Mammoth Yosemite Airport
Mammoth Lakes, California

Airport Layout Plan Update Narrative

August 2013

MAMMOTH LAKES

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MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE

Prepared for
Town of Mammoth Lakes, California

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August 2013

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MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE
TOWN OF MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

Mammoth Yosemite Airport (MMH), located 8 miles east of the Town of Mammoth Lakes immediately to the north of U.S. Highway 395, serves the commercial and general aviation needs of the Mammoth Lakes area. The main attractions to Mammoth Lakes include the Mammoth Mountain Ski Area (MMSA), fishing, boating, hiking, and mountain recreation, and it is the east entrance to Yosemite National Park.

With the backing of MMSA, Mammoth Lakes Tourism, the Town of Mammoth Lakes (Town), and Mono County, an airline service program has been initiated and all entities are committed to significantly enlarge and sustain this program for the long term. In the winter of 2011/12 up to seven daily flights operated at this airport – three by Alaska Air using Bombardier Q400 aircraft and four by United Airlines using CRJ 700 aircraft. The flight program is expected to increase to a point where there are 120,000 enplaned passengers by the year 2033. It is anticipated that as air operations increase, aircraft of the B 737 and A319 class or other future class of 124 seat aircraft will be introduced at MMH. Airline operations and security are currently accommodated in an interim airline terminal that has very limited capacity.

There are only eight small general aviation aircraft currently based at the airport and the population base is not expected to support much increase in based aircraft.

There are extensive itinerant aircraft operations at MMH with aircraft ranging from small single engine aircraft to the business jet aircraft of the Gulfstream G-V class. These aircraft serve Mammoth Lakes from the Central and Western United States.

The fixed base operator has constructed 91 hangars on the airport ranging from small glider storage buildings to large hangars that accommodate the business jets. These hangars have been sold to individual owners throughout the Central and Western United States so that they can hangar their aircraft when they visit the Mammoth Lakes area. This itinerant aircraft operation is expected to continue and increase.

MMH is currently classified as B III by the F.A.A. ARC classification system. Several aircraft of the ARC C III class, both commercial and private, now use the airport. If the airline operations and the itinerant general aviation operations at the airport change as forecast, there is the potential for the classification of the airport to change to ARC C III in the future. It is recommended that any proposed new development be designed, wherever feasible, to meet ARC C III standards so they will not require reconstruction if the airport classification changes to ARC C III.

This Airport Layout Plan Update identifies many areas on the airport that need updating and expansion. The major items include the following:

1. Runway – The single Runway 9-27 meets the requirements for wind coverage and capacity, but it needs to be extended. Early extension to 8,200 feet is

possible within land owned by the Airport and total extension to 9,000 feet is possible by acquiring U.S. Forest Service (USFS) land to the west. It is recommended that the runway be extended to 8,200 feet as soon as funding becomes available and that land be acquired from the USFS to allow a 9,000-foot runway if required. The runway width of 100 feet meets F.A.A. requirements for the current fleet of aircraft and for C III aircraft with takeoff weights less than 150,000 pounds. Forecast growth indicates that aircraft anticipated to utilize the airport within the forecast period will operate at gross takeoff weights less than 150,000 pounds. The runway can be widened at anytime if it becomes necessary. There are no physical conditions that would limit widening of the runway. Shoulders need to be widened from 12 to 25 feet.

Declared distances should be applied to provide a 1,000-foot clearway at each end of the runway so as to increase the total takeoff distance available (TODA) by 1,000 feet for each direction of operation.

The runway pavement sections are adequate to serve existing aircraft and proposed aircraft operations for the next 20 years so far as deep-seated distress is concerned. Deep-seated distress contributes to a fatigue-type failure of the total pavement section caused by repeated loading.

The asphalt pavement on the runway and taxiways has a polymer-modified asphalt to retard or eliminate the formation of thermal cracking caused by extreme daily temperature variations. These pavements are in excellent condition but should be inspected annually. Any defects that develop should be corrected by normal maintenance procedures. If at a later date thermal cracking begins as evidenced by transverse cracks spaced at 200 to 500 feet, then the installation of a jointing system should be considered to allow normal maintenance of the pavements.

2. Taxiways – All existing taxiways are 50 feet wide. The Q400 aircraft wheelbase is wide, and the taxiway edge safety margin is only 8 feet. It is recommended that the taxiways be widened to 75 feet, that the taxiway-to-taxiway and taxiway-to-runway fillets be widened to F.A.A. minimums, and that 25-foot paved shoulders be added to each side of the taxiways. The pavement sections for the taxiways are adequate to support proposed traffic for the next 20 years and maintenance procedures listed for the runway applies to the taxiways.

3. Airline Terminal – The existing interim airline terminal is over-crowded during several periods of the day and will limit the number of airline operations that can be accommodated until a new terminal is constructed. A recently completed Terminal Area Study indicates the need for a 40,000 square foot terminal to be built as soon as possible. This terminal will have three gates, which will handle aircraft up to the B 737 size, and is expandable to six gates. It is recommended that this terminal be developed at this airport as early as possible.

4. General Aviation Apron – The general aviation apron has a current capacity of 74 small aircraft tie down positions. During holidays and busy weekends there are more itinerant aircraft visiting the airport than can be comfortably accommodated. It may also be necessary to eliminate twenty two (22) of these tie down positions to meet F.A.A. standards of 500 feet from runway centerline to aircraft parking if the airport ARC is upgraded from B III to C III. It is recommended that additional general aviation apron be constructed as soon as funding becomes available. At least 300,000 square feet of new pavement will be required.

5. General Aviation Hangars – There are adequate hangars on the airport to serve forecast needs for the next 20 years.

6. Access Roads – Currently MMH is served from U.S. Highway 395 by Hot Creek Hatchery Road and Airport Road. This roadway system can continue to serve the airport. It is recommended that Airport Road be extended to Benton Crossing Road, which also connects to U.S. Highway 395, to provide emergency access to the airport and to assure passenger access at such times as there is an accident on the road or the road is shut down for maintenance.

7. Land – All land surrounding the airport belongs to USFS or Los Angeles Department of Water and Power (LADWP). It is important that the Airport work closely with these agencies to make sure that none of this land is released for any development that has an adverse effect on the operation and safety of operations at MMH. It is also important that the Airport acquire additional land from LADWP for the development of the airport. It is recommended that at the earliest convenience land rights be obtained from the USFS and LADWP for those lands identified on Sheet 14 of 14 for future land acquisition. These lands plus all existing airport property interests include:

   Parcel A – 196.23 Acres – Airport Property – Existing – Fee Simple Title
   Parcel B – 33.00 Acres – 50-year Lease LADWP – Existing – Future Acquisition
   Parcel C – 17.30 Acres – USFS Special Use Permit – Existing – Future Acquisition
   Parcel D – 34.86 Acres – Auto Parking Lot and Apron – USFS – Future Lease or Acquisition
   Parcel E – 18.88 Acres – RPZ Runway 27 – LADWP – Future Acquisition
   Parcel F – 5.76 Acres – RPZ Runway 27 – LADWP – Future Acquisition
   Parcel G – 39.12 Acres – RPZ Runway 9 – USFS – Future Lease or Acquisition

   It is recommended that Parcels B, E, and F be acquired in fee simple title from LADWP at the earliest possible time. It is recommended that a 50-year special use permit be acquired from USFS on Parcels D and G or that Parcels C, D, and G be acquired in fee simple title from USFS.

8. Security – Current fencing at the airport includes chain link fencing in the terminal area and barb wire fencing for the remaining portion of the airport. New 8-foot chain link fencing should be constructed around the entire airport to protect against human and wildlife incursions.

9. Deviation from Standards – There are several deviations from standards that exist at this airport. Many of them can be corrected with the reasonable expenditure of funds and these should be corrected as soon as funding becomes available. There are some deviations from standards that cannot be corrected for economical, environmental, and land use reasons. Modification to standards should be requested for these items. The more significant deviations to standards for which modifications to standards are required are the location of the East Hangars within the runway and taxiway object free areas and the location and operation on U.S. Highway 395. Depending on the size of aircraft operating, these deviations from standards can be safely accommodated as required by maintaining high minimums of ceiling and visibility and/or possibly instituting operational constraints. Operational constraints will not have a significant effect on aircraft operations or cause significant delays because the frequency of operation of larger aircraft at the airport is not large enough to cause delays.

   Most of the other deviations from standards are caused by objects located in the outer edges of the runway and taxiway object free areas. Doe Ridge and several of the hangars penetrate the runway and taxiway object free area and/or Part 77 surfaces on the north side of the airport. It is recommended that a line of obstruction lights be constructed parallel to the runway and located 390 feet from the centerline of the runway to clearly identify the inner edge of these obstructions.

   All existing deviations to standards, together with proposed actions to deal with these deficiencies, are indicated on Sheet No. 4 of the ALP update plans included in this report.

CHAPTER 1. INTRODUCTION

Mammoth Yosemite Airport (MMH) is located in the Sierra Nevada mountain range east of the summit in a moderately broad valley. It is located 8 miles east of the town of Mammoth Lakes adjacent to U.S. Highway 395. Up until 2008 the airport served the general aviation fleet with mostly itinerant operations bringing in visitors to enjoy the recreation facilities in and around Mammoth Lakes including skiing, hiking, and fishing. It is the east entrance to Yosemite National Park. Some modest airline service was provided prior to 2008.

In the late 1990s the Town of Mammoth Lakes proposed a large development project for MMH. The project included a longer and wider runway, a new terminal building, and related infrastructure to support Boeing 757 service from Dallas and Chicago and was based on a forecast of 330,000 annual passenger enplanements after 20 years. This project was enjoined in Federal court in 2000. After the injunction the Town has worked to initiate airline service at the airport. In 2005 an Environmental Impact Statement (EIS) was prepared to accommodate the Town's scaled-back vision for the airport. The EIS provided for regional commercial air service using aircraft of 80 seats or less, 8 flights daily in the winter, and summer service, all to regional markets. The EIS also approved the remodel of an existing airport structure, which is now the interim terminal building.

Air service began in December of 2008 with one flight daily, subsidized by Mammoth Mountain Ski Area (MMSA), on Alaska Air from Los Angeles using the 76-seat Bombardier Q400. In 2010 the Town completed an Environmental Assessment to initiate jet air service from additional markets with United Airlines using the 70-seat Bombardier CRJ700. Summer air service started in 2010 with Alaska Air from Los Angeles, subsidized by a partnership of the Town, Mono County, and MMSA. In the winter of 2010-11 air service had four daily flights. In the winter of 2011-12 there were up to seven flights on peak days, with four flights by United Airlines and three by Alaska Air. Winter flights will continue to be subsidized solely by MMSA. The 2011-12 destinations include Los Angeles, Orange County, San Diego, San Jose, and San Francisco. Commercial air service has been highly successful as evidenced by the growth in the number of flights, markets, and passenger loads.

With seven flights daily, passenger overcrowding in the existing interim terminal building is a major problem.

MMH is used by itinerant general aviation aircraft ranging in size from the small single-engine and twin-engine aircraft to the large turbojet aircraft such as the Gulfstream G V. These aircraft are used to bring visitors to Mammoth Lakes to enjoy the recreation facilities available in the area such as skiing, boating, fishing, and hiking. This general aviation activity is expected to continue and increase.

There are currently 8 general aviation aircraft based at MMH – 6 single-engine aircraft and 2 twin-engine aircraft. The number of based aircraft at MMH is not expected to increase significantly.

An Airport Layout Plan (ALP) was prepared by the office of Reinard W. Brandley, Consulting Airport Engineer, and conditionally approved by the Federal Aviation Administration (F.A.A.) in December 2000. This year 2000 plan was developed to show the modifications required at the airport to serve the proposed B 757 service from Dallas and Chicago. The role of the airport has changed significantly since the 2000 Airport Layout Plan was prepared and this plan, in its current condition, no longer represents the requirements for the scaled-down airline service currently anticipated.

The new Airport Layout Plan presented with this report is an update to the 2000 ALP and updates all of the airport development requirements to safely accommodate current and forecast airport activity and changes in F.A.A. Standards.

A Terminal Area Study to identify airline terminal facility development required to accommodate forecast airline traffic was completed in 2013. The results of this study were used in the development of the Airport Layout Plan Update.

This Airport Layout Plan Narrative provides the results of studies conducted and research performed to provide the basis for the updated Airport Layout Plan.

This report includes the update of the Airport Layout Plans and an Airport Layout Plan Narrative describing the basis for decisions and the proposed layout of the airport required to accommodate forecast traffic.

The Town's General Plan supports year-round scheduled air service as well as Airport upgrades and improvements. The Airport Layout Plan Update is consistent with the General Plan of the Town.

Airport standards, aviation forecasts, and airport development requirements to accommodate the standards and forecasts are expected to change over time with changes in economic conditions, environmental requirements, and the political environment. This Airport Layout Plan and Narrative Report has been prepared to accommodate existing and forecast growth conditions and provide guidance for development of the airport to accommodate existing and forecast growth. It is important that the Airport Layout Plan be reviewed and updated at least once every five years to plan for and accommodate any changes that develop. Flexibility has been incorporated into the Airport Layout Plan to allow changes if and when required to the existing plan.

CHAPTER 2. INVENTORY

This inventory chapter provides data on existing airside and building area facilities, existing airspace utilization, existing navigation aids, meteorological data, and air traffic data at the MMH.

