455		5		0	0		0		127	178		0		0	5		213	
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:	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 Volume:	15	455		5		0	0		0		127	178		0		0	5		213	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
Final Vol.:	15	455		5		0	0		0		127	178		0		0	5		213	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx					7.1	6.5	xxxxx	xxxxx		6.5	6.2			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx					3.5	4.0	xxxxx	xxxxx		4.0	3.3			
Capacity Module:																				
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx					260	490	xxxxx	xxxx		488	230			
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx					697	482	xxxxx	xxxx		483	814			
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx					511	482	xxxxx	xxxx		483	814			
Level Of Service Module:																				
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.5	11.0								
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	B								
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT										
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	493	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	23.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	*	*	*	*	*	*	C	*	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			23.4			11.0										
ApproachLOS:	*			*			C			B										

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 17.6 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			1 0 2 0 1			0 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	0	0	0	178	304	34	0	127	54	5	15	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	304	34	0	127	54	5	15	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:	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 Volume:	0	0	0	178	304	34	0	127	54	5	15	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	304	34	0	127	54	5	15	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	660	152	572	694	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	386	900	434	369	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	386	900	304	369	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	465	350	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	17.6	15.9	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	C	C	*	*
ApproachDel:	xxxxxx			xxxxxx			17.6			15.9		
ApproachLOS:	*			*			C			C		

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 I-395 N / Benton Crossing

Average Delay (sec/veh): 14.7 Worst Case 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:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:			Include					Include					Include					Include		
Lanes:	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	475	131			0	0	0			0	0	0			0	80	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	475	131			0	0	0			0	0	0			0	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		
PHF Adj:	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 Volume:	0	475	131			0	0	0			0	0	0			0	80	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Final Vol.:	0	475	131			0	0	0			0	0	0			0	80	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	6.5	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	4.0	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	541	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	451	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	451	xxxxx		
Level Of Service Module:																				
Stopped Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	14.7	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	B	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedStpDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					14.7				
ApproachLOS:	*					*					*					B				

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 I-395 S / Benton Crossing

Average Delay (sec/veh): 9.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0	2 0	0	0 0	0 1	0	1 0	0 0	0
Volume Module:												
Base Vol:	0	0	0	0	363	0	0	0	0	80	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	363	0	0	0	0	80	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:	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 Volume:	0	0	0	0	363	0	0	0	0	80	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	363	0	0	0	0	80	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	182	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	813	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	813	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	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	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

YEAR 2020 AND YEAR 2020 + PROJECT(S) SCENARIOS

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 14.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	666	5	0	0	0	0	12	0	0	5	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	666	5	0	0	0	0	12	0	0	5	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:	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 Volume:	0	666	5	0	0	0	0	12	0	0	5	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	666	5	0	0	0	0	12	0	0	5	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	671	xxxxx	xxxx	669	336
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	380	xxxxx	xxxx	381	711
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	380	xxxxx	xxxx	381	711
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	14.8	xxxxx	xxxxx	14.6	10.2
LOS by Move:	*	*	*	*	*	*	*	B	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			14.8			11.3		
ApproachLOS:	*			*			B			B		

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 9.9 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1 0	2	0 1	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	12	444	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	444	0	0	0	0	5	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:	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 Volume:	0	0	0	12	444	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	444	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	246	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	747	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	747	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.9	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	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 17.4 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	666	5	0	0	0	0	91	0	0	5	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	666	5	0	0	0	0	91	0	0	5	93
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:	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 Volume:	0	666	5	0	0	0	0	91	0	0	5	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	666	5	0	0	0	0	91	0	0	5	93
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	671	xxxxx	xxxx	669	336
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	380	xxxxx	xxxx	381	711
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	380	xxxxx	xxxx	381	711
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.4	xxxxx	xxxxx	14.6	10.8
LOS by Move:	*	*	*	*	*	*	*	C	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			17.4			11.0		
ApproachLOS:	*			*			C			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 11.0 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	0	1 0	2 0	1	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	91	444	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	91	444	0	0	0	0	5	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:	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 Volume:	0	0	0	91	444	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	91	444	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	404	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	606	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	606	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			11.0		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 24.3 Worst Case 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:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	575		136		0	0		0		0	178		0		0	85		213	
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Initial Bse:	0	575		136		0	0		0		0	178		0		0	85		213	
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:	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 Volume:	0	575		136		0	0		0		0	178		0		0	85		213	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
Final Vol.:	0	575		136		0	0		0		0	178		0		0	85		213	
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	6.5		xxxxx		xxxxx	6.5		6.2	
FollowUpTim:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	4.0		xxxxx		xxxxx	4.0		3.3	
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	711		xxxxx		xxxx	643		356	
Potent Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	361		xxxxx		xxxx	394		693	
Move Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	361		xxxxx		xxxx	394		693	
Level Of Service Module:																				
Stopped Del:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	24.3		xxxxx		xxxxx	16.6		12.5	
LOS by Move:	*	*		*		*	*		*		*	C		*		*	C		B	
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	
Shrd StpDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx		xxxxx	xxxx		xxxxx	
Shared LOS:	*	*		*		*	*		*		*	*		*		*	*		*	
ApproachDel:	xxxxxx					xxxxxx					24.3					13.7				
ApproachLOS:	*					*					C					B				

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 13.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	0	1 0	2 0	1	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	178	384	0	0	0	0	85	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	384	0	0	0	0	85	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:	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 Volume:	0	0	0	178	384	0	0	0	0	85	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	384	0	0	0	0	85	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	548	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	501	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	501	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.7		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 13.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	0 0	0 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	15	666	5	0	0	0	127	12	0	0	5	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	666	5	0	0	0	127	12	0	0	5	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:	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 Volume:	15	666	5	0	0	0	127	12	0	0	5	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	666	5	0	0	0	127	12	0	0	5	14
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	366	701	xxxxx	xxxx	699	336
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	594	365	xxxxx	xxxx	367	711
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	577	365	xxxxx	xxxx	367	711
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	15.0	10.2
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	549	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	B	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.8			11.4		
ApproachLOS:	*			*			B			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 14.4 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0 2	0 1		0 0 0	1 0		0 1 0	0 0	
Volume Module:												
Base Vol:	0	0	0	12	444	34	0	127	54	5	15	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	12	444	34	0	127	54	5	15	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:	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 Volume:	0	0	0	12	444	34	0	127	54	5	15	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	12	444	34	0	127	54	5	15	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	468	222	310	502	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	496	823	647	474	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	496	823	485	474	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	562	477	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	14.4	12.9	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	B	B	*	*
ApproachDel:	xxxxxx			xxxxxx			14.4			12.9		
ApproachLOS:	*			*			B			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 58.7 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	1 0	0	0	0	0 0	0	1	0	0 0	0	0	1	0 1
Volume Module:																
Base Vol:	15	575	136		0	0	0		127	178	0		0	85	213	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	15	575	136		0	0	0		127	178	0		0	85	213	
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:	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 Volume:	15	575	136		0	0	0		127	178	0		0	85	213	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	15	575	136		0	0	0		127	178	0		0	85	213	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		7.1	6.5	xxxxx		xxxxx	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3.5	4.0	xxxxx		xxxxx	4.0	3.3	
Capacity Module:																
Cnflict Vol:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		360	741	xxxxx		xxxx	673	356	
Potent Cap.:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		599	347	xxxxx		xxxx	379	693	
Move Cap.:	0	xxxx	xxxxx		xxxx	xxxx	xxxxx		343	347	xxxxx		xxxx	379	693	
Level Of Service Module:																
Stopped Del:	0.0	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	17.2	12.5	
LOS by Move:	*	*	*		*	*	*		*	*	*		*	C	B	
Movement:	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		345	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		58.7	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		F	*	*		*	*	*	
ApproachDel:		xxxxxx				xxxxxx				58.7				13.8		
ApproachLOS:		*				*				F				B		

2020 + Airport + Hot Creek + Industrial Park w/ Mitigation

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 24.0 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		1 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	15	575	136	0	0	0	127	178	0	0	85	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	575	136	0	0	0	127	178	0	0	85	213
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:	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 Volume:	15	575	136	0	0	0	127	178	0	0	85	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	575	136	0	0	0	127	178	0	0	85	213
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	360	741	xxxxx	xxxx	673	356
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	599	347	xxxxx	xxxx	379	693
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	343	347	xxxxx	xxxx	379	693
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	21.5	25.9	xxxxx	xxxxx	17.2	12.5
LOS by Move:	*	*	*	*	*	*	C	D	*	*	C	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			24.0			13.8		
ApproachLOS:	*			*			C			B		