2-1 Location and Setting

MMH is located in the eastern edge of the Sierra Nevada. It is a mountainous area with moderately broad valleys. The airport is located 8 miles east of the Town of Mammoth Lakes immediately to the north of U.S. Highway 395. The runway centerline is parallel to the adjacent highway centerline.

The nearest airports to the MMH are general aviation airports including Bishop, 32 miles to the southeast, Lee Vining, 22 miles to the northwest, and Bridgeport, 47 miles to the northwest. The nearest commercial airports are Reno – 170 miles, Fresno – 190 miles, Sacramento – 220 miles, San Francisco Bay Area – 258 miles, Las Vegas – 310 miles, and Los Angeles – 320 miles.

The location of the airport and adjacent facilities is shown on Exhibit 1.

2-2 Climate

MMH is located in the Sierra Nevada with an Airport elevation of 7,146.5 feet. During the summer the weather is generally clear and warm with no major rainfall. A few thunderstorms occur in the area during the summer. In the winter the weather is fairly cold with significant snow. Mammoth Mountain, located approximately 10 miles to the west, had a total of 669 inches of snow in the winter of 2010/2011. Throughout the year the weather is generally VFR conditions except during snowstorms in the winter, at which time visibilities and ceilings become very low. There is a significant change in temperature from day to night of 40º to 65º F on most days. This differential occurs summer and winter.

2-3 Geography

The general area is mountainous. The airport is located in the Sierra Nevada mountains. The airport is located adjacent to the mountains in a moderately wide valley.

2-4 Soils and Geology

The soils at the airport are generally waterborne clean sands with some small gravels. They have a very high coefficient of permeability. Reasonably short ditches on the airport are adequate to infiltrate all of the storm water from the paved areas in the terminal area. There are significant volcanic deposits in the Mammoth area, but none on the airport itself.

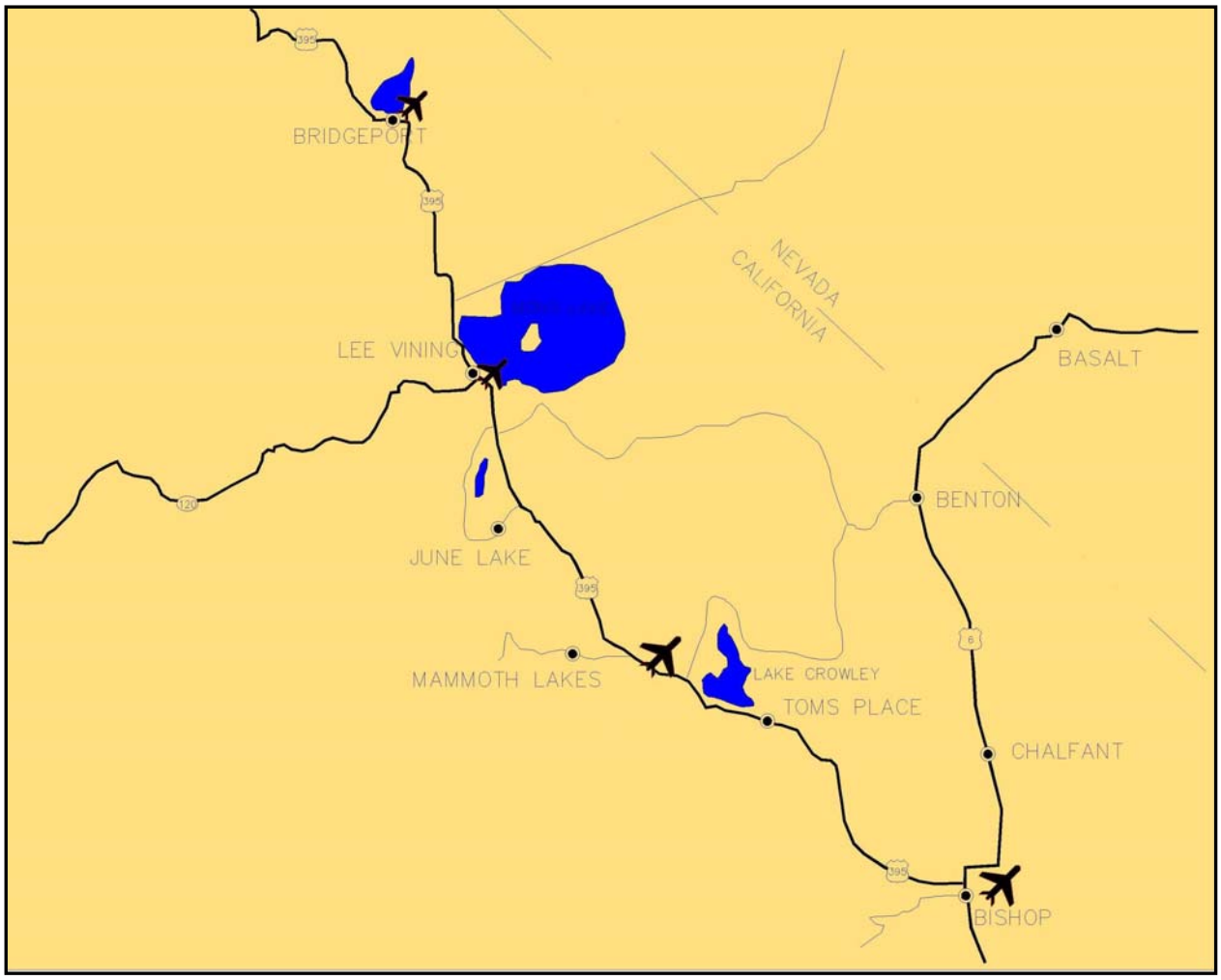


Exhibit 1
Location Map
Mammoth Yosemite Airport

2-5 Ground Access

MMH is located immediately adjacent to U.S. Highway 395. Access to the airport is from Highway 395 by way of Hot Creek Hatchery Road and Airport Road. Future plans call for the extension of Airport Road to the east to Benton Crossing Road, which also connects to Highway 395.

2-6 History

MMH 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 (USFS) 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. Highway 395, which runs adjacent to the airport. The airport was renamed Mammoth Lakes Airport and private interests operated the airfield, using USFS 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, currently used as an FBO office and pilots' lounge, 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 reestablished public operation of the airport in 1980, and the F.A.A. approved a Finding of No Significant Impact (FONSI) in 1981.

Mono County began an airfield improvement program in 1983. Using funds received under the Airport Improvement Program (AIP) a new runway, 7,000 feet by 100 feet, was constructed. 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.

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 and the 19-seat Jetstream aircraft led to passenger dissatisfaction, 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 abandoned. An extension of the current Runway 9-27 from 7,000 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, and 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 134 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 an environmental clearance upon 1997 certification of the EIR. Phase one construction began shortly after the EIR certification and has continued to date.

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

By 2007 all the pavements at the airport had shown severe cracking caused by thermal stresses. In 2008 the entire runway/taxiway complex at the airport was reconstructed and a polymer-modified asphalt was used in the bituminous surface course to retard the formation of thermal-induced cracks. The entire runway length was grooved to provide protection against hydroplaning. Also in 2008 an interim terminal was constructed to serve the new airline service.

2-7 Airfield Facilities

The airfield consists of features and facilities required to accommodate safe and efficient current and future aircraft operations. The airfield includes a runway, taxiways, aircraft parking aprons, hangar facilities, fixed base operators, and an interim airline terminal building. The major airfield facilities at this airport consist of the following items:

- Runway 9-27 is 7,000 feet long by 100 feet wide with 12-foot paved shoulders. The runway has full-length runway sighting distance. The runway is lighted by a medium intensity runway lighting system.
- Taxiway A is parallel to Runway 9-27 and spaced at 300-foot centerline-to-centerline distance from the runway. The taxiway is 50 feet wide, runs the full length of the runway, and has holding aprons at each approach end of the runway. There are no paved shoulders on the taxiways.
- Cross Taxiways A1, A2, A3, A4, and A5 connect the runway and the parallel taxiway. These taxiways are 50 feet wide. There are no paved shoulders on these taxiways.
- The aircraft parking apron consists of 58,000 square feet of 12-inch Portland cement concrete and 417,000 square feet of flexible pavement section. There are 74 tie down spaces for small aircraft on the apron.
- A series of tee hangars and storage hangars have been constructed at the airport and are served by hangar taxilanes.
- There are two rows of privately owned hangars on leased airport property. These are designated as the East Hangars and the West Hangars and face the airfield.
- Access to the airport is by way of Airport Road, which is a 24-foot wide paved dead-end road.
- There are two relatively small automobile parking lots on the airport.

In Exhibit 2 the Airport Photomap shows the general layout and surrounding area of the airport. Exhibit 3 is a Terminal Area Photomap that shows the main terminal area facilities. The east and west hangar complex is not shown on this photomap.

Exhibit 2
Airport Photomap
Mammoth Yosemite Airport

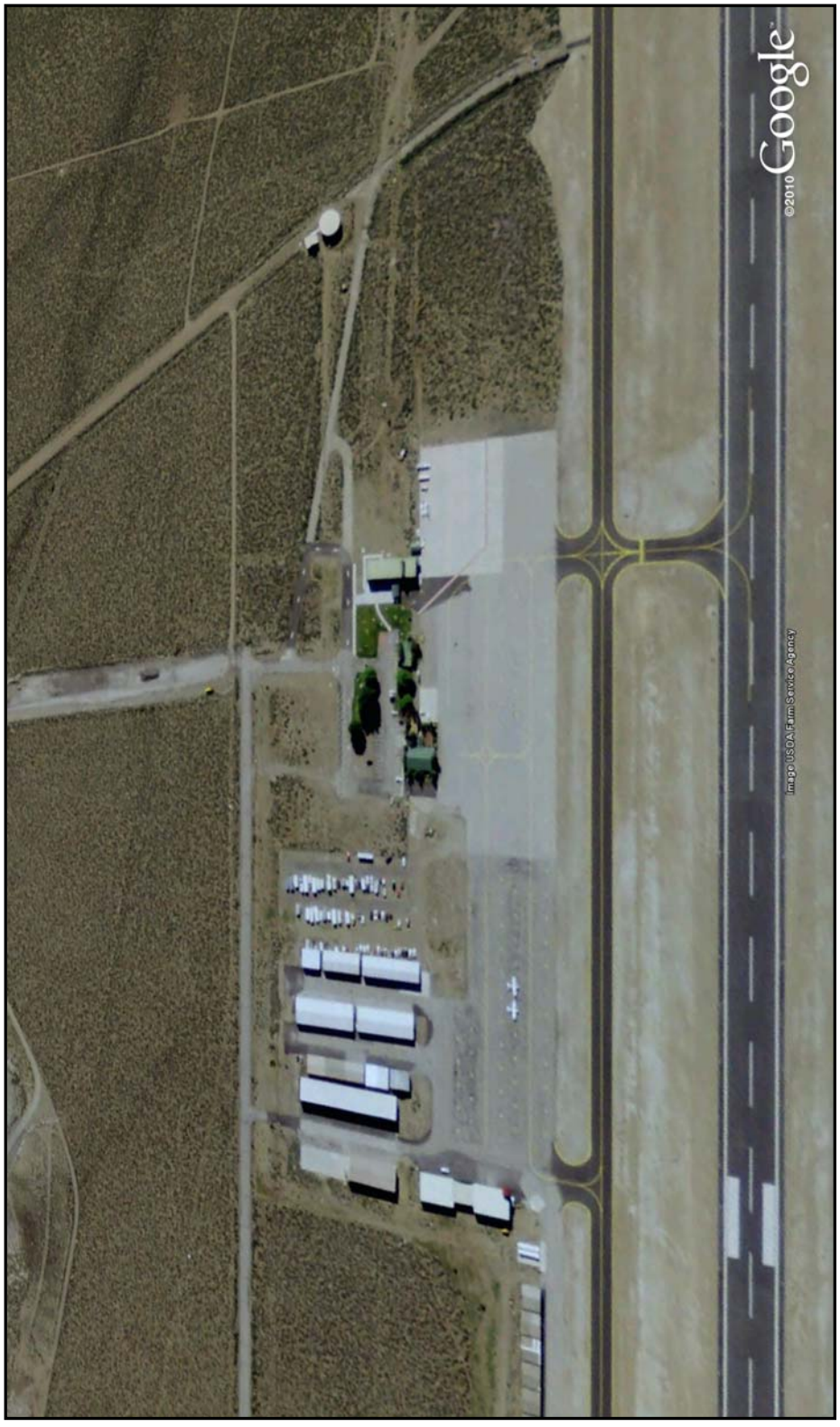


Exhibit 3
Terminal Area Photomap
Mammoth Yosemite Airport

2-8 Building Facilities

There is significant general aviation development and a small airline facility on the airport. Due to environmental constraints the construction of the interim airline terminal building was limited to updating an equipment maintenance building into an interim terminal to serve the new airline service. This building is only 5,000 square feet and handles all airline operations except baggage pick up, which is located outside of the building. The 5,000-square foot terminal building is also used for all TSA screening. This building was remodeled in 2008 and is already too small to accommodate the existing traffic, let alone the forecast increased traffic. A sprung structure was erected adjacent to the terminal in 2011 to serve as an additional hold room.

There is an FBO office and pilots' lounge on the airport, a small Airport Manager's Office, and an electrical and telephone vault.

There are 134 hangars on the airport. Ninety-one of these hangars were constructed by the fixed base operator on leased property and sold to individual aircraft owners located throughout the central and western portion of the United States so that they could store their airplanes indoors each year when they came to Mammoth Lakes for skiing and other recreational activities. These ninety-one hangars consist of the following units:

22 – 10' x 36' units
30 – 42' x 40' units
20 – 50' x 48' units
16 – 60' x 56' units
3 – 72' x 70' units

These ninety-one hangars were constructed at both the easterly end and the westerly ends of the airport and face the airfield. The additional 43 hangars consist of three FBO hangars and 37 older hangars constructed in a nested tee hangar configuration.

2-9 Airspace and Navigational Facilities

MMH is located 24 miles south of V244, 18 miles southwest of V381, and 9 miles southeast of V230. Aircraft flying V230 and V244 are generally at high altitudes and aircraft operating at MMH would not be affected by those operations.

Exhibit 4 is a copy of a portion of the San Francisco Sectional, which shows the relationship of the airport to other facilities.

There is a VOR at Bishop, which is located 32 miles to the southeast of the airport, but terrain does not allow acquisition of the VOR transmission at lower levels in the vicinity of MMH. MMH has an AWOS III P to provide current weather conditions to the pilots. Mammoth has published instrument approaches

using GPS to Runway 27 and a GPS approach to Runway 27 circling to land on Runway 9. Additional instrument approaches are currently being developed.

2-10 Obstructions

Obstruction studies have shown that there are a number of obstructions located around the airport that are considered obstructions based on FAR Part 77. The major obstructions include the following:

- Doe Ridge located north of the threshold of Runway 27 is an obstruction to both the transitional surface and the horizontal surface.
- One power pole and one telephone pole on the south side of the runway immediately north of U.S. Highway 395 penetrate the transitional surface and are lighted with solar-powered obstruction lights.
- A floodlight pole and power pole on Benton Crossing Road to the east of the airport are obstructions to the threshold siting departure surface but only penetrate that surface by 2 to 4 feet. These poles are proposed to be lighted with solar powered obstruction lights.
- The mountains to the south, west, and northwest penetrate the horizontal surface and the conical surface.
- Several of the east hangars penetrate the Part 77 surfaces on the north side of the airport. These hangars are also within the Runway Object Free Area. A portion of the east hangars is located in front of the Building Restriction Line and is within the ROFA.

The Airport proposes to install a row of obstruction lights parallel to the runway and 390 feet north of the runway centerline to clearly identify the edge of Doe Ridge and the East Hangars and the West Hangars.

Obstruction lights are existing at the top of the power and telephone poles located south of the runway and are proposed to be installed on the floodlight and power pole at Benton Crossing Road.

2-11 Industrial and Commercial Property

All lands surrounding the airport are owned by the USFS or the Los Angeles Department of Water and Power (LADWP) and are not readily available for industrial/commercial development.

2-12 Drainage and Utilities

Water is provided by on-site wells and storage tanks. Sewer facilities currently consist of septic tanks and leaching fields, which are very effective because of the high coefficient of permeability of the sand soils. It is proposed with future development to construct a package sewage treatment plant at the airport and to continue to use leaching fields for disposal of effluent.

Electrical service is provided by Southern California Edison. Telephone service is provided by Verizon. There is no natural gas service at the airport. Propane is used to heat most of the buildings on the airport.

There is no off-site drainage from or onto the airport. All storm water infiltrates the ground, except in paved areas where the storm water is carried to ditches or leaching fields and infiltrates into the ground.

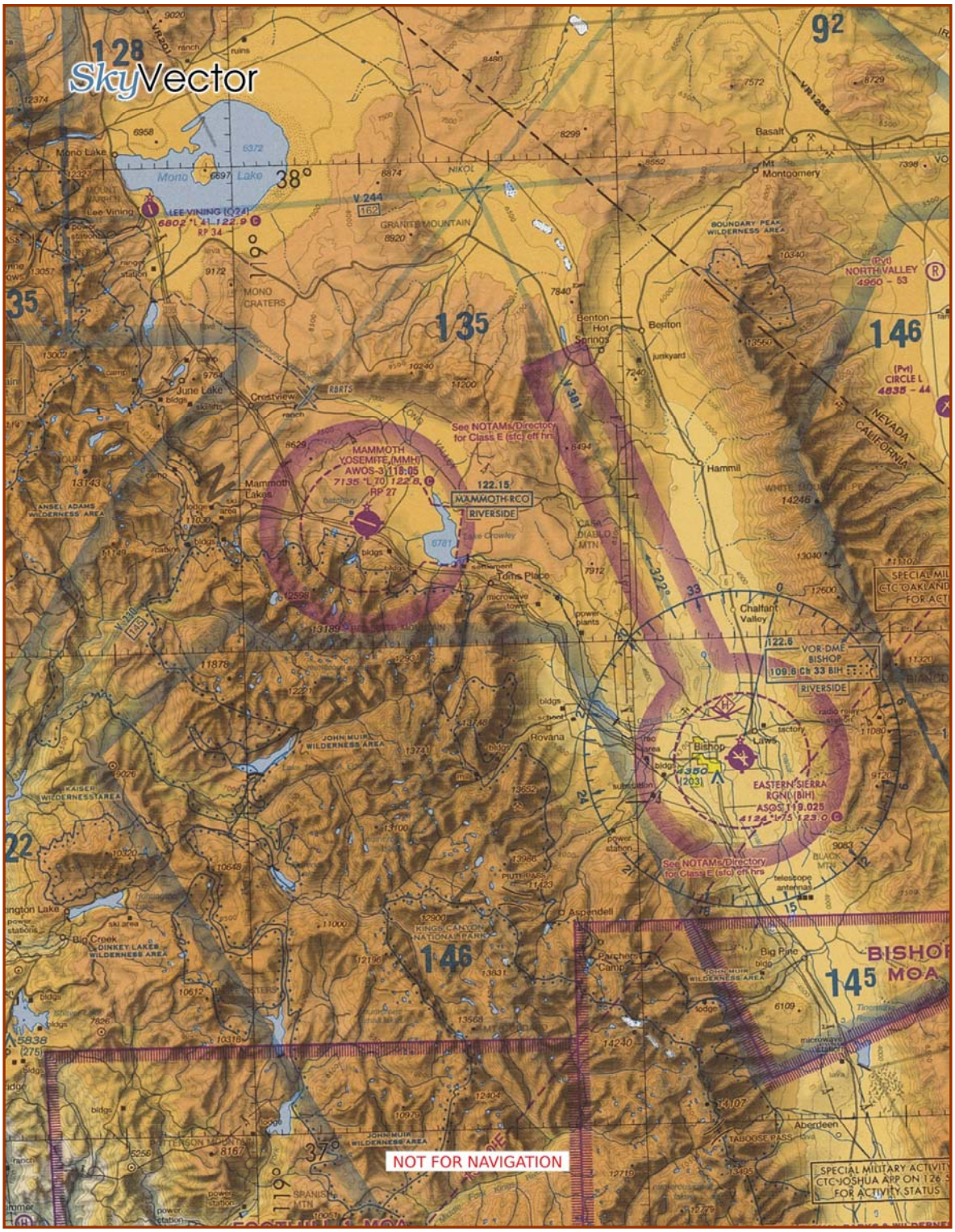


Exhibit 4
Aeronautical Section Map
Mammoth Yosemite Airport

CHAPTER 3. AVIATION FORECASTS

3-1 Introduction

The aviation forecasts provide estimates for future aviation demand at the airport. Projections of aviation demand are important in the planning process as they provide the basis for the orderly development of the airport including the following:

- Documentation of the role of the airport and determination of the type of aircraft to be accommodated in the early stages and in the future.
- Evaluation of the capacity of existing airport facilities and their ability to accommodate proposed expansion.
- Estimation of extent of airside and landside facilities required to accommodate forecast traffic for future years.

The Airport Layout Plan's twenty-year aviation forecast projects markets, enplanements, operations – both average annual and peaking - and aircraft types. The Airport Forecasts (MMH Forecasts) considered various information during the development of these forecasts. These included forecasts prepared by Mammoth Mountain Ski Area's airline consultants, analysis and comparison of MMH Forecasts and peer resort airport enplanements and aircraft operations, trend forecasts based on population and economic factors, and share analysis based on share of traffic at MMH as compared to F.A.A. Western Pacific Region Airports and Total United States Airports.

3-2 Airport Role

MMH has previously served and will continue to serve as an airport that provides service for general aviation and business aircraft from the Central and Western United States bringing visitors to the recreation facilities available in the area including skiing, fishing, hiking, and access to Yosemite National Park. Airline service has been instituted in the past at MMH and has ceased due to lack of support. In the late 1990s an agreement was made between the Mammoth Mountain Ski Area (MMSA) and American Airlines to fly scheduled B 757 aircraft flights between Chicago, Illinois; Dallas Ft.-Worth, Texas and MMH during the winter months to bring skiers to the area. This proposed service was abandoned due to legal issues. New air service to the region was instituted in 2008 and has grown significantly since that time. The contract for the new airline service is backed by the MMSA who provides subsidies for the airlines in the wintertime. A decreased service operates the rest of the year and this service is subsidized by a partnership of the Town, Mono County, and MMSA. MMSA and the Town are committed to maintaining and expanding airline service to MMH and have committed to continue subsidizing the airline service as necessary. The nearest

commercial airport to Mammoth Lakes is Reno, Nevada, which is 170 miles to the north.

A series of 91 hangars were constructed by the fixed base operator at the airport and sold to individual pilots and aircraft owners for aircraft storage at the airport. Many of these hangars have been placed in a pool, which is controlled and operated by the fixed base operator providing covered storage space for visiting aircraft. In addition to the 91 new hangars, there are 43 old hangars consisting of three FBO hangars and 40 privately owned hangars.

MMH has only eight aircraft based at the airport. Six are single engine and two are small twin engine. The based aircraft population is not expected to change appreciably in the forecast period.

While locally based operations at the airport are minimal – less than 10% of total operations – there are a significant number of itinerant operations at the airport. MMH serves itinerant GA aircraft ranging from the small single engine propeller aircraft to large business jets on a year-round basis. MMH also serves a growing airline operation. It is expected that these operations will continue at MMH and that there will be significant growth in airline and business aircraft operations.

There are three other general aviation airports within 50 miles of MMH. According to F.A.A. Airport Master Records, Eastern Sierra Regional Airport in Bishop, California, has 64 based aircraft, Lee Vining Airport has 1 based aircraft, and Bryant Field in Bridgeport, California, has 1 based aircraft.

3-3 Projections

3-3.1 General Airport Services

MMH serves the Town of Mammoth Lakes and surrounding recreational areas. Aviation activity generally results from demand for access to MMSA in the winter and summer recreation facilities including hiking, fishing, hot springs bathing, and access to Yosemite National Park. These demands are satisfied by general aviation aircraft ranging in size from the light single-engine propeller aircraft to the large jets up to the G V class and automobiles and buses. MMH began current commercial airline operations in 2008 during the winter months and has expanded rapidly since then.

Aviation activity levels result from interaction of demand and supply factors. The demand for aviation is generally a function of demographic and economic activities, but at this airport recreation activities are the main attraction. Supply factors that influence activity levels include cost, competition, and regulations. While there are very few aircraft based at this airport, there is significant activity by general aviation aircraft bringing visitors to the area and by commercial airlines bringing visitors to the area since 2008.

3-3.2 Aviation Activity Parameters and Measures to be Forecast

The major activities and measures to be forecast include:

- Annual Operations – Itinerant, Local, and Total
- Enplaned Passengers on Commercial Aircraft
- Fleet Mix – Number and Type of Operations
- Peak Operations
- Critical Aircraft
- Based Aircraft
- Comparison of Airport Planning to TAF Forecasts

3-3.3 Collect and Review Previous Airport Forecasts

Historical forecasts for commercial operations were prepared over 12 years ago and envisioned B 757 nonstop flights from Chicago and Dallas Ft. Worth. Today a different market is being served by the airlines and so historical forecasts for commercial operations will not be used for this study. Historical forecasts for general aviation activity were reviewed for this study and found to be consistent with current forecasts.

3-3.4 Data Collection

Pertinent data available for all demographics used in these forecasts were collected and used in this study. The most recent F.A.A. Terminal Area Forecasts (TAF) were obtained for historical and forecast aviation activity for the entire United States, the F.A.A. Western Pacific Region, and MMH. Forecasts presented in the California Aviation System Plan (CASP) were obtained and reviewed. This CASP data is old and does not represent current conditions. The additional data collected included the following:

- *Population* – The population of the Town of Mammoth Lakes and all of Mono County was obtained. It was found that the population of both the Town and the County is very small and not expected to grow very rapidly.

- *Employment* – The major employment in the area is service and government and the employment level is small and growth rate is small.

- *Enplaned Passengers* – MMSA is responsible for all contracts with the airlines for all winter airline service to MMH. These contracts include the payment of subsidies to the airlines by MMSA. MMSA has retained an airline consultant who worked in collaboration with Airport Staff and Mammoth Lakes Tourism to prepare a development plan for airline service to MMH. The airline service plan entitled, *MMH Growth Plan* is included in Exhibit 5. In this exhibit the growth plan from 2008 to 2028 has been developed and is presented. On this plan MMSA includes the listing of

airlines providing the service, type aircraft to be used, the city served, the number of seats and operations provided for the early winter service, the spring/summer/fall scheduled service and the total year-round scheduled service. The airlines contracts have been successful in matching these forecasts and MMSA is committed to continue the contracts and expand them as shown in Exhibit 5.