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Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 24.7 Worst Case 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:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	2	0 1	0	0	0	1 0	0	1	0	0 0
Volume Module:																
Base Vol:	0	0	0		178	384	34		0	127	54		85	15	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0		178	384	34		0	127	54		85	15	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:	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 Volume:	0	0	0		178	384	34		0	127	54		85	15	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	0	0		178	384	34		0	127	54		85	15	0	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		xxxxx	6.5	6.2		7.1	6.5	xxxxx	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		xxxxx	4.0	3.3		3.5	4.0	xxxxx	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		0	xxxx	xxxxx		xxxx	740	192		612	774	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		0	xxxx	xxxxx		xxxx	347	855		408	332	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		0	xxxx	xxxxx		xxxx	347	855		274	332	xxxxx	
Level Of Service Module:																
Stopped Del:	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		*	*	*		*	*	*	
Movement:	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT	LT	-	LTR	- RT
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	422		281	xxxx	xxxxx	
Shrd StpDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	19.8		24.7	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	C		C	*	*	
ApproachDel:	xxxxxx				xxxxxx				19.8				24.7			
ApproachLOS:	*				*				C				C			

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 19.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0 1	1 0		0 0 0	0 0		0 0 1	0 0		0 0 1	0 1	
Volume Module:												
Base Vol:	0	575	5	0	0	0	0	178	0	0	5	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	575	5	0	0	0	0	178	0	0	5	213
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:	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 Volume:	0	575	5	0	0	0	0	178	0	0	5	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	575	5	0	0	0	0	178	0	0	5	213
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	580	xxxxx	xxxx	578	290
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	428	xxxxx	xxxx	430	754
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	428	xxxxx	xxxx	430	754
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	19.2	xxxxx	xxxxx	13.5	11.6
LOS by Move:	*	*	*	*	*	*	*	C	*	*	B	B
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
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			19.2			11.7		
ApproachLOS:	*			*			C			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 12.3 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0	0	1 0	2 0	1	0 0	0 1	0	1 0	0 0	0
Volume Module:												
Base Vol:	0	0	0	178	384	0	0	0	0	5	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	384	0	0	0	0	5	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:	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 Volume:	0	0	0	178	384	0	0	0	0	5	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	384	0	0	0	0	5	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	548	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	501	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	501	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		xxxxxx			xxxxxx			xxxxxx			12.3	
ApproachLOS:		*			*			*			B	

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 I-395 N / Benton Crossing

Average Delay (sec/veh): 16.5 Worst Case 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:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	580	131			0	0	0			0	0	0			0	80	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	580	131			0	0	0			0	0	0			0	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		
PHF Adj:	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 Volume:	0	580	131			0	0	0			0	0	0			0	80	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Final Vol.:	0	580	131			0	0	0			0	0	0			0	80	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	6.5	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	4.0	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	646	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	393	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	393	xxxxx		
Level Of Service Module:																				
Stopped Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	16.5	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	C	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Shrd StpDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					16.5				
ApproachLOS:	*					*					*					C				

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 I-395 S / Benton Crossing

Average Delay (sec/veh): 10.0 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0	0 0	1 0	2	0 0	0 0	0	1 0	1 0	0	0 0
Volume Module:												
Base Vol:	0	0	0	0	389	0	0	0	0	80	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	389	0	0	0	0	80	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:	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 Volume:	0	0	0	0	389	0	0	0	0	80	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	389	0	0	0	0	80	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	195	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	799	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	799	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 I-395 N / Hot Creek Fish Hatchery Road

Average Delay (sec/veh): 31.7 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	1 0	1 1	0	0 0	0 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	15	575	5	0	0	0	127	178	0	0	5	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	575	5	0	0	0	127	178	0	0	5	213
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:	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 Volume:	15	575	5	0	0	0	127	178	0	0	5	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	15	575	5	0	0	0	127	178	0	0	5	213
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.1	6.5	xxxxx	xxxxx	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	xxxxx	xxxxx	4.0	3.3
Capacity Module:												
Cnflict Vol:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	320	610	xxxxx	xxxx	608	290
Potent Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	637	412	xxxxx	xxxx	413	754
Move Cap.:	0	xxxx	xxxxx	xxxx	xxxx	xxxxx	453	412	xxxxx	xxxx	413	754
Level Of Service Module:												
Stopped Del:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.8	11.6
LOS by Move:	*	*	*	*	*	*	*	*	*	*	B	B
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	428	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	31.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	D	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			31.7			11.7		
ApproachLOS:	*			*			D			B		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

****

Intersection #2 I-395 S / Hot Creek Fish Hatchery Road

****

Average Delay (sec/veh): 19.8 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0 2	0 1		0 0 0	1 0		0 1 0	0 0	
Volume Module:												
Base Vol:	0	0	0	178	384	34	0	127	54	5	15	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	178	384	34	0	127	54	5	15	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:	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 Volume:	0	0	0	178	384	34	0	127	54	5	15	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	178	384	34	0	127	54	5	15	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	6.5	6.2	7.1	6.5	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	4.0	3.3	3.5	4.0	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	740	192	612	774	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	347	855	408	332	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	0	xxxx	xxxxx	xxxx	347	855	274	332	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	422	315	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	19.8	17.2	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	C	C	*	*
ApproachDel:	xxxxxx			xxxxxx			19.8			17.2		
ApproachLOS:	*			*			C			C		

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 I-395 N / Benton Crossing

Average Delay (sec/veh): 16.8 Worst Case 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:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Volume Module:																				
Base Vol:	0	595	131			0	0	0			0	0	0			0	80	0		
Growth Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
Initial Bse:	0	595	131			0	0	0			0	0	0			0	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		
PHF Adj:	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 Volume:	0	595	131			0	0	0			0	0	0			0	80	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
Final Vol.:	0	595	131			0	0	0			0	0	0			0	80	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	6.5	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	4.0	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	661	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	385	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	385	xxxxx		
Level Of Service Module:																				
Stopped Del:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	16.8	xxxxx		
LOS by Move:	*	*	*			*	*	*			*	*	*			*	C	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			0	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Shrd StpDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					16.8				
ApproachLOS:	*					*					*					C				

Level Of Service Computation Report
1997 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 I-395 S / Benton Crossing

Average Delay (sec/veh): 10.2 Worst Case 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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0 0		1 0 2	0 0		0 0 0	1 0		1 0 0	0 0	
Volume Module:												
Base Vol:	0	0	0	0	443	0	0	0	0	80	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	443	0	0	0	0	80	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:	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 Volume:	0	0	0	0	443	0	0	0	0	80	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	443	0	0	0	0	80	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	222	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	771	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	771	xxxx	xxxxx
Level Of Service Module:												
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.2	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0	xxxx	xxxx	xxxxx
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.2		
ApproachLOS:	*			*			*			B		

APPENDIX C

AIRPORT TRIP GENERATION

Les Card

From: John Bergener [J_Bergener@Ricondo.com]
Sent: Thursday, November 16, 2000 4:41 PM
To: les.card@lsa-assoc.com
Subject: [Fwd: MMH Trip Generation]

MMH_GT3.xls

-------- Original Message --------
Subject: MMH Trip Generation
Date: Thu, 16 Nov 2000 16:18:02 -0800
From: John Bergener <J_Bergener@Ricondo.com>
Reply-To: J_Bergener@Ricondo.com
Organization: Ricondo & Associates, Inc.
To: les.card@lsa-oc.com
CC: T_Cornell@ricondo.com

Vehicle trip generation numbers as we discussed.
--
John Bergener
Ricondo & Associates, Inc.
221 Main St. Suite 1460
San Francisco, CA 94105
Phone: (415) 547-1930
FAX: (415) 547-1940
J_Bergener@Ricondo.com

	Vehicle trip generation at MMH (Winter)				
	PAL 1		PAL 5 (year 2020)		
	Airport peak hour (12-1 p.m.)	Daily	Airport peak hour (12-1 p.m.)	Traffic peak period (4-6 p.m.)	Daily
Passengers					
Arriving	249	351	452	252	1,380
Departing	254	351	294	260	1,380
Vehicles					
Buses	7	10	11	7	41
Shuttle vans	7	10	10	7	37
Rental cars	32	45	51	33	189
Private vehicles, parking	11	15	18	12	67
Private vehicles, dropoff/pickup	20	28	31	20	115
Total Vehicle Trips [a]	77	108	121	79	449

(a) One vehicle trip equals one round trip from the town of Mammoth Lakes, CA to the Mammoth Lakes-Yosemite Valley Airport and back to the town of Mammoth Lakes, CA.