There are several airports in the Western United States that are located in areas of small population, but serve major ski areas, summer recreation facilities, and in many areas national parks. These resorts are similar in size and facilities, and have successful air service programs. A detailed comparison of peer resort airplane enplanements and airline operations was made that included Yampa Valley, Eagle County, Aspen/Pitkin, Glacier Park, Montrose Regional, and Friedman Memorial (Sun Valley) Airports. These airports were chosen since they have similar population bases and similar recreation facilities to MMH, and it is reasonable to expect that MMH will have a growth rate similar to that of the peer review airports. It is noted that all of the peer review airports also subsidize the airline operations. A summary of peer market comparisons is included in Exhibit 6. A summary of enplaned passengers, airline operations, and total operations for each of these peer review airports is included in Table No. 3-2.

- *Based Aircraft* – Historical and forecast based aircraft data were collected from the F.A.A. TAF for the entire United States system, the F.A.A. Western Pacific Region, and MMH. Historical and forecast based aircraft data for MMH were also collected from the California Aviation System Plan (CASP). TAF forecasts indicate four based aircraft during the base year and no increase over the next 20 years. Airport inventory indicates that there are currently 8 based aircraft at the airport and that there have been 8 to 10 based aircraft at the airport for the past 6 to 8 years. These data are included in Table No. 3-3.

- *Annual Aircraft Operations* – Historical and forecast annual aircraft operations were obtained from the F.A.A. TAF for the entire United States system, the F.A.A. Western Pacific Region, and MMH. Data were also collected from the CASP reports. Annual operation forecasts for airline service were prepared by the airline consultant for MMSA. These data are shown in Tables No. 3-1 and 3-3 for MMH.

- *Fleet Mix* – Fleet mix data were acquired from the Airport and from the MMH Growth Plan prepared by the airline consultant for MMSA for airline operations. The general aviation fleet mix ranges from light single-engine propeller aircraft to light twin-engine propeller aircraft to the small jet powered aircraft, larger piston aircraft, and the large jet powered aircraft of the G V class. The fleet mix for the airlines will be determined by contracts between the airline and MMSA and are indicated in Exhibit 5.

Currently the airlines are using Q400 aircraft and CRJ 700 aircraft and are proposing to use B 737 and A 319 aircraft in the future.

- *Helicopter Operations and Based Helicopters* – There are no based helicopters at the airport.

3-3.5 Forecast Methods

For based aircraft and local general aviation operations trend analyses were conducted using population and employment as comparable features. Share analyses were used with share of based aircraft and operations compared to the total National and Western Pacific Region numbers. In the trend analysis historical data were used to develop a reasonable relationship between the number of based aircraft or number of aircraft operations per unit of population or employment. This ratio was applied to the forecast population data available from local agencies. The trend analysis is only valid at MMH for based aircraft and local aircraft operations. Itinerant aircraft operations, airline passenger enplanements, and airline operations are not dependent on local population or employment, but rather on the recreational facilities available in the area. The existing and forecast number of based aircraft is small, as are the local operations, and will have little effect on the requirements for development at the airport.

Forecasts for total itinerant operations were established by historical data obtained from Airport Management. In addition to the small single and twin-engine propeller driven aircraft that use the airport, there are significant numbers of larger propeller driven and turbojet aircraft that utilize the airport to bring people to the airport for skiing and other recreational activities. The use of this airport by larger aircraft has increased significantly over the past 10 years and this trend is expected to continue.

Forecasts for airline operations and enplaned passengers are a function of the contract between the airlines and MMSA, which includes subsidies or guarantees paid to the airline by MMSA. MMSA's airline consultant, in cooperation with MMSA and the Town, has provided an MMH Growth Plan for 2008 through 2028 for MMH. This plan is shown in Exhibit 5.

3-3.6 Evaluation of Forecasts

The forecasts prepared have been evaluated to indicate the forecast growth, the reason for the growth, and the basis for the projected forecasts.

3-3.6.1 *Based Aircraft*

The number of aircraft based at MMH is basically a function of local population and employment. The population of the Town of Mammoth Lakes and Mono County is small and the rate of growth is projected to

be small. The employment is basically service and government. This type population, population growth, and employment do not support large numbers of based aircraft or local operations. By actual count there are 8 aircraft based at the airport at this time – 6 light single engine aircraft and 2 twin-engine aircraft. Records indicate that for the past 6 to 8 years the number of based aircraft has ranged from 8 to 10.

Based on trend analyses using population and employment as a base and share analyses using TAF for the Western Pacific Region and the total United States as a base, it is forecast that within 20 years there will be 10 aircraft based at the airport and that the local operations will only increase by a small amount. The number of based aircraft forecast and existing are shown on Table No. 3-3 and Plate No. 3-1. It will be noted that for the same period TAF indicates that there are only 4 aircraft based at the airport at this time and there will be no increase over the 20-year period, which does not match existing conditions.

3-3.6.2 *Airport Operations*

Airport operations have been broken down into three categories- local operations, itinerant operations, and airline operations. The historic and forecast operations are presented in Table No. 3-1, Table No. 3-3, Plate No. 3-2, Plate No. 3-4, and Plate No. 3-5. These data show a significant increase in itinerant operations and airline operations over the 20-year forecast period, but a fairly small increase in local operations. The increase in airline operations is brought about by the plans of MMSA to expand their contract with the airlines for airline service to MMH.

The increase in airline operations appears to be reasonable when compared to the operations at the peer review airports as shown on Table No. 3-3 and Plate No. 3-4. The shape of the airline operation curve for MMH after the first few years of operations is similar to that existing and forecast for the peer review airports. The peer review airports generally showed a more rapid increase in the initial years of operation than does MMH. This is due to the requirement to restrain the growth at MMH until adequate terminal facilities are developed. Taking into consideration the economic value to MMSA of increasing airline operations and their commitment to increasing this service, it is reasonable to expect that the growth plan will be implemented.

3-3.6.3 *Enplaned Passengers*

The MMH Growth Plan prepared by the consultant to MMSA shows the number of airline departures and the number of seats that are available on the aircraft that are operating at MMH. They do not provide any

figures for the number of enplaned passengers. A load factor of 60 percent has been used in this study to determine the number of passengers in the forecast period. This load factor is considered conservative. The peer market comparisons show load factors ranging from 64 to 85 percent for the peer airports. The load factor for the first few years of operation at MMH were lower but have exceeded 60 percent this past year. The low values in the first years were caused by lack of advertisement and knowledge of the existing operation.

The forecast number of enplaned passengers is included on Table No. 3-1. In Table No. 3-2 the forecast enplaned passengers for MMH and the peer airports is presented. These data are also included in Table No. 3-3. Plate No. 3-3 shows the historical and forecast enplaned passengers for MMH and the peer airports. It will be noted that in the later years the MMH forecast curve essentially parallels the curves for the peer airports and the increase in enplanements over the first 10 to 15 years of operation is of similar shape as that of the peer airports.

The current airline service is subsidized by MMSA during the winter ski season and by MMSA, Mammoth Lakes Tourism, the Town of Mammoth Lakes, and the County of Mono during the rest of the year. These entities are committed to maintaining and expanding the airline service and to continuing the subsidy program as necessary, as indicated in Exhibits 8, 9, and 10.

The extent of airline service is driven by the MMSA commitment and willingness to continue the subsidy program as needed. All of the peer airports airline operations studied are also dependent on subsidies from the local ski areas. Forecasts of enplaned passengers and airline operations have, therefore, been based on the MMSA growth plan. A 60 percent load factor has been applied to provide forecasts of enplaned passengers.

3-3.6.4 *Helicopters – Based Helicopters and Helicopter Operations*

There are no based helicopters at the airport, and those that use the airport are mainly fire service and Forest Service who only fly a few intermittent helicopter operations per year.

3-3.6.5 *Fleet Mix*

The fleet mix ranges from small single-engine aircraft to the small twins, large twin engine propeller aircraft, and small jets to large jets including Gulfstream G V aircraft. The current airline operations use Q 400 aircraft and RJ 700 aircraft. The critical aircraft in the base year is the Q 400. The airlines propose adding aircraft of the B 737/A 319

category within 8 to 10 years, at which time the B 737 will become the critical aircraft.

3-3.6.6 *Comparison of MMH Forecasts to F.A.A.-TAF Forecasts*

Comparisons of MMH forecasts to TAF of based aircraft and total operations have been prepared and are shown in Table No. 3-4 for the based aircraft and Table No. 3-5 for the total operations. It will be noted that the ratio of MMH forecasts to TAF forecasts for based aircraft range from 200% for the base year to 250% for the base year plus 20 years. This is brought about by the low values that TAF shows for based aircraft currently and no increase in over 20 years. They show 4 aircraft based in the base year; whereas, actual count shows 8 aircraft.

The comparison of MMH forecasts to TAF forecasts of annual enplaned passengers, annual commercial operations, and annual total operations is presented in Table No. 3-5. It will be noted that the ratio of MMH forecasts to TAF forecasts for enplaned passengers ranges from 117% in the base year to 415% in the base year plus 20 years and for commercial operations the ratio ranges from 158% for the base year to 470% in the base year plus 20 years. For total operations the ratio of MMH forecasts to TAF forecasts ranges from 98% in the base year to 160% in the base year plus 20 years. The reason for these large discrepancies is that TAF does not anticipate the airline traffic development at MMH and they do not consider any increase in airline operations for the 20-year forecast period.

3-3.6.7 *Peaking Characteristics*

When planning future airport facilities and determining adequacy of existing facilities, it is important to identify and project peak period activity levels. Peaking characteristics are developed for aircraft operations using the following methodologies:

- Annual operations are determined from previously described forecasts, and the peak month activity is typically considered to be approximately 10 percent of the year's total activity.
- The average peak day is determined by dividing the peak month activity by 30.
- The peak hour percentages are applied to the projected average peak day operations. The peak hour operations typically range from 12 to 20 percent of the peak day operations.

The peak hour operations anticipated by this methodology range from 4 in 2013 to 7.5 in 2033. Forecast peak hour operations indicate that the existing single runway will adequately serve the forecast aircraft during the forecast period without any significant delays.

Separate studies included in the Terminal Area Development Plan forecast that the peak hour passenger level in the new terminal building will be 245 in 2018 and 544 in 2033. This report also indicates that the number of gates required at the new terminal will be three in 2018 and five in 2033.

3-3.6.8 *Critical Aircraft*

F.A.A. defines the critical aircraft for planning purposes to be the largest aircraft group that has more than 500 operations per year. The aircraft operated by the airlines will meet this requirement and be the critical aircraft. The critical aircraft as of the base year 2013 will be the Q400. The critical aircraft by 2021, based on MMSA projections, will be the B737-700 or A 319.

TABLE NO. 3-1

MMH HISTORICAL AND FORECAST GROWTH

Year	Airline Seats	Enplaned Passengers		Airline Operations		Itinerent Operantions		Local Operantions		Total Operations	
		TAF	MMH	TAF	MMH	TAF	MMH	TAF	MMH	TAF	MMH
2006		0		0		5,389		1,896		7,285	
2007		0		0		5,389		1,896		7,285	
2008		0	557	0	36	5,389	5,600	1,896	600	7,285	6,236
2009	8,816	5,021	6,157	120	330	5,389	5,600	1,896	600	7,405	6,530
2010	51,148	18,252	19,798	1,000	1,346	5,389	5,600	1,896	600	8,285	7,546
2011	60,932	24,471	26,196	1,000	1,664	5,389	5,700	1,896	605	8,285	7,969
2012	65,204	28,917	27,246	1,000	1,818	5,389	5,800	1,896	612	8,285	8,230
2013	**56,360**	**28,917**	**33,816**	**1,000**	**1,580**	**5,389**	**5,900**	**1,896**	**620**	**8,285**	**8,100**
2014	**57,930**	**28,917**	**34,758**	**1,000**	**1,610**	**5,389**	**6,000**	**1,896**	**630**	**8,285**	**8,240**
2015	**64,690**	**28,917**	**38,814**	**1,000**	**1,790**	**5,389**		**1,896**		**8,285**	**8,420**
2016	**75,278**	**28,917**	**45,167**	**1,000**	**2,106**	**5,389**		**1,896**		**8,285**	**8,736**
2017	**80,910**	**28,917**	**48,546**	**1,000**	**2,266**	**5,389**		**1,896**		**8,285**	**8,896**
2018	**92,024**	**28,917**	**55,214**	**1,000**	**2,596**	**5,389**	**6,350**	**1,896**	**670**	**8,285**	**9,616**
2019	**112,174**	**28,917**	**67,304**	**1,000**	**3,152**	**5,389**		**1,896**		**8,285**	**10,172**
2020	**119,800**	**28,917**	**71,880**	**1,000**	**3,379**	**5,389**		**1,896**		**8,285**	**10,399**
2021	**134,523**	**28,917**	**80,714**	**1,000**	**3,808**	**5,389**		**1,896**		**8,285**	**10,828**
2022	**141,456**	**28,917**	**84,874**	**1,000**	**3,820**	**5,389**		**1,896**		**8,285**	**10,840**
2023	**151,748**	**28,917**	**91,049**	**1,000**	**3,954**	**5,389**	**6,700**	**1,896**	**730**	**8,285**	**11,384**
2024	**156,839**	**28,917**	**94,102**	**1,000**	**4,367**	**5,389**		**1,896**		**8,285**	**11,792**
2025	**168,440**	**28,917**	**101,064**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**
2026	**173,850**	**28,917**	**104,310**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**
2027	**179,110**	**28,917**	**107,466**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**
2028	**181,870**	**28,917**	**109,122**	**1,000**	**4,500**	**5,389**	**7,200**	**1,896**	**770**	**8,285**	**12,470**
2029		**28,917**	**114,000**	**1,000**		**5,389**		**1,896**		**8,285**	
2030		**28,917**	**115,500**	**1,000**		**5,389**		**1,896**		**8,285**	
2031		**28,917**	**116,500**	**1,000**		**5,389**		**1,896**		**8,285**	
2032		**28,917**	**118,200**	**1,000**		**5,389**		**1,896**		**8,285**	
2033		**28,917**	**120,000**	**1,000**	**4,700**	**5,389**	**7,700**	**1,896**	**820**	**8,285**	**13,220**