APPENDIX D

TSE REVISED TRIP GENERATION AND TRIP ASSIGNMENT

TRAFFIC SAFETY ENGINEERS

November 27, 2000

Ms. Sandra Bauer
Bauer Environmental Services
15901 Red Hill Avenue, Suite 210
Irvine, CA 92614

Subject: Sierra Business Park Specific Plan

Dear Ms. Bauer:

In response to Caltrans' letter of comments dated November 8, 2000 for the subject development, our responses to the specific traffic comments are as follows:

1. Comment: Based on our preliminary review of the submitted traffic analysis, we do not agree with the conclusions for the full buildout because of other developments within this vicinity.

   Response: In conjunction with the future Mammoth Lakes/ Yosemite Airport Expansion Plan, the Hot Creek Aviation Mixed-use Development is also proposed. This development is to be located immediately adjacent to the airport. Anticipated site uses include a 24-fuel pump gasoline/service station with convenience market, 188 units of high-density residential/lodging, a 62-room hotel, a 100-campsite recreational park and a 100-seat restaurant. The Airport Expansion Plan and the Hot Creek Aviation Mixed-use Project are the only two known significant developments within the vicinity of the proposed Sierra Business Park Project.

   According to LSA's traffic impact study, both the Airport Expansion and Hot Creek Mixed-use Developments will generate a total of 3,688 daily trips and 504 trips during the P.M. peak traffic hour (see Exhibit "A"). Figure 1 shows the project trips assigned to the intersection of Highway 395 and Hot Creek Fish Hatchery Road.

2. Comment: A thorough traffic intersection operation study needs to be completed to assess the potential impacts to and remediation measures required for U.S. Highway 395.

Response: Figure 2 shows the existing P.M. peak hour traffic turning movements at the intersection of Highway 395 and Sierra Business Park Project Entrance/Hot Creek Fish Hatchery Road.

Traffic volume data for Highway 395 were provided by Caltrans. These traffic volumes represent the existing P.M. peak hour counts during the peak traffic season of the year, i.e. winter months.

Future project traffic volumes for the proposed Sierra Business Park Project were forecasted based on trip generation rate established by the Institute of Transportation Engineers (ITE) for Land Use Code (130), Industrial Park. Traffic counts were recently conducted at an existing industrial/business park center located in the Town of Mammoth Lake. Results of this traffic survey indicate that the derived trip rate from this industrial site is consistent with the trip generation rate established by ITE for an industrial park land use. For this reason, ITE's trip generation rate for Land Use Code (130), Industrial Park is determined to be most appropriate for forecasting future traffic for the proposed Sierra Business Park Project.

Table A, below, shows the trip generation forecasts for the proposed Sierra Business Park Project .

TABLE A

Site Use	A.M. Peak Hour			P.M. Peak Hour			Daily Traffic
	Inbound	Outbound	Total	Inbound	Outbound	Total	
Generation Rate: Industrial Park (Trips/Acre)	8.88	1.82	10.7	2.35	8.82	11.17	72.7
Traffic Generated: Industrial Park 36.7 - 12.64(*) = 24.06 acres	215	44	259	56	213	269	1,749
** Less 15% pass-by and work trips	-32	-7	-39	-8	-32	-40	-262
Net Project Traffic	183	37	220	48	181	229	1,487

(*) Total unbuildable areas = 4.1 acres for internal streets, plus 2.8 acres for existing concrete plant plus 1.04 acres for Lot 15 which is reserved for utility and water wells plus 4.7 acres for perimeter maintenance zone.

** A 15% reduction was applied due to pass-by trips and existing employment trips originated from communities south of the Town of Mammoth Lakes that no longer need to work in the Town because of the proposed project.

Figure 3 shows the project trips assigned to the intersection of Highway 395 and project entrance/Hot Creek Fish Hatchery Road.

Intersection Traffic Impact Analysis

Exhibit "B" shows the detailed volume-to-capacity ratio and level of service calculations for existing traffic, existing traffic plus Sierra Business Park traffic, and existing traffic plus Sierra Business Park traffic plus Airport Expansion traffic plus Hot Creek Mixed-use Project traffic including Year 2020 traffic analysis at the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road. These detailed volume-to-capacity and level of service calculations were provided by LSA, traffic consultant for the Airport Expansion and Hot Creek Projects, and are re-outlined below for comparison.

TABLE B

Scenario	Highway 395/Hot Creek Fish Hatchery Road[1] Northbound Delay[2]	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Existing Year 1999/2000 Conditions[3]	13.3 sec.	B	9.6 sec.	A
Existing + Sierra Business Park	12.7 sec.	B	13.2 sec.	C
Existing + Airport Expansion	15.2 sec.	C	10.7 sec.	B
Existing + Airport Expansion + Hot Creek	19.6 sec.	C	13.1 sec.	B
Existing + Sierra Business Park + Airport Expansion+ Hot Creek	36.8 sec.	E	21.9 sec	C
Existing + Sierra Business Park + Airport Expansion+ Hot Creek (with median mitigation)	19.6 sec.	C	-	-
WITH CONNECTION TO BENTON CROSSING[4]				
Existing + Airport Expansion + Hot Creek	16.1 sec.	C	11.9 sec.	B
Existing + Airport Expansion + Hot Creek + Sierra Business Park	23.4sec.	C	17.6 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.

[3] Existing conditions are based on Caltrans 1999 counts on mainline segments, and manual p.m. peak hour counts on Hot Creek Fish Hatchery Road conducted in November , 2000

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

TABLE C

Scenario	Highway 395/Hot Creek Fish hatchery Road[1] Northbound Delay[2]	LOS	Southbound Delay	LOS
WITH EXISTING CIRCULATION SYSTEM				
Year 2020 Baseline[3]	14.8 sec.	B	9.9 sec.	A
2020 + Sierra Business Park	13.8 sec.	B	14.4 sec.	B
2020 + Airport Expansion	17.4 sec.	C	11.0 sec.	B
2020 + Airport Expansion + Hot Creek	24.3 sec.	C	13.7 sec.	B
2020 + Sierra Business Park + Airport Expansion + Hot Creek	58.7 sec.	F	24.7 sec	C
Existing + Sierra Business Park + Airport Expansion+ Hot Creek (with median mitigation)	24.0 sec.	C	-	-
WITH CONNECTION TO BENTON CROSSING[4]				
2020 + Sierra Business park + Airport Expansion + Hot Creek	19.2 sec.	C	12.3 sec.	B
2020 + Sierra Business park+ Airport Expansion + Hot Creek	31.7 sec.	D	19.8 sec.	C

Notes:

[1] Due to the current intersection configuration, the northbound and southbound approaches on US-395 can be analyzed as separate intersections.

[2] Intersections are analyzed through the Highway Capacity Manual (HCM) 1997 Operations Analysis. Delay is expressed in seconds of average delay per vehicle, LOS = Level of Service.

[3] Per Caltrans, District 9, a 1.0% per year growth rate compounded annually was used to determine the 2020 baseline volumes on US-395. This rate constitutes a growth of 22.0% from 2000 to 2020.

[4] A roadway connection to Benton Crossing may be provided with the Hot Creek Aviation Mixed-use and Airport Expansion projects.

As indicated in Tables B and C, the intersection of Highway 395 and Project Entrance/Hot Creek Fish Hatchery Road will continue to maintain an acceptable 'C" level of service or better with the addition of traffic from the proposed Sierra Business Park Project for both Current Year and Year 2020 traffic conditions. However, with additional traffic from the Sierra Business Park Project, the Airport Expansion Project and the Hot Creek Aviation Mixed-use Project, the intersection will operate at an unacceptable "E" level of service for current traffic condition and "F" for Year 2020 traffic conditions. To mitigate traffic impacts, installation of separate left-turn and through traffic lanes in the median opening area of Highway 395 or construction of a connector road to the Benton

Crossing with Highway 395 from the airport developments would be required (see Figure 4). With either mitigation improvements implemented, the intersection level of service would operate with a satisfactory D or better.

We trust that the above information/clarifications will be of assistance to Caltrans. If you have any questions or need additional information, please do not hesitate to call us.