TABLE NO. 3-2
MMH and Comparable Airports
Historical and Forecast Growth

	Yampa Valley			Eagle County Regional			Aspen-Pitkin CO			Glacier Park International			Friedman Memorial			Montrose Regional			Mammoth Yosemite Airport										
	Enplaned Passengers	Airline Operations	Total Operations	Enplaned Passengers	Airline Operations	Total Operations	Enplaned Passengers	Airline Operations	Total Operations	Enplaned Passengers	Airline Operations	Total Operations	Enplaned Passengers	Airline Operations	Total Operations	Enplaned Passengers	Airline Operations	Total Operations	Seats Available	Enplaned Passengers		Airline Operations		Itinerent Operantions		Local Operantions		Total Operations		
Year	TAF	TAF		TAF	TAF		TAF	TAF		TAF	TAF		TAF	TAF	TAF	TAF	TAF			TAF	MMH	TAF	MMH	TAF	MMH	TAF	MMH	TAF	MMH	Year
1976	11,500			5,157			109,525			31,657			18,093			16,008				16,141										1976
1977	8,109			4,604			93,369			38,082			19,000			16,422				9,836										1977
1978	12,175			4,448			128,824			43,542			22,000			23,352				16,626										1978
1979	15,070			2,947			137,632			51,372			24,000			32,736				16,230										1979
1980	12,012			14			132,128			39,141			14,924			26,963				2,373										1980
1981	9,801			0			112,149			36,690			5,680			23,097				5,161										1981
1982	3,984			13,453			120,539			41,039			2,587			21,581				5,681										1982
1983	1,296			0			127,674			53,158			12,384			35,333				3,950										1983
1984	22			0			153,971			52,751			25,240			24,110				402										1984
1985	132			0			173,189			53,743			29,537			19,900				2,183										1985
1986	573			0			190,709			57,052			21,833			21,375				4,403										1986
1987	24,495			0			257,311			47,044			29,007			22,850				3,053										1987
1988	35,544			63			227,475			57,317			37,218			24,325				3,211										1988
1989	45,419			300			214,841			67,473			39,912			25,800				6,986										1989
1990	44,862	1,800	7,630	8,398	4,814	20,664	214,067	11,052	41,259	69,776	12,270	65,190	34,712	4,824	46,066	24,120	0	28,448		5,247		2,900		17,030		4,000		23,930		1990
1991	59,355	3,932	8,256	29,749	1,484	21,234	204,137	12,935	47,662	79,069	12,465	64,715	38,938	9,337	53,719	25,425	0	23,014		5,897		3,000		17,030		4,000		24,030		1991
1992	55,953	3,668	6,442	34,558	1,458	21,208	234,511	14,228	47,889	85,914	10,500	40,700	50,614	11,078	65,672	28,330	10	25,910		5,777		3,000		17,030		4,000		24,030		1992
1993	63,866	3,668	6,442	53,200	2,048	21,798	250,981	14,102	47,315	88,937	10,500	40,700	54,066	9,767	63,019	37,096	40	25,940		9,328		3,000		17,030		4,000		24,030		1993
1994	62,778	3,918	6,692	62,347	1,755	6,425	251,533	13,956	45,438	102,995	11,400	40,500	65,336	9,939	66,931	36,053	60	27,812		8,169		1,500		9,030		3,000		13,530		1994
1995	81,549	8,982	11,806	77,167	6,699	27,399	204,907	8,894	43,934	114,845	10,670	62,050	63,109	8,570	54,245	40,867	160	19,610		7,518		1,500		9,030		3,000		13,530		1995
1996	95,643	10,518	13,960	109,118	3,097	25,458	206,672	10,166	42,614	121,176	11,450	58,730	67,179	9,229	71,223	43,284	100	23,217		1,762		1,500		9,100		3,000		13,600		1996
1997	105,906	7,138	10,602	164,415	4,364	29,511	217,343	14,396	44,612	133,275	8,660	55,460	60,356	7,596	64,320	55,591	104	23,540		0		1,200		9,050		3,000		13,250		1997
1998	104,428	5,146	8,635	173,041	5,944	30,030	251,448	16,945	47,067	133,502	13,450	76,015	60,771	8,738	61,984	62,721	106	23,744		0		1,200		9,050		3,000		13,250		1998
1999	109,066	5,436	8,950	172,429	7,847	33,307	219,909	11,036	44,510	142,698	13,730	64,610	66,996	10,443	58,296	72,119	107	23,969		0		800		9,050		3,000		12,850		1999
2000	110,561	6,672	10,211	183,502	10,440	39,355	214,358	14,225	49,586	156,384	15,044	65,924	71,463	13,825	67,278	66,976	110	24,194		0		800		9,050		3,000		12,850		2000
2001	102,290	5,670	11,278	173,478	10,327	39,267	363,654	15,843	46,042	159,376	15,044	65,924	63,540	12,768	52,375	71,098	2,000	23,964		0		800		9,050		3,000		12,850		2001
2002	104,815	4,004	9,673	163,948	10,926	40,735	336,561	17,155	47,018	156,964	14,107	48,364	65,572	16,122	57,100	70,510	2,059	24,194		0		800		9,050		3,000		12,850		2002
2003	100,475	4,098	9,828	166,416	11,270	43,341	192,251	16,629	43,780	169,265	15,914	50,761	72,621	14,733	44,473	67,813	2,081	24,387		0		800		9,050		3,000		12,850		2003
2004	117,604	4,566	10,356	187,549	11,257	38,980	180,519	17,302	43,256	173,985	16,109	62,083	71,128	14,469	45,300	72,129	2,103	24,578		0		800		9,050		3,000		12,850		2004
2005	125,563	4,762	10,614	209,764	11,316	41,041	191,579	17,834	44,778	195,385	19,250	65,602	69,604	15,228	43,978	77,203	2,247	25,206		0		0		9,100		3,000		12,800		2005
2006	131,864	4,853	10,762	213,891	11,852	40,774	202,137	19,009	44,464	174,305	15,049	52,252	69,003	15,377	41,442	81,264	2,269	25,380		0		0		5,389		1,896		7,285		2006
2007	140,765	4,947	10,914	228,421	13,053	42,033	180,951	19,022	42,947	185,390	16,459	55,017	67,863	14,220	48,220	93,110	2,292	25,558		0		0		5,389		1,896		7,285		2007
2008	140,289	7,578	13,843	217,914	12,758	42,842	215,833	21,006	46,536	189,254	10,983	37,470	66,564	13,390	36,239	87,582	5,412	17,791		0	557	0	36	5,389	5,600	1,896	600	7,285	6,236	2008
2009	122,076	6,862	12,399	180,272	8,994	31,302	207,165	18,444	40,924	162,826	9,116	28,502	50,540	10,929	29,243	90,943	5,412	17,791	8,816	5,021	6,157	120	330	5,389	5,600	1,896	600	7,405	6,530	2009
2010	110,715	6,862	12,399	201,484	11,380	35,061	226,684	18,297	38,292	172,383	8,868	29,267	52,861	11,136	31,450	94,849	5,054	22,505	51,148	18,252	19,798	1,000	1,346	5,389	5,600	1,896	600	8,285	7,546	2010
2011	105,750	5,273	9,677	190,739	10,664	32,484	204,287	17,755	37,121	178,282	8,836	28,150	50,985	10,195	28,304	89,283	5,054	22,505	60,932	24,471	26,196	1,000	1,664	5,389	5,700	1,896	605	8,285	7,969	2011
2012	103,449	6,134	10,582	175,086	11,435	36,574	224,379	18,995	37,718	184,754	8,685	25,286	48,618	9,471	26,969	78,735	5,105	22,686	65,204	28,917	27,246	1,000	1,818	5,389	5,800	1,896	612	8,285	8,230	2012
2013	**106,289**	**6,251**	**10,744**	**178,803**	**11,664**	**36,766**	**229,741**	**19,217**	**37,077**	**187,646**	**8,771**	**24,905**	**50,308**	**9,635**	**25,869**	**78,983**	**5,154**	**22,866**	**56,360**	**28,917**	**33,816**	**1,000**	**1,580**	**5,389**	**5,900**	**1,896**	**620**	**8,285**	**8,100**	**2013**
2014	**109,205**	**6,371**	**10,909**	**182,603**	**11,895**	**37,120**	**235,232**	**19,441**	**37,423**	**190,595**	**8,859**	**25,069**	**52,057**	**9,804**	**26,188**	**79,235**	**5,205**	**23,050**	**57,930**	**28,917**	**34,758**	**1,000**	**1,610**	**5,389**	**6,000**	**1,896**	**630**	**8,285**	**8,240**	**2014**
2015	**112,203**	**6,494**	**11,077**	**186,489**	**12,134**	**37,483**	**240,854**	**19,669**	**37,774**	**193,602**	**8,947**	**25,234**	**53,866**	**9,975**	**26,510**	**79,492**	**5,258**	**23,239**	**64,690**	**28,917**	**38,814**	**1,000**	**1,790**	**5,389**		**1,896**		**8,285**	**8,420**	**2015**
2016	**115,283**	**6,618**	**11,248**	**190,461**	**12,377**	**37,851**	**246,612**	**19,898**	**38,126**	**196,668**	**9,038**	**25,403**	**55,738**	**10,150**	**26,838**	**79,755**	**5,309**	**23,427**	**75,278**	**28,917**	**45,167**	**1,000**	**2,106**	**5,389**		**1,896**		**8,285**	**8,736**	**2016**
2017	**118,447**	**6,746**	**11,421**	**194,522**	**12,625**	**38,225**	**252,505**	**20,130**	**38,483**	**199,797**	**9,129**	**25,572**	**57,675**	**10,327**	**27,169**	**80,022**	**5,362**	**23,620**	**80,910**	**28,917**	**48,546**	**1,000**	**2,266**	**5,389**		**1,896**		**8,285**	**8,896**	**2017**
2018	**121,699**	**6,877**	**11,599**	**198,671**	**12,881**	**38,608**	**258,539**	**20,368**	**38,847**	**202,990**	**9,221**	**25,743**	**59,681**	**10,506**	**27,504**	**80,294**	**5,415**	**23,815**	**92,024**	**28,917**	**55,214**	**1,000**	**2,596**	**5,389**	**6,350**	**1,896**	**670**	**8,285**	**9,616**	**2018**
2019	**125,040**	**7,010**	**11,779**	**202,912**	**13,141**	**38,996**	**264,718**	**20,608**	**39,213**	**206,247**	**9,316**	**25,917**	**61,754**	**10,690**	**27,845**	**80,571**	**5,468**	**24,013**	**112,174**	**28,917**	**67,304**	**1,000**	**3,152**	**5,389**		**1,896**		**8,285**	**10,172**	**2019**
2020	**128,472**	**7,146**	**11,963**	**207,245**	**13,405**	**39,389**	**271,043**	**20,851**	**39,584**	**209,567**	**9,412**	**26,093**	**63,901**	**10,876**	**28,189**	**80,856**	**5,521**	**24,213**	**119,800**	**28,917**	**71,880**	**1,000**	**3,379**	**5,389**		**1,896**		**8,285**	**10,399**	**2020**
2021	**131,999**	**7,285**	**12,150**	**211,674**	**13,675**	**39,789**	**277,519**	**21,099**	**39,961**	**212,952**	**9,509**	**26,271**	**66,122**	**11,066**	**28,538**	**81,145**	**5,577**	**24,418**	**134,523**	**28,917**	**80,714**	**1,000**	**3,808**	**5,389**		**1,896**		**8,285**	**10,828**	**2021**
2022	**135,621**	**7,425**	**12,338**	**216,203**	**13,951**	**40,196**	**284,151**	**21,349**	**40,340**	**216,391**	**9,608**	**26,451**	**68,420**	**11,259**	**28,892**	**81,440**	**5,633**	**24,625**	**141,456**	**28,917**	**84,874**	**1,000**	**3,820**	**5,389**		**1,896**		**8,285**	**10,840**	**2022**
2023	**139,343**	**7,567**	**12,529**	**220,835**	**14,232**	**40,609**	**290,941**	**21,603**	**40,725**	**219,916**	**9,708**	**26,633**	**70,800**	**11,458**	**29,254**	**81,741**	**5,689**	**24,835**	**151,748**	**28,917**	**91,049**	**1,000**	**3,954**	**5,389**	**6,700**	**1,896**	**730**	**8,285**	**11,384**	**2023**
2024	**143,170**	**7,712**	**12,722**	**225,573**	**14,519**	**41,029**	**297,895**	**21,860**	**41,113**	**223,510**	**9,811**	**26,819**	**73,261**	**11,661**	**29,621**	**82,046**	**5,745**	**25,046**	**156,839**	**28,917**	**94,102**	**1,000**	**4,367**	**5,389**		**1,896**		**8,285**	**11,792**	**2024**
2025	**147,102**	**7,858**	**12,916**	**230,415**	**14,812**	**41,456**	**305,014**	**22,123**	**41,508**	**227,175**	**9,915**	**27,006**	**75,810**	**11,866**	**29,992**	**82,358**	**5,801**	**25,260**	**168,440**	**28,917**	**101,064**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**	**2025**
2026	**151,140**	**8,008**	**13,114**	**235,364**	**15,109**	**41,888**	**312,304**	**22,388**	**41,907**	**230,915**	**10,021**	**27,196**	**78,446**	**12,075**	**30,369**	**82,676**	**5,857**	**25,476**	**173,850**	**28,917**	**104,310**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**	**2026**
2027	**155,290**	**8,160**	**13,316**	**240,425**	**15,415**	**42,330**	**319,767**	**22,658**	**42,311**	**234,729**	**10,128**	**27,387**	**81,175**	**12,289**	**30,753**	**82,999**	**5,913**	**25,694**	**179,110**	**28,917**	**107,466**	**1,000**	**4,500**	**5,389**		**1,896**		**8,285**	**11,930**	**2027**
2028	**159,554**	**8,317**	**13,523**	**245,596**	**15,730**	**42,782**	**327,409**	**22,933**	**42,721**	**238,618**	**10,236**	**27,579**	**83,998**	**12,506**	**31,141**	**83,329**	**5,970**	**25,916**	**181,870**	**28,917**	**109,122**	**1,000**	**4,500**	**5,389**	**7,200**	**1,896**	**770**	**8,285**	**12,470**	**2028**
2029	**163,933**	**8,476**	**13,733**	**250,885**	**16,050**	**43,241**	**335,233**	**23,212**	**43,137**	**242,585**	**10,345**	**27,773**	**86,919**	**12,727**	**31,534**	**83,665**	**6,027**	**26,140**		**28,917**	**114,000**	**1,000**		**5,389**		**1,896**		**8,285**		**2029**
2030	**168,434**	**8,638**	**13,947**	**256,297**	**16,375**	**43,706**	**343,245**	**23,492**	**43,554**	**246,634**	**10,456**	**27,969**	**89,942**	**12,953**	**31,934**	**84,009**	**6,085**	**26,369**		**28,917**	**115,500**	**1,000**		**5,389**		**1,896**		**8,285**		**2030**
2031																				**28,917**	**116,500**	**1,000**		**5,389**		**1,896**		**8,285**		**2031**
2032																				**28,917**	**118,200**	**1,000**		**5,389**		**1,896**		**8,285**		**2032**
2033	**182,691**	**9,143.00**	**14,610**	**273,275**	**17,394**	**45,151**	**368,449**	**24,357**	**44,835**	**259,272**	**10,797**	**28,570**	**99,655**	**13,657**	**33,169**	**85,079**	**6,263**	**27,073**		**28,917**	**120,000**	**1,000**	**4,700**	**5,389**	**7,700**	**1,896**	**820**	**8,285**	**13,220**	**2033**

Bold = Future Projection

Table No. 3-3
MMH Forecasts

A. Forecast Levels
Base Year: 2013

	Annual Operations						Average Annual Compound Growth Rates - Percent				
	Base Yr. Level	Base Yr. + 1 Yr.	Base Yr. + 5 Yrs.	Base Yr. + 10 Yrs	Base Yr. + 15 Yrs	Base Yr. to +20	Base Yr. + 1 Yr.	Base Yr. + 5 Yrs.	Base Yr. + 10 Yrs.	Base Yr. + 15 Yrs.	Base Yr. to +20
Passenger Enplanements											
Air Carrier	33,816	34,758	55,214	91,049	109,122	120,000	2.87	10.30	10.41	8.12	6.54
Commuter	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
TOTAL	33,816	34,758	55,214	91,049	109,122	120,000	2.87	10.30	10.41	8.12	6.54
Operations - Fixed Wing											
Itinerant											
Air carrier	1,580	1,610	2,596	3,954	4,500	4,700	1.90	10.44	9.61	7.23	5.60
Commuter/air taxi	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
Total Commercial Operations	1,580	1,610	2,596	3,954	4,500	4,700	1.90	10.44	9.61	7.23	5.60
General aviation	5,900	6,000	6,350	6,700	7,200	7,700	1.69	1.48	1.28	1.34	1.34
Military	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
Local											
General aviation	620	630	670	730	770	820	1.61	1.56	1.65	1.45	1.41
Military	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
TOTAL OPERATIONS	8,100	8,240	9,616	11,384	12,470	13,220	1.73	3.49	3.46	2.92	2.48
Instrument Operations	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00
Peak Hour Operations	4.0	4.1	4.8	5.6	6.2	6.6	2.50	3.71	3.42	2.96	2.54
Cargo/mail (enplaned + deplaned tons)											
Based Aircraft - Fixed Wing											
Single Engine (Nonjet)	6	6	6	7	7	8	0.00	0.00	1.55	1.03	1.45
Multi Engine (Nonjet)	2	2	2	2	2	2	0.00	0.00	0.00	0.00	0.00
Jet Engine	0	0	0	0	0	0	0.00				
Other	0	0	0	0	0	0	0.00				
TOTAL	8	8	8	9	9	10	0.00	0.00	1.18	0.79	1.12
Helicopter*											
Based helicopters	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
Helicopter operations	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00
TAF Total Operations	8,285	8,285	8,285	8,285	8,285	8,285					
TAF Based Aircraft	4	4	4	4	4	4					

***Note**: Helicopter based and operations are not included in data for total operations.

B. Operational Factors

	Base Yr. Level	Base Yr. + 1 Yr.	Base Yr. + 5 Yrs.	Base Yr. + 10 Yrs	Base Yr. + 15 Yrs.
Average aircraft size (seats)					
Air carrier	72	72	71	73	81
Commuter	0	0	0	0	0
Air taxi	0	0	0	0	0
Average enplaning load factor					
Air carrier	49	60	60	60	60
Commuter	0	0	0	0	0
Air taxi	0	0	0	0	0
GA operations per based aircraft	**815**	**829**	**877**	**826**	**886**

Sources: F.A.A. Terminal Area Forecasts (TAF)
Mammoth Yosemite Airport
Prepared by: Reinard W. Brandley, Consulting Airport Engineer

Table No. 3-4
Mammoth Yosemite Airport (MMH)
Comparison of Airport Planning and TAF Forecasts of Based Fixed Wing Aircraft

	Year	Airport Forecast (AF)	TAF	AF/TAF (%)
Total Based Aircraft - Fixed Wing				
Base yr. - 2013	2013	8	4	200
Base yr. + 5 yrs.	2018	8	4	200
Base yr. + 10 yrs.	2023	9	4	225
Base yr. + 15 yrs.	2028	9	4	225
Base yr. + 20 yrs.	2033	10	4	250

Note: TAF data is on a U.S. government fiscal year basis (October through September).

Reason for discrepancy:

1. TAF assumed no increase in forecast annual operations since 1995.
2. Normal growth of airport operations expected to relate to population and employment growth.

Sources: F.A.A. Terminal Area Forecasts (TAF)
Mammoth Yosemite Airport (MMH)

Prepared by: Reinard W. Brandley, Consulting Airport Engineer

Table No. 3-5
Mammoth Yosemite Airport (MMH)
Comparison of Airport Planning and TAF Forecasts of Enplaned Passengers & Annual Operations - Fixed Wing Aircraft

	Year	Airport Forecast (AF)	TAF	AF/TAF (%)
Passenger Enplanements				
Base yr. - 2013	2013	33,816	28,917	117
Base yr. + 5 yrs.	2018	55,214	28,917	191
Base yr. + 10 yrs.	2023	91,049	28,917	315
Base yr. + 15 yrs.	2028	109,122	28,917	377
Base yr. + 20 yrs.	2033	120,000	28,917	415
Commercial Operations				
Base yr. - 2013	2013	1,580	1,000	158
Base yr. + 5 yrs.	2018	2,596	1,000	260
Base yr. + 10 yrs.	2023	3,954	1,000	395
Base yr. + 15 yrs.	2028	4,500	1,000	450
Base yr. + 20 yrs.	2033	4,700	1,000	470
Total Operations				
Base yr. - 2013	2013	8,100	8,285	98
Base yr. + 5 yrs.	2018	9,616	8,285	116
Base yr. + 10 yrs.	2023	11,384	8,285	137
Base yr. + 15 yrs.	2028	12,470	8,285	151
Base yr. + 20 yrs.	2033	13,220	8,285	160

Note: TAF data is on a U.S. government fiscal year basis (October through September).

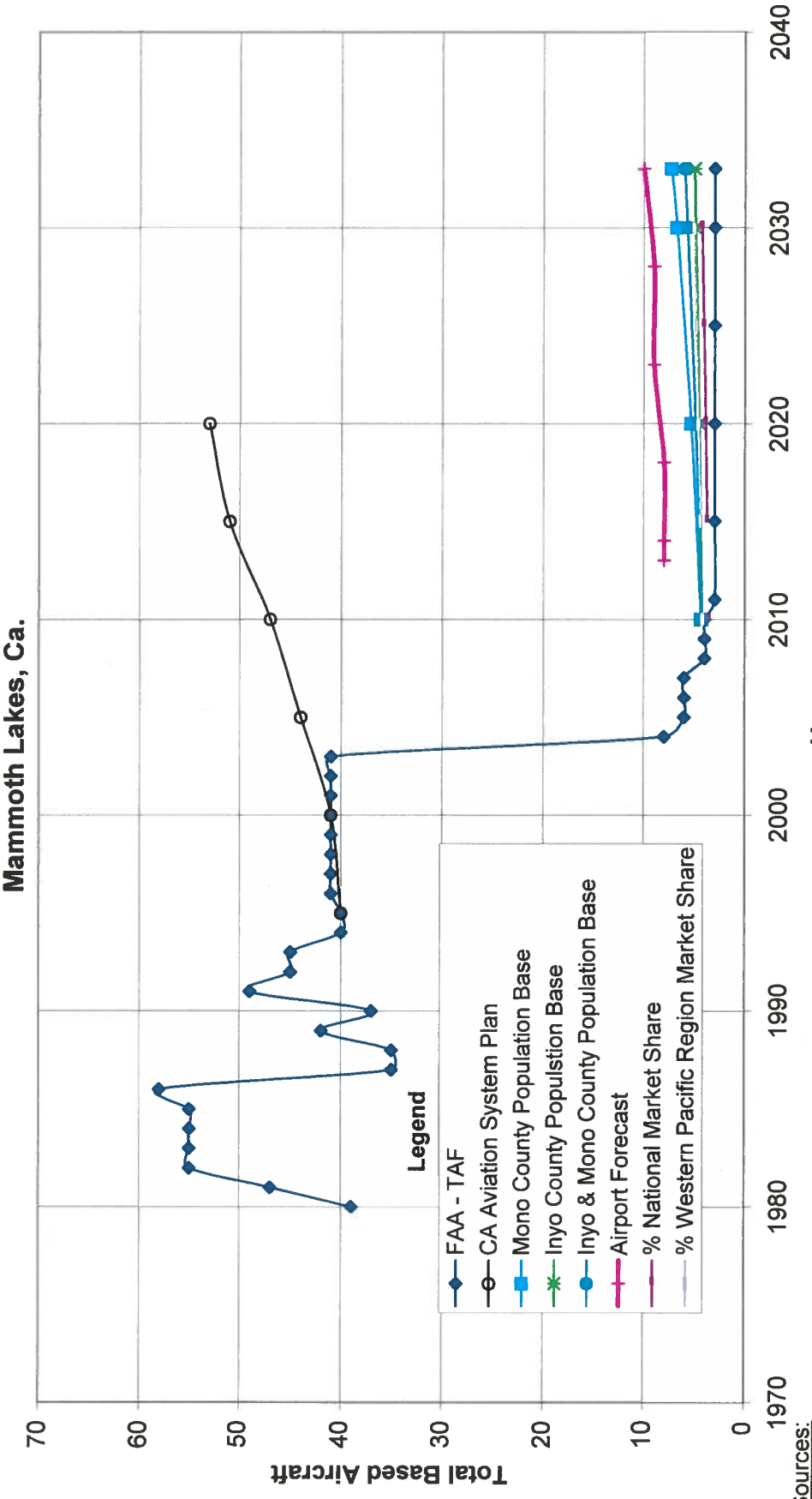
Reason for discrepancy:

1. TAF assumed no increase in forecast annual operations since 1995.
2. Normal growth of airport operations expected to relate to introduction of airline services, increased itinerant operations to provide access to recreational facilities, and population and employment growth.