Respectfully submitted,

C. Hui Lai, P.E.
Traffic Engineer

FIGURES

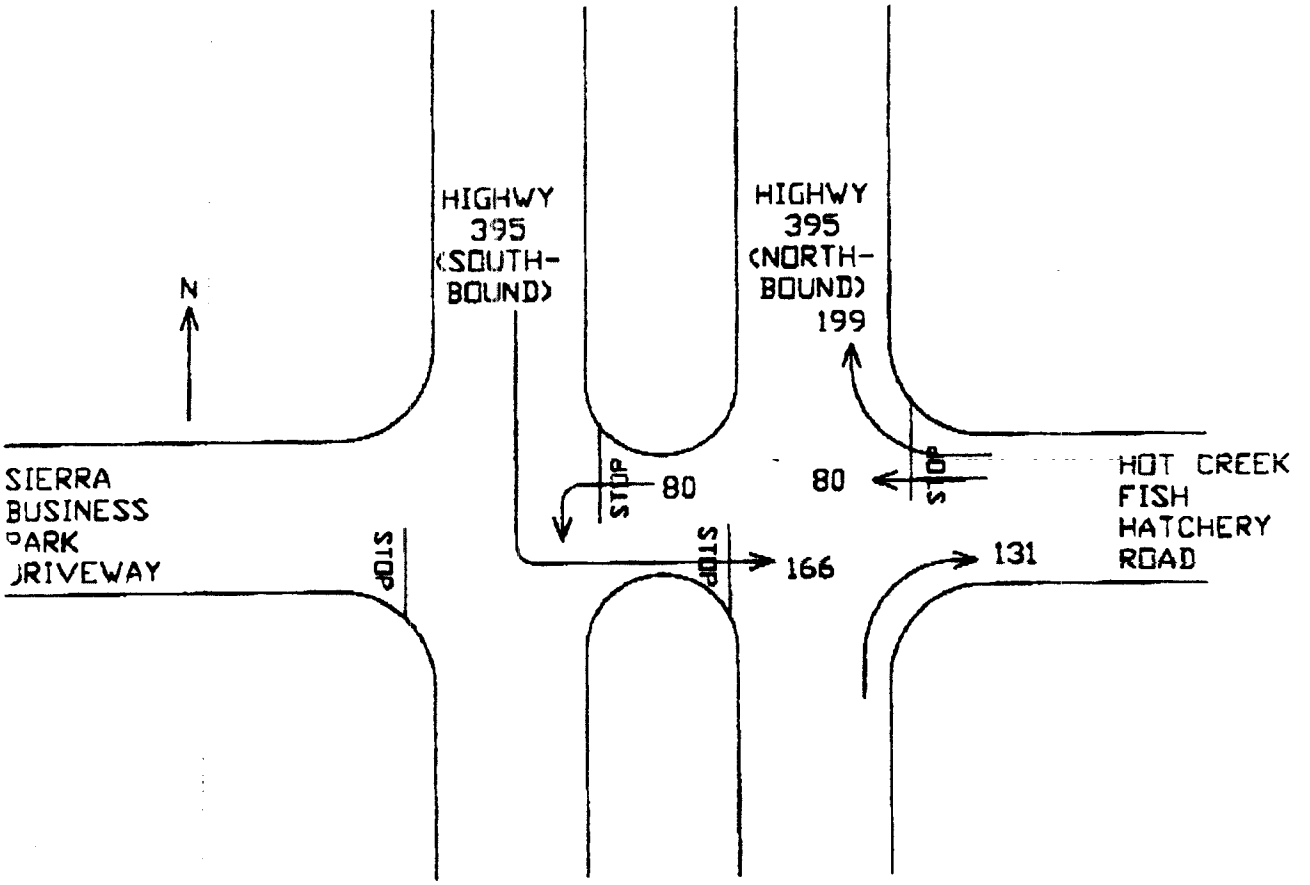


FIGURE 1

CUMULATIVE MAMMOTH LAKES/YOSEMITE AIRPORT EXPANSION PROJECT TRAFFIC PLUS HOT CREEK MIXED-USE PROJECT TRAFFIC (P.M. PEAK TRAFFIC HOUR)