Sources: F.A.A. Terminal Area Forecasts (TAF)
Mammoth Yosemite Airport (MMH)

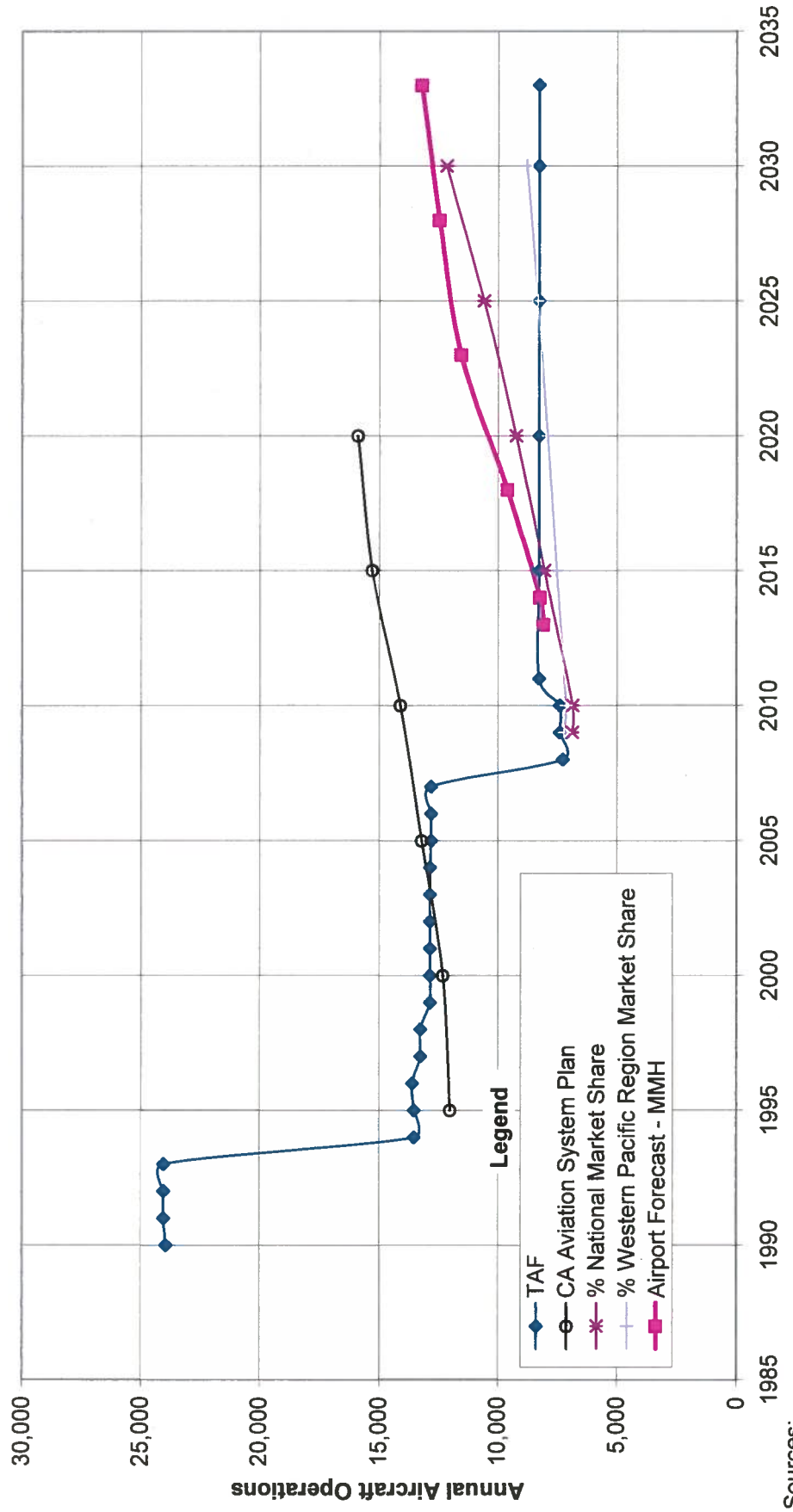
Prepared by: Reinard W. Brandley, Consulting Airport Engineer

Plate 3-1
Historical & Forecast Based Aircraft Trends
Mammoth Yosemite Airport,
Mammoth Lakes, Ca.



Sources:
Federal Aviation Administration
Ca. Aviation System Plan
Ca. Department of Finance
Town of Mammoth Lakes - Planning

Plate 3-2
Historical & Forecast Annual Aircraft Operation Trends
Mammoth Yosemite Airport, Mammoth, Ca.



Sources:
Federal Aviation Administration
Ca. Aviation System Plan
Ca. Department of Finance
Town of Mammoth Lakes - Planning

Plate 3-3
MMH and Comparable Airports
Annual Enplaned Passengers Historical & Forecast

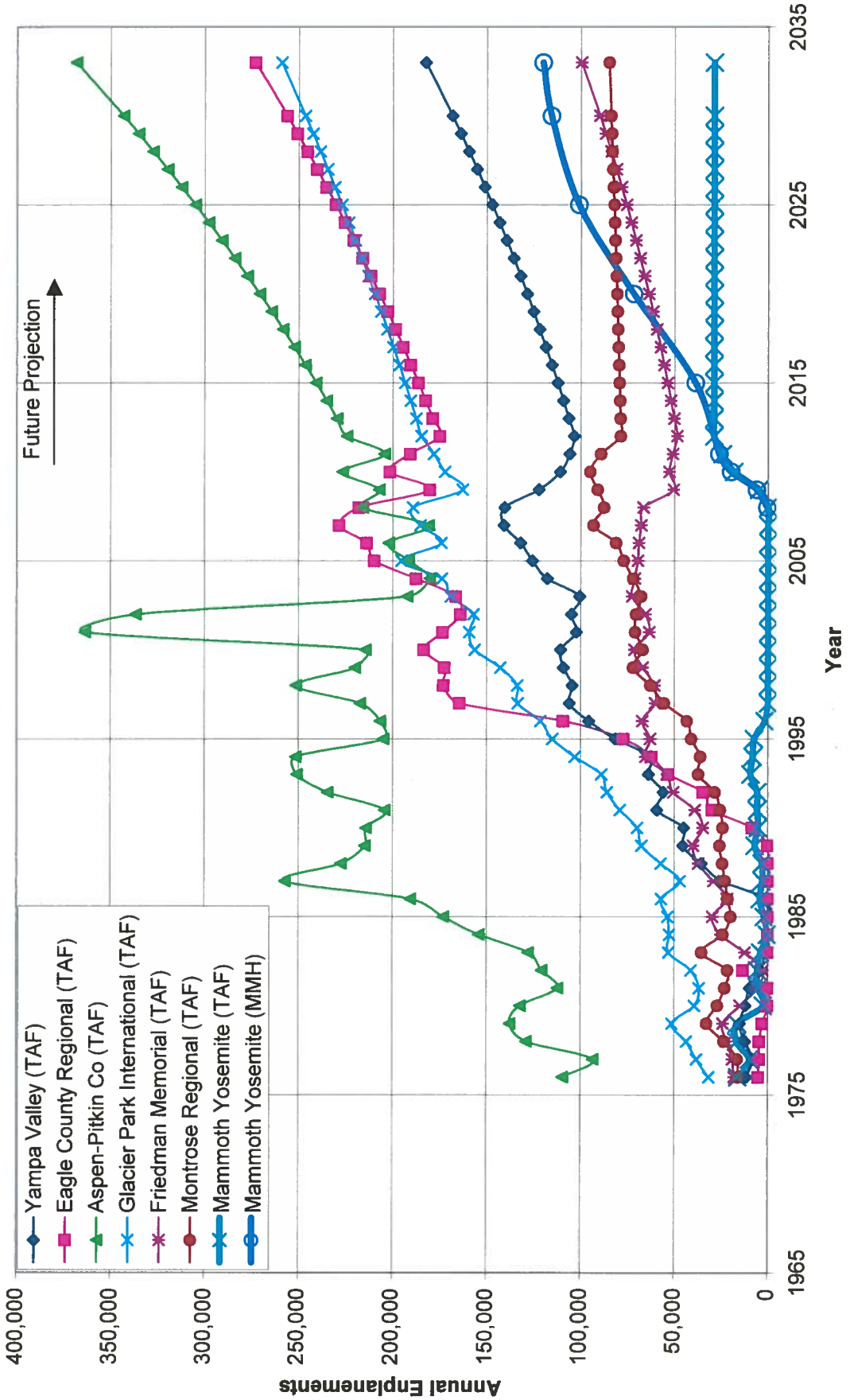
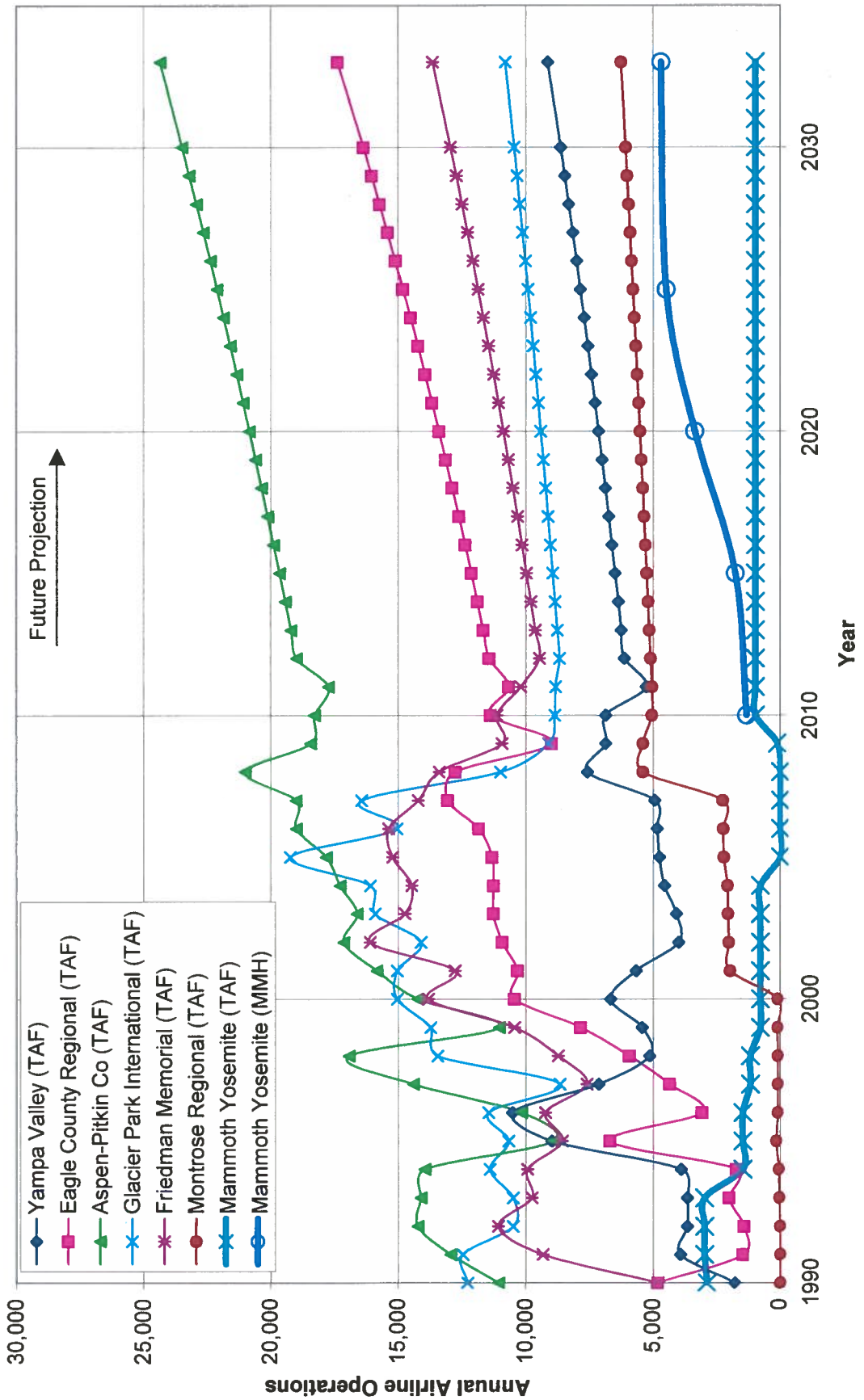


Plate 3-4
MMH and Comparable Airports
Annual Airline Operations - Historical and Forecast