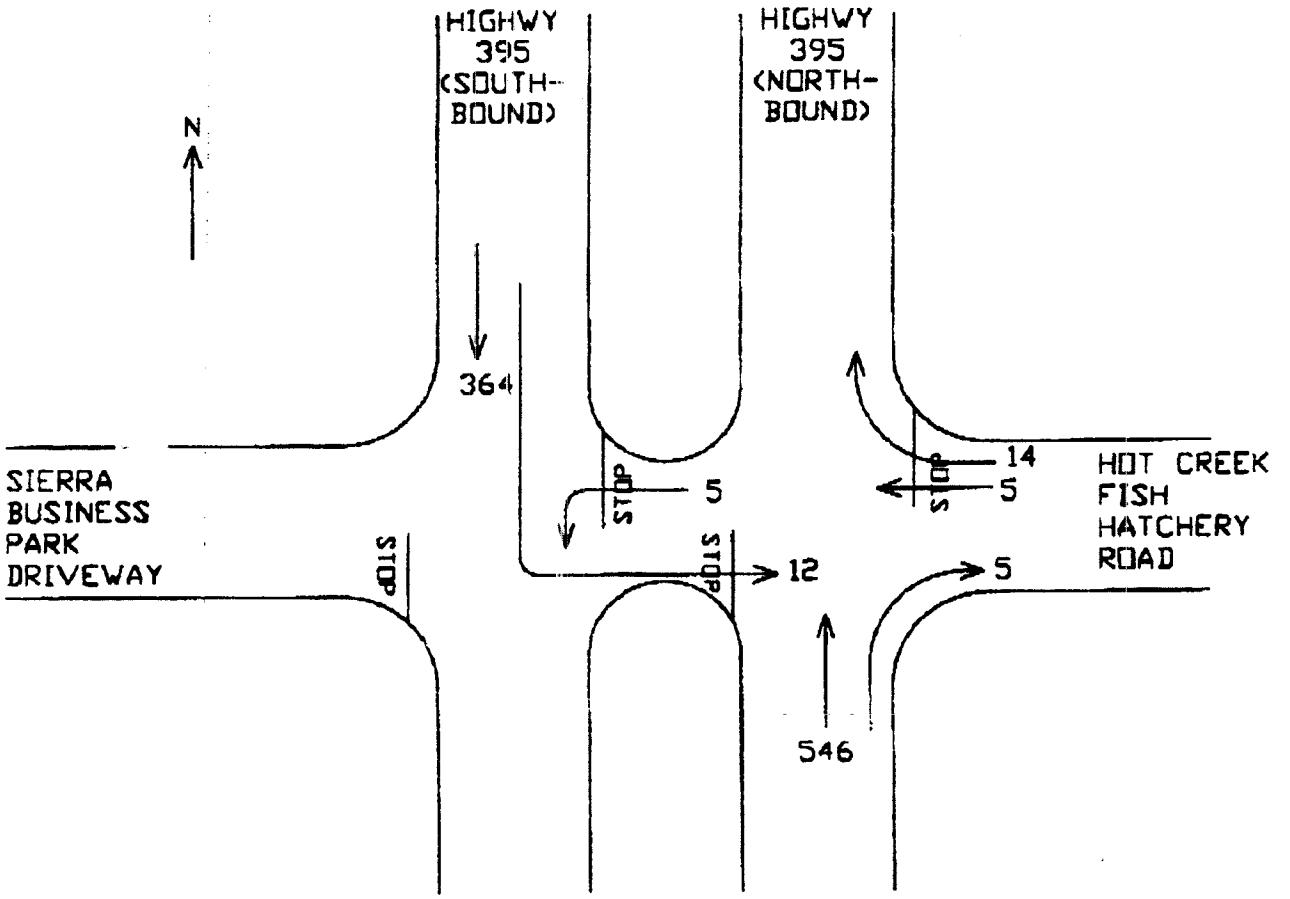


FIGURE 2

EXISTING P.M. PEAK HOUR TRAFFIC

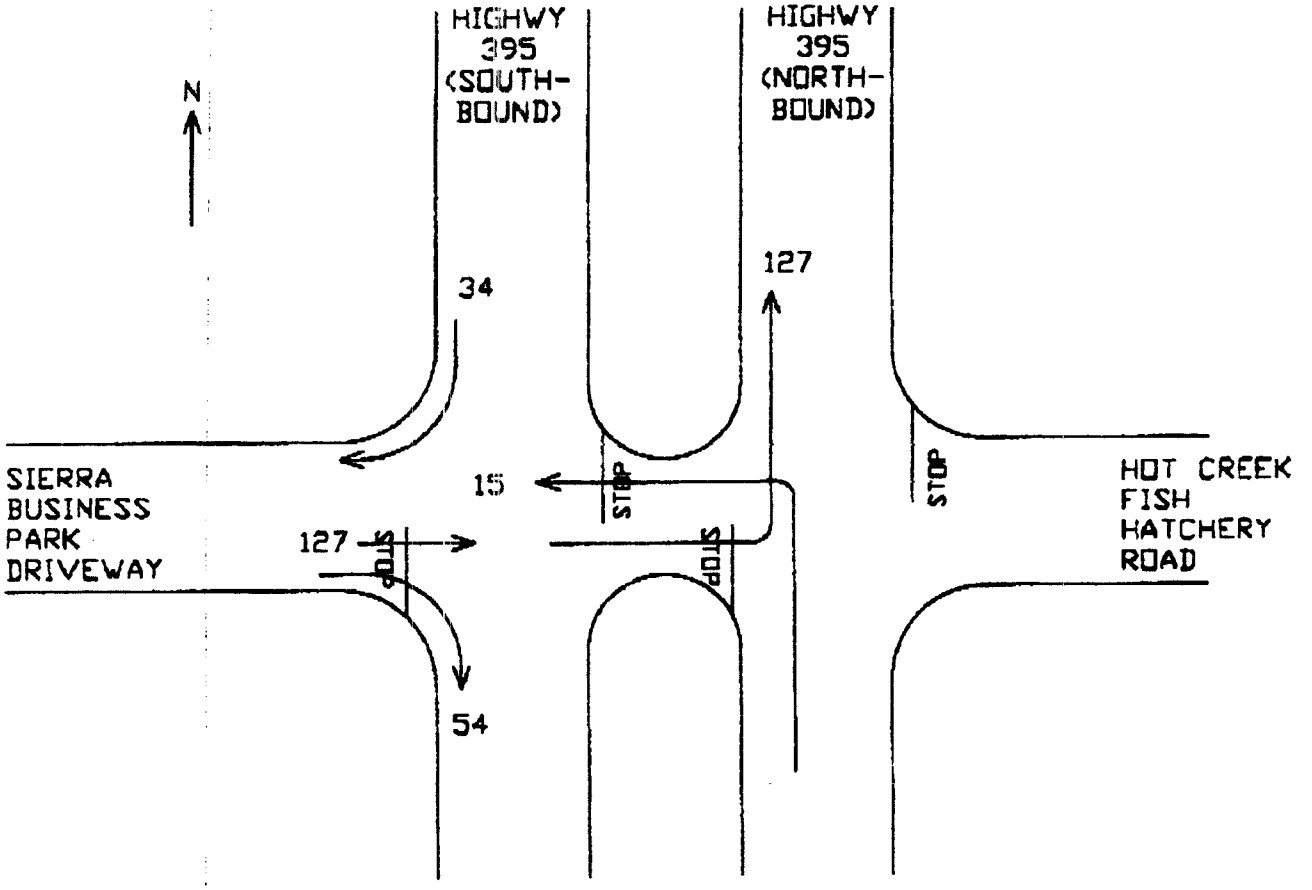


FIGURE 3

P.M. PEAK TRAFFIC HOUR
SIERRA BUSINESS PARK TRAFFIC

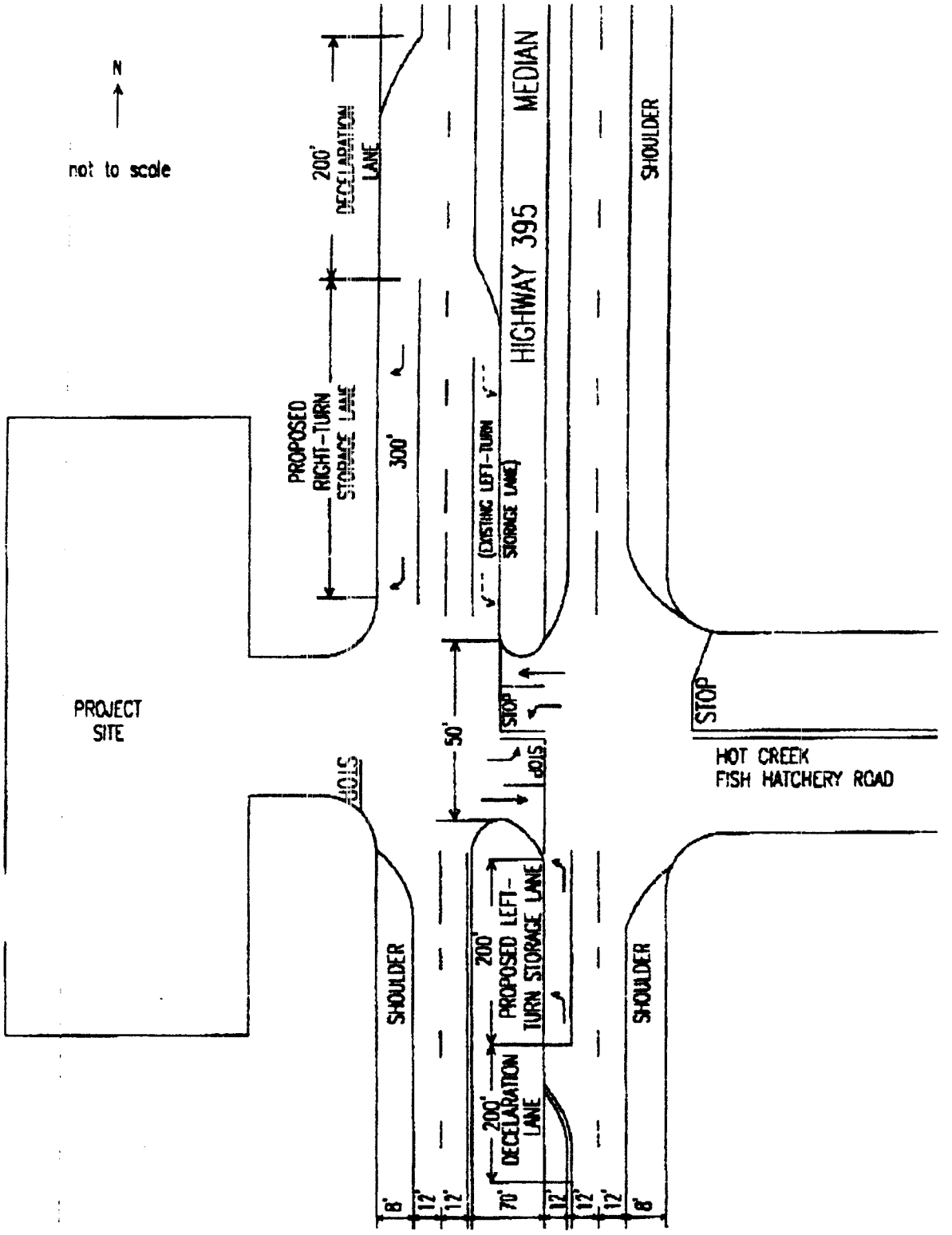


FIGURE 4
PROPOSED INTERSECTION TRAFFIC TURN LANE CONFIGURATIONS

EXHIBIT "A"

AIRPORT EXPANSION AND HOT CREEK MIXED-USE PROJECT TRIP GENERATION

Table B - Mammoth Lakes -Yosemite Valley Airport Area Trip Generation

Land Use	Size	Units	ADT	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total
TRIP RATES						
Mammoth Lakes-Yosemite Valley Airport[1]	*based on data provided by Mammoth Lakes-Yosemite Valley Airport*					
Hot Creek Aviation Mixed-Used Development[2]						
Gasoline/Service Station w/ Convenience Market	per fueling position (FP)		162.78	6.69	6.69	13.38
Residential High Density (MF) Seasonal	per dwelling unit (DU)		8.00	0.50	0.25	0.75
Hotel	per occupied room		8.92	0.35	0.36	0.71
Campground/Recreational Vehicle Park	per occupied campsite		4.00	0.20	0.20	0.39
High Turnover Sit-Down Restaurant	per seat		4.83	0.24	0.18	0.42
Sierra Business Park Specific Plan[3]	*based on data provided in Morgan Industrial Park Specific Plan TIA*					
TRIP GENERATION						
Mammoth Lakes-Yosemite Valley Airport	702	passengers	898	79	79	158
Hot Creek Aviation Mixed-Used Development						
Gasoline/Service Station w/ Convenience Market	24	FPs	3,907	161	161	321
Residential High Density (MF) Seasonal[4]	150	DUs	1,203	76	37	113
Hotel[4]	50	rooms	442	17	18	35
Campground/Recreational Vehicle Park[4]	80	campsites	320	16	16	31
High Turnover Sit-Down Restaurant	100	seats	483	24	18	42
Sierra Business Park Specific Plan	36	acres	1,487	48	181	229
Total Trip Generation			**8,740**	**420**	**509**	**929**
TRIP REDUCTIONS						
Hot Creek Aviation Mixed-Use Development						
Gasoline/Service Station w/ Convenience Market[5]	(90 percent reduction)		-3,516	-145	-145	-289
Residential High Density (MF) Seasonal[6]	(60 percent reduction)		-722	-45	-22	-68
Hotel[7]	(75 percent reduction)		-332	-13	-13	-26
Campground/Recreational Vehicle Park	*no trip reductions anticipated*					
High Turnover Sit-Down Restaurant[8]	(100 percent reduction)		-483	-24	-18	-42
Total Trip Reductions			**-5,053**	**-227**	**-198**	**-425**
NET EFFECTIVE TRIP GENERATION			**3,688**	**193**	**311**	**504**

[1] Year 2020 airport trip generation data provided by Mammoth Lakes-Yosemite Valley Airport staff (Tom Cornell-Ricondo).

[2] Trip rates for Hot Creek Mixed-Use Development provided in *Trip Generation*, 6th Edition, Institute of Transportation Engineers (ITE), 1997. Trip rates for the Residential High Density (MF) Seasonal are based on the Mammoth Lakes Transportation Model (MTM). Daily trip rate for RV Park based on SANDAG rates for campsite uses; p.m. peak hour rates for RV Park are based on ITE rates.

[3] Trip generation data provided in *Traffic Impact Study Addendum for Sierra Business Park Specific Plan*, Traffic Safety Engineers (TSE), Novem

[4] Unit counts for residential/lodging components are based on 80% occupancy rate which is consistent with Town of Mammoth "typical" winter conditions. Build out unit counts are 188 multi-family homes, 62 hotel rooms, and 100 campsites.

[5] A 90% reduction was applied due to a majority of pass-by trip making for vehicles travelling on Highway 395. Approximately 10% (new trips) may originate from existing communities south of the Airport.

[6] A 60% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

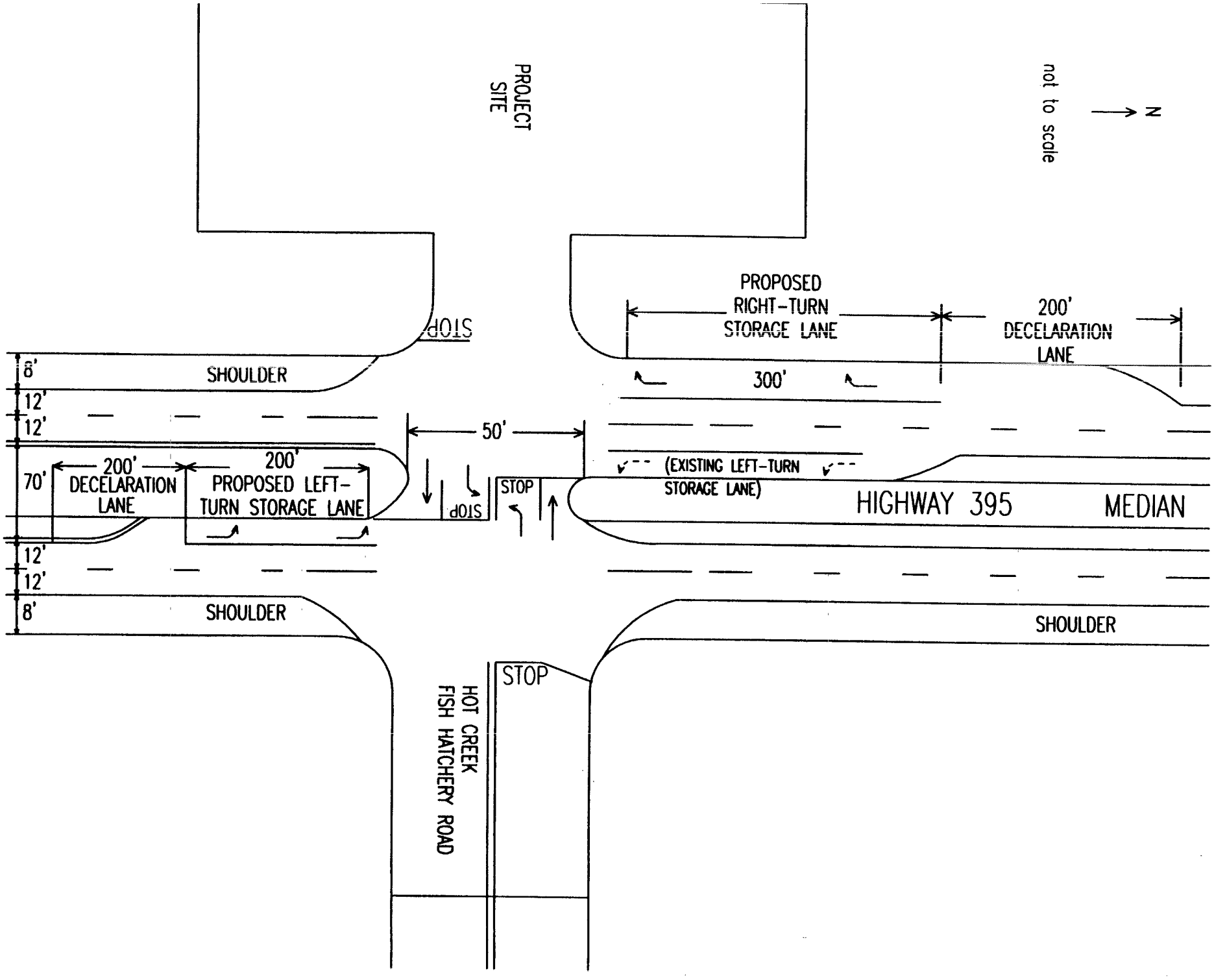
[7] A 75% reduction was applied due to shuttle service provided to residents destined to Mammoth Lakes and Mammoth Mountain Ski Area. A majority of residents will arrive to the Hot Creek Mixed-Used development via airline service to Mammoth Lakes-Yosemite Valley Airport.

[8] A 75% internal trip capture, and 25% pass-by trip reduction was applied for vehicles travelling on Highway 395. No new trips are anticipated for this land use.

11/30/2000 (P:\TML030\model.xls\gen)

APPENDIX E

MEDIAN IMPROVEMENTS


PROJECT SITE
not to scale
N
STOP
PROPOSED RIGHT-TURN STORAGE LANE
200' DECELARATION LANE
300'
6'
SHOULDER
12'
12'
50'
200' DECELARATION LANE
200' PROPOSED LEFT-TURN STORAGE LANE
70'
STOP
STOP
(EXISTING LEFT-TURN STORAGE LANE)
HIGHWAY 395
MEDIAN
12'
12'
8'
SHOULDER
SHOULDER
STOP
HOT CREEK FISH HATCHERY ROAD

Appendix N – Air Service Agreement

AIR SERVICE AGREEMENT

This Air Service Agreement (this "Agreement") is made and entered into as of the 30 day of May, 2000, by and between American Airlines, Inc. ("American"), a Delaware corporation having its principal offices at P.O. Box 619616, Dallas/Fort Worth International Airport, Texas 75261-9616, and Mammoth Mountain Ski Area ("Mammoth"), a California corporation having its principal offices at Box 24, Mammoth Lakes, CA 93546.

RECITALS

WHEREAS, American is an air carrier engaged in the transportation of persons, property, and mail; and

WHEREAS, Mammoth desires to have American provide air transportation service between Chicago O'Hare ("ORD") and Mammoth Lakes, CA ("MMH"), and between Dallas/Forth Worth International Airport ("DFW") and MMH; and

WHEREAS, American desires to provide such air transportation at a reasonable return on its investment; and

WHEREAS, American and Mammoth wish to enter into this Agreement regarding air transportation between ORD and MMH and between DFW and MMH.

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, the parties agree as follows:

1. Air Service

(a) American, subject to using its reasonable efforts to procure all necessary governmental approvals and subject to the existence of adequate operating facilities at MMH, shall provide regularly scheduled passenger air service between ORD and MMH and between DFW and MMH (the "Air Service," with each flight and "Air Service Flight") during Mammoth's 2001-2002, 2002-2003, 2003-2004, 2004-2005 and 2005-2006 ski seasons (each, a "Ski Season" or an "Air Service Period"). Notwithstanding the foregoing, it is understood and agreed that either party may terminate this Agreement as follows: (i) with respect to the 2002-2003 Ski Season, by giving written notice to the other party on or before May 15, 2002, and (ii) with respect to any subsequent Ski Seasons, by giving written notice to the other party on or before the May 15, prior to such Ski Season. Upon giving such notice, this Agreement shall terminate as to all Ski Seasons which have not yet commenced as of the date such notice was given.

(b) It is anticipated that Mammoth's 2001-2002 Ski Season will run from December 15, 2001 through April 6, 2002 (inclusive), provided however, that the exact operating dates for 2001-2002 Ski Season shall be mutually agreed to by the parties on or before May 15, 2001. The dates of each subsequent Ski Season shall be mutually

agreed by the parties by the May 15, preceding such Ski Season. Should the parties be unable to agree on such dates by the deadlines set forth in this Paragraph 1 (b), then such failure to agree shall cause this Agreement to immediately terminate as to all Ski Seasons which have not yet commenced as of such deadline.

(c) American agrees to operate one daily round-trip, plus a second round-trip each Saturday, between MMH and DFW and one daily round-trip, plus a second round-trip each Saturday, between MMH and ORD during each Air Service Period. Operating times for such flights shall be determined by American, in its sole discretion, taking into consideration Mammoth's advice. It is the currently the intent of both American and Mammoth to increase the Air Service over the term of the Agreement, as outlined in Table 1. Any such increase, however, shall be subject to the mutual agreement of the parties, as to the terms and conditions applicable to such increased service.

(d) American agrees to schedule Boeing 757 aircraft to perform the Air Service hereunder. American's Boeing 757 aircraft are presently scheduled to be configured with 176 seats, however, the actual number of seats on such aircraft shall be subject to change if American, in its sole discretion, deems a change appropriate.

2. Term

This Agreement shall commence upon the date first written above, and unless sooner terminated as provided for herein, shall remain in full force and effect until June 15, 2006 (the "Term").

3. Minimum Revenue Requirement

(a) American and Mammoth agree that the Total Revenue (as that term is defined in Paragraph 4 (b) of this Agreement) for each Air Service Period, must equal or exceed the Minimum Revenue Requirement (as that term is defined in the next sentence) for that same Air Service Period or Mammoth shall be required to pay the Revenue Shortfall (as that term is defined in Paragraph 5 of this Agreement). For purposes of this Agreement, the "Minimum Revenue Requirement" for each Air Service Period shall mean the Base Charge (as set forth in Subparagraph 3(b) below) for each round-trip Air Service Flight, multiplied by the actual number of round-trip Air Service Flights operated by American during the relevant Air Service Period, plus the Per Revenue Passenger Charge (as that term is defined in Subparagraph 3(c) of this Agreement) for each round-trip revenue Air Service Passenger who actually travels during such Air Service Period, plus the Miscellaneous Expenses (as that term is defined in Subparagraph 3(d) of this Agreement) applicable to such Air Service Period.

(b) The "Base Charge" is [redacted] Dollars ([redacted]) per round-trip DFW-MMH Air Service Flight and [redacted]

[redacted]0) per round-trip ORD-MMH Air Service Flight.

(c) The "Per Revenue Passenger Charge" is [redacted] per round-trip revenue passenger carried on the DFW-MMH Air Service Flights, and [redacted] per round-trip revenue passenger carried on the ORD-MMH Air Service Flights.

(d) "Miscellaneous Expenses" shall mean:

(i) The actual and reasonable cost of de-icing for flights at MMH; plus

(ii) The actual and reasonable cost directly associated with the diversion of a flight originating at DFW or ORD due to weather conditions at MMH; it being understood that if a flight is diverted for reasons other than airport conditions or weather related problems at MMH (e.g., mechanical problems), then American shall pay all additional costs associated with such diversion and such additional cost shall be included as part of Miscellaneous Expenses hereunder.

(e) American, in its sole discretion, may change the "Base Charge" and "Per Revenue Passenger Charge" for the 2001-2002 Ski Season by giving written notice to Mammoth of such change(s), no later than June 15, 2001.

(f) American, in its sole discretion, may change the "Base Charge" and "Per Revenue Passenger Charge" for all subsequent Ski Seasons by giving written notice to Mammoth of such change(s), no later than the May 1, preceding each such Ski Season.

4. Revenue Calculation

(a) The "Net Revenue" for each Air Service Flight shall be established by deducting [redacted]%) from the Segment On-Board Revenue (as that term is defined below and as calculated by American using American's Marketing Information Report System ("MIRS") for such Air Service Flight). (American and Mammoth agree that the foregoing [redacted]%) deduction is an agreed upon amount that reflects all cost attributable to credit card fees, commissions, and overrides, and that there shall be no other deductions with respect to such fees, commission, and overrides in connection with the calculation of Net Revenue or Total Revenue hereunder). For purposes of this Agreement, the "Segment On-Board Revenue" for each Air Service Flight shall be the total amount paid by passengers in connection with the applicable Air Service Flight, less applicable taxes, and shall be rate-prorated by segment. A rate-prorate is used to divide total on-board revenue paid per Air Service Flight among the actual number of segments flown by an Air Service Passenger according to the ratio of each segment's local fare to the sum of all the local fares applicable to the passenger's actual itinerary.

(b) For purposes of this Agreement, "Total Revenue" shall mean the Net Revenue for each Air Service Flight times the actual number of Air Service Flights operated by American during the relevant Air Service Period.

(c) MIRS shall be the sole source of information for calculating Segment On-Board Revenue, Net Revenue, and Total Revenue hereunder. Notwithstanding the foregoing, Mammoth shall have the right, upon providing at least five (5) business days' prior written notice to American to conduct, at Mammoth's sole expense, one audit during the Term of this Agreement, of the information and documents used to calculate Segment On-Board Revenue, Net Revenue, and Total Revenue hereunder. Any such audit must be reasonable in all respects.

5. Payment of Revenue Shortfall

A "Revenue Shortfall" shall be deemed to occur if the Total Revenue received by American for any Air Service Period falls below the Minimum Revenue Requirement described in Paragraph 3 for the same Air Service Period. Should this occur, Mammoth agrees to pay the total amount of such Revenue Shortfall within fifteen (15) business days after receipt of an invoice from American detailing the amount of the Shortfall. Such invoices shall be provided by American to Mammoth on or before the May 31 immediately following the relevant Air Service Period. Mammoth agrees to pay interest on any overdue payment (including without limitation any Revenue Shortfall) at an annual rate of eighteen percent (18%) from the date such payment was due hereunder until the date on which such payment is received by American.

6. Guarantee by Mammoth

(a) In consideration of the Air Service to be provided by American hereunder, Mammoth, on or before August 15, 2001, shall establish and maintain during the Term of this Agreement, a letter of credit ("Letter of Credit"), issued by a bank acceptable to American and in the form of Exhibit A attached hereto, in the amount of [redacted]

(a) The Letter of Credit will be irrevocable and will provide that American may draw upon all or any part thereof at any time upon presentation to the bank of a letter signed by a vice president of American stating that American is entitled to draw upon the Letter of Credit for amounts owed under this Agreement. American shall have the right to draw upon the Letter of Credit to recover any unpaid amounts which Mammoth owes to American under this Agreement. Upon termination or expiration of this Agreement, American agrees to give notice to the bank authorizing it to release and cancel the Letter of Credit.

7. Termination and Default

In addition to any other termination rights provided for herein, this Agreement may be terminated by the party specified below, effective immediately upon written notice to the other party, upon the happening of any one or more of the following events:

(i) By American, without liability or obligation on the part of either party if American is unable to obtain the governmental approvals necessary to commence the Air Service, or if in American's sole discretion, American determines that the operating facilities at MMH are inadequate for American to commence service at MMH;

(ii) By American, if Mammoth fails to make any payment due and owing hereunder when due and Mammoth does not make such payment within five (5) days after receipt of written notice of demand therefore; or

(iii) By either party, if the other party is in breach of or default under any provision of this Agreement and such party does not cure such default within a period of five (5) days after receipt of written notice from the non-breaching or non-defaulting party, which notice shall specify the breach or default, or, if such cure cannot be accomplished in five (5) days, if the noticed party does not commence a cure within five (5) days.

A termination under (ii) or (iii) above shall not limit the non-defaulting party's right to pursue or enforce any of its rights under this Agreement or otherwise. Moreover, if bankruptcy proceedings are commenced with respect to a party and if this Agreement has not otherwise terminated, then the other party may suspend all further performance of this Agreement until the party involved in bankruptcy assumes or rejects this Agreement pursuant to § 365 of the Bankruptcy Code or any similar or successor provision. Any such suspension of further performance by a party pending the other party's assumption or rejection will not be a breach of or default under this Agreement and will not affect a party's right to pursue or enforce any of its rights under this Agreement or otherwise.

In the event of any termination under this Paragraph 7, Mammoth shall pay all amounts owed to American as of the date of such termination within three (3) business days after receipt of an invoice from American. The obligation of Mammoth to pay all amounts due under this Agreement shall survive the termination or expiration of this Agreement for any reason.

8. Promotional Materials, Booking Information and Fares

(a) All promotional materials prepared by Mammoth which contain any reference to American shall be subject to the prior review and written consent of American.

(b) American and Mammoth will cooperate in exchanging flight and accommodations booking information for the ORD-MMH and DFW-MMH routes in order to accurately calculate no-show ratios; provided, however, the parties agree that any such information supplied by one party to the other is proprietary and confidential information which shall be made available to only to those directors, officers, and employees of such party with a need to know such information, unless otherwise consented to in advance and in writing by the party supplying such information.

(c) American agrees to establish and modify, as needed, the air fares for the Air Service and agrees to provide yield and inventory management services with respect thereto. Mammoth acknowledges that American has agreed to establish and modify the air fares and to provide yield and inventory management services as an accommodation to Mammoth and that American hereby disclaims all liability for, and Mammoth hereby waives all claims against American which may arise out of or in connection with the establishment or modification of such air fares or the yield and revenue management services provided hereunder. American agrees to consult (to the extent American deems appropriate) with Mammoth regarding pricing for such air fares; provided, however, that such consultations need not occur prior to any fare changes; and provided, further, that American shall at all times have the unconditional right in its sole discretion to determine air fares for the Air Service.

9. Final Accounting and Settlement

American agrees to provide Mammoth with a monthly accounting of the prior month's Segment On-Board Revenue generated by the Air Service Flights. This accounting will be furnished to Mammoth approximately thirty (30) days following the end of the applicable month during each Air Service Period. A final report and, if necessary, an accounting, covering the entire Air Service Period, will be provided to American to Mammoth on or before the May 31 following each Air Service Period. Any amount due pursuant to this accounting (including without limitation any Revenue Shortfall) shall be paid by Mammoth within fifteen (15) business days after receipt of such final report.

10. Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflict of laws principles thereof. Mammoth hereby consents and submits to the jurisdiction of the courts of the State of Texas in all questions or controversies arising from or otherwise in connection with this Agreement.

11. Excusable Delay and Waiver of Consequential Damages

Except as otherwise expressly provided herein, neither party shall be liable for obligations hereunder (other than payment of monetary obligations due and owing by

Mammoth) to the extent such obligations are prevented or delayed by reasons or circumstances beyond the reasonable control of such party; provided, however, such party, shall provide the other party with prompt written notice thereof and shall use its best reasonable efforts to avoid or remove such causes of non-performance and, immediately thereafter, continue performance to the extent such causes are removed or avoided. EXCEPT WITH RESPECT TO EACH PARTY'S INDEMNIFICATION OBLIGATIONS HEREUNDER, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, EVEN IF SUCH PARTY HAD BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

12. Indemnification

(a) American agrees to indemnify, defend, and hold harmless Mammoth and its officers, directors, employees, agents, and affiliates from and against (i) any and all liabilities, damages, losses, claims, suits, liens, demands, actions, causes of action, judgments, fines, penalties, and expenses of any nature (including without limitation reasonable attorney's fees) whatsoever (collectively "Claims") arising out of or related to any loss, cost, damage, or injury (including, without limitation the death of any person or damage to property of any kind) caused by the willful misconduct or negligent acts, errors or omissions of American, its subcontractors, or any person directly or indirectly employed by American, while engaged in any activity associated with or related in any way to the operation of the Air Service Flights, the provision of the equipment in connection with this Agreement, or American's performance under this Agreement, and (ii) any and all Claims made by third parties as a result of or arising out of or in connection with American's products or services supplied or performed in connection with this Agreement or otherwise.

(b) Mammoth agrees to indemnify, defend and hold harmless American, its subsidiaries and affiliated companies, and their respective officers, directors, employees, and agents from and against (i) any and all Claims arising out of or related to any loss, cost, damage, or injury (including, without limitation, the death of any person or damage to property of any kind) caused by the willful misconduct or negligent acts, errors, or omissions of Mammoth, its subcontractors, or any person directly or indirectly employed by Mammoth, or any of them, while engaged in any activity associated with or related in any way to Mammoth's performance under this Agreement, and (ii) any and all claims made by third parties as a result of or arising out of or in connection with Mammoth's products or services supplied or performed in connection with this Agreement or otherwise.

(c) The provisions of this Paragraph 12 shall survive the termination or expiration of this Agreement.

13. Insurance

(a) American

At all times during the Term of this Agreement, American shall carry and maintain, at its sole cost and expense, the following insurance: (i) aircraft liability insurance with aggregate limits of at least [redacted] for personal injury (including without limitation and bodily injury and death) and property damage; (ii) Workmen's Compensation insurance covering all its employees while engaged in any of the Air Service Flights or any services under this Agreement. If so requested by Mammoth, on or before October 15, 2001, American will furnish Mammoth within thirty (30) days of such request an insurance certificate which: (a) specifies Mammoth as an additional insured; (b) indicates that the insurer has accepted and insured Paragraph 12 (a) of this Agreement; (c) includes the insurer's commitment to give Mammoth not less than thirty (30) days prior written notice in the event of cancellation or material change in coverage; and (d) indicates that such coverage is primary without right of contribution from any insurance carried by Mammoth.

(b) Mammoth

At all times during the Term of this Agreement, Mammoth shall carry and maintain at its sole cost and expense, comprehensive commercial general liability insurance, with aggregate limits of at least [redacted] for personal injury (including, without limitation bodily injury and death) and property damage. If so requested by American, Mammoth will furnish American within thirty (30) days of such request an insurance certificate which: (a) specifies American as an additional insured; (b) indicates that the insurer has accepted and insured Paragraph 12 (b) of this Agreement; (c) includes the insurer's commitment to give American not less than thirty (30) days prior written notice in the event of cancellation or material change in coverage; and (d) indicates that such coverage is primary without right of contribution from any insurance carried by American.

14. Assignment

Neither party may assign this Agreement (in whole or in part) or any interest under it without prior written consent of the other party.

15. Waivers and Modifications

This Agreement embodies the entire Agreement and understanding of the parties with respect to the subject matter hereof, and as of its effective date, terminates and supercedes all prior and/or independent agreements and understanding between the parties covering the subject matter hereof. The provisions of this Agreement shall govern

all services to be provided hereunder by the parties, and no addition, amendment, waiver, modification of, or document contrary to these provisions shall be effective unless signed jointly by an officer of American and an officer of Mammoth after the effective date of this Agreement.

16. Headings/Construction

The headings contained herein are for convenience and reference and are not intended to define or limit the scope of any provision of this Agreement.

17. Severability

In the event that any one or more of the provisions of this Agreement shall be determined to be invalid, unenforceable or illegal, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and the Agreement shall be construed as if such invalid, illegal, and unenforceable provision had never been contained herein.

18. Confidential Agreement

Each party hereto agrees that it will not disclose the terms of this Agreement to any third party without the prior written consent of the other party (i) except when required to do so by law or by a court of competent jurisdiction; (ii) except to the attorneys, accountants, or lending institutions of either party; or (iii) unless such terms are, by their nature, in the public domain.

19. Relationship of the Parties

For the purposes of this Agreement, neither party shall be deemed to be the agent, partner, employee, joint venturer, or fiduciary of the other party.

20. Notices

Any notice required to be given by one party to the other party to the other pursuant to this Agreement shall be in writing and shall be deemed to have been properly given if delivered in person, transmitted by telecopier, sent by overnight delivery, or sent by registered or certified mail, return receipt requested, addressed to the other party at the following address, and shall be deemed to have been given on the day so delivered, transmitted or mailed:

By Mammoth to American:

American Airlines, Inc.
Attention: Walter J. Aue, Vice President, Capacity Planning
MD 5535, PO Box 619616
Dallas/Fort Worth Airport, Texas 75261-9616
Telecopier No: (817) 931-6670

By American to Mammoth:

Mammoth Mountain Ski Area
Attention: Rob Perlman, Vice President Marketing
Box 24
Mammoth Lakes, CA 93546
Telecopier No. _____

21. Successor and Assigns

This Agreement shall be binding upon and inure to the benefit of the parties, their successors, and permitted assigns.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed by their duly authorized officers as of the date first above written.

MAMMOTH MOUNTAIN SKI AREA

By _____
Title CEO

AMERICAN AIRLINES, INC

By W. J. Aue
Title VP/Capacity Planning