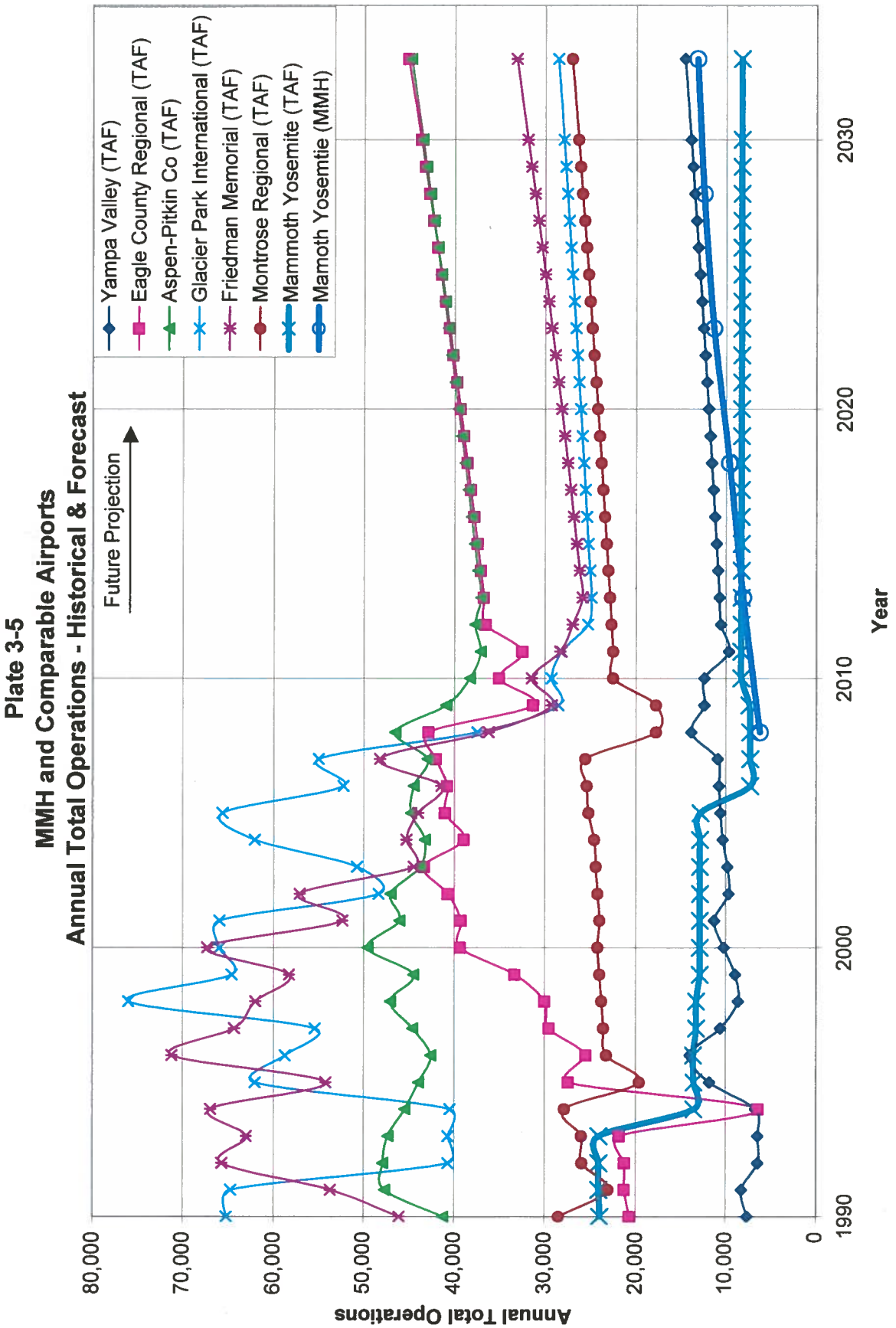


Plate 3-5
MMH and Comparable Airports
Annual Total Operations - Historical & Forecast
Future Projection
Yampa Valley (TAF)
Eagle County Regional (TAF)
Aspen-Pitkin Co (TAF)
Glacier Park International (TAF)
Friedman Memorial (TAF)
Montrose Regional (TAF)
Mammoth Yosemite (TAF)
Mamoth Yosemtie (MMH)
Annual Total Operations
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
1990
2000
2010
2020
2030
Year

MMH Growth Plan 2008 to 2013 - FY Oct 1 to Sept 30

As of 4/18/13

Early Winter/Winter Scheduled Air Service (Dec 1 to April 30)

(Actuals ending 4/30/13)

				2008-09		2009-10		2010-11		2011-12		2012-13	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	116	8816	115	8740	143	10868	143	10868	143	10868
LAX	Q-400	76	AS			114	8664	115	8740	131	9956	102	7752
SNA	RJ	66	UA							71	4686	67	4422
SAN	RJ	66	UA							123	8118	117	7722
SFO	RJ	66	UA					115	7590	123	8118	117	7722
SFO	RJ	66	UA							71	4686	67	4422
SJC	Q-400	76	AS			115	8740	130	9880	70	5320		
SEA	RJ	70	AS										
RNO	Q-400	76	AS			115	8740						
LAS	RJ	70	AS										
PHX	RJ	70	AA										
DFW													
Totals				**116**	**8816**	**459**	**34884**	**503**	**37078**	**732**	**51752**	**613**	**42908**
							296%		**6%**		**40%**		**-17%**

Spring/Summer/Fall Scheduled Air Service (May 1 to Nov 30)

				2008-09		2009-10		2010-11		2011-12		2012-13	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS			214	16264	214	16264	177	13452	177	13452
LAX	Q-400	76	AS										
SNA	RJ	66	UA										
SAN	RJ	66	UA										
SFO	RJ	66	UA										
SFO	RJ	66	UA										
SJC	Q-400	76	AS										
SEA	RJ	70	AS										
PDX	RJ	70	AS										
RNO	Q-400	76	AS										
LAS	RJ	70	AS										
PHX	RJ	70	AA										
DFW													
Totals				**0**	**0**	**214**	**16264**	**214**	**16264**	**177**	**13452**	**177**	**13452**
									0%		**-17%**		**0%**

Total Year Round Scheduled Air Service

				2008-09		2009-10		2010-11		2011-12		2012-13	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	116	8816	329	25004	357	27132	320	24320	320	24320
LAX	Q-400	76	AS			114	8664	115	8740	131	9956	102	7752
SNA	RJ	66	UA							71	4686	67	4422
SAN	RJ	66	UA					115	7590	123	8118	117	7722
SFO	RJ	66	UA					115	7590	123	8118	117	7722
SFO	RJ	66	UA							71	4686	67	4422
SJC	Q-400	76	AS			115	8740	130	9880	70	5320		
SEA	RJ	70	AS										
PDX	RJ	70	AS										
RNO	Q-400	76	AS			115	8740						
LAS	RJ	70	AS										
PHX	RJ	70	AA									0	0
DFW													
Totals				**116**	**8816**	**673**	**51148**	**832**	**60932**	**909**	**65204**	**790**	**56360**
							480%		**19%**		**7%**		**-14%**

Season	Days	Dates
Winter Season	115	Dec 17 to April 10
Spring/Summer Season	173	April 11 to Sept 30
Fall Season	49	Oct 1 to Nov 18
Early Winter Season	28	Nov 19 to Dec 16
Summer only	82	June 15 to Sept 4

Season	Days
Winter Season	115
Spring/Summer Season	173
Fall Season	49
Early Winter Season	28
Totals	365

Seasonal day counts will vary some from year to year

Ops	ns and Days	Ops	Seasons and Days	Ops	Seasons and Days
16	Weekend Day only	115	Winter Daily	173	Spring Summer Daily
28	rly Winter	131	Winter Daily + One Weekend Day	197	Winter Daily +Summer only
32	vo Weekend Days	143	Early Winter + Winter Daily	222	Spring Summer and Fall Daily
82	nmer Daily	147	Winter Daily + Two Weekend Days	230	Winter 2X Daily

Exhibit 5

MMH Growth Plan 2014 to 2018 - FY Oct 1 to Sept 30

As of 4/18/13

Early Winter/Winter Scheduled Air Service

				2013-14		2014-15		2015-16		2016-17		2017-18	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	143	10868	143	10868	143	10868	143	10868	143	10868
LAX	Q-400	76	AS	64	4864	64	4864	47	3572	30	2280	30	2280
SNA	RJ	66	UA					71	4686	71	4686	71	4686
SAN	RJ	66	UA	123	8118	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	71	4686	71	4686	44	2904	44	2904	44	2904
SFO	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
DEN	RJ	66	UA	16	1056	32	2112	48	3168	64	4224	115	7590
PDX	Q-400	76	AS					16	1216	32	2432	48	3648
LAS	Q-400	76	AS	51	3876	51	3876	68	5168	85	6460	85	6460
PHX	RJ	70	AA							48	3360	64	4480
DFW													
Totals			**42908**	**583**	**41058**	**591**	**41586**	**667**	**46762**	**747**	**52394**	**830**	**58096**
					-4%		**1%**		**12%**		**12%**		**11%**

Spring/Summer/Fall Scheduled Air Service

				2013-14		2014-15		2015-16		2016-17		2017-18	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	222	16872	222	16872	222	16872	222	16872	222	16872
LAX	Q-400	76	AS			82	6232	82	6232	82	6232	82	6232
SNA	RJ	66	UA										
SAN	RJ	66	UA										
SFO	RJ	66	UA					82	5412	82	5412	82	5412
SFO	RJ	66	UA									82	5412
DEN	RJ	66	UA										
PDX	Q-400	76	AS										
LAS	Q-400	76	AS										
PHX	RJ	70	AA										
DFW			AA										
Totals			**13452**	**222**	**16872**	**304**	**23104**	**386**	**28516**	**386**	**28516**	**468**	**33928**
					25%		**37%**		**23%**		**0%**		**19%**

				2013-14		2014-15		2015-16		2016-17		2017-18	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	365	27740	365	27740	365	27740	365	27740	365	27740
LAX	Q-400	76	AS	64	4864	146	11096	129	9804	112	8512	112	8512
SNA	RJ	66	UA					71	4686	71	4686	71	4686
SAN	RJ	66	UA	123	8118	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	71	4686	71	4686	126	8316	126	8316	126	8316
SFO	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	197	13002
DEN	RJ	66	UA	16	1056	32	2112	48	3168	64	4224	115	7590
PDX	Q-400	76	AS					16	1216	32	2432	48	3648
LAS	Q-400	76	AS	51	3876	51	3876	68	5168	85	6460	85	6460
PHX	RJ	70	AA							48	3360	64	4480
DFW			AA										
Totals			**56360**	**805**	**57930**	**895**	**64690**	**1053**	**75278**	**1133**	**80910**	**1298**	**92024**
					3%		**12%**		**16%**		**7%**		**14%**

Exhibit 5

MMH Growth Plan 2019 to 2022 - FY Oct 1 to Sept 30

As of 4/18/13

Early Winter/Winter Scheduled Air Service

				2018-19		2019-20		2020-21		2021-22		2022-23	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	143	10868	143	10868	143	10868	143	10868	143	10868
LAX	Q-400	76	AS	30	2280	30	2280	30	2280	30	2280	30	2280
LAX	Q-400	76	AS	115	8740	115	8740	115	8740	115	8740	115	8740
SNA	RJ	66	UA	71	4686	71	4686	71	4686	71	4686	71	4686
SAN	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	44	2904	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
DEN	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SEA	RJ	70	AS	48	3360	64	4480	90	6300	64	4480	115	8050
PDX	Q-400	70	AS	64	4480	90	6300	115	8050	115	8050	115	8050
LAS	Q-400	76	AS	85	6460	85	6460	85	6460	85	6460	85	6460
PHX	RJ	70	AA	115	8050	115	8050	115	8050	115	8050	115	8050
DFW	A-319	124	AA							16	1984	32	3968
Totals			**58096**	**1060**	**74598**	**1173**	**82224**	**1224**	**85794**	**1214**	**85958**	**1281**	**91512**
					28%		**10%**		**4%**		**0%**		**6%**

Spring/Summer/Fall Scheduled Air Service

				2018-19		2019-20		2020-21		2020-21		2021-22	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	222	16872	222	16872	222	16872	222	16872	222	16872
LAX	Q-400	76	AS	82	6232	82	6232	82	6232	82	6232	82	6232
LAX	Q-400	76	AS										
SNA	RJ	66	UA										
SAN	RJ	66	UA					82	5412	82	5412	82	5412
SFO	RJ	66	UA	82	5412	82	5412	82	5412	82	5412	82	5412
SFO	RJ	66	UA	82	5412	82	5412	82	5412	82	5412	82	5412
DEN	RJ	66	UA										
SEA	RJ	70	AS										
PDX	Q-400	70	AS										
LAS	Q-400	76	AS	48	3648	48	3648	48	3648	64	4864	64	4864
PHX	RJ	70	AA					82	5740	82	5740	82	5740
DFW	A-319	124	AA										
Totals			**33928**	**516**	**37576**	**516**	**37576**	**680**	**48728**	**696**	**49944**	**696**	**49944**
					11%		**0%**		**30%**		**2%**		**0%**

Total Year Round Scheduled Air Service

				2018-19		2019-20		2020-21		2020-21		2021-22	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	365	27740	365	27740	365	27740	365	27740	365	27740
LAX	Q-400	76	AS	112	8512	112	8512	112	8512	112	8512	112	8512
LAX	Q-400	76	AS	115	8740	115	8740	115	8740	115	8740	115	8740
SNA	RJ	66	UA	71	4686	71	4686	71	4686	71	4686	71	4686
SAN	RJ	66	UA	115	7590	115	7590	197	13002	197	13002	197	13002
SFO	RJ	66	UA	126	8316	197	13002	197	13002	197	13002	197	13002
SFO	RJ	66	UA	197	13002	197	13002	197	13002	197	13002	197	13002
DEN	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SEA	RJ	70	AS	48	3360	64	4480	90	6300	64	4480	115	8050
PDX	Q-400	70	AS	64	4480	90	6300	115	8050	115	8050	115	8050
LAS	Q-400	76	AS	133	10108	133	10108	133	10108	149	11324	149	11324
PHX	RJ	70	AA	115	8050	115	8050	197	13790	197	13790	197	13790
DFW	A-319	124	AA	0	0	0	0	0	0	16	1984	32	3968
Totals			**92024**	**1576**	**112174**	**1689**	**119800**	**1904**	**134522**	**1910**	**135902**	**1977**	**141456**

Exhibit 5

MMH Growth Plan 2023 to 2028 - FY Oct 1 to Sept 30

As of 4/18/13

Early Winter/Winter Scheduled Air Service

				2023-24		2024-25		2025-26		2026-27		2027-28	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	143	10868	143	10868	143	10868	143	10868	143	10868
LAX	Q-400	76	AS	30	2280	30	2280	30	2280	30	2280	30	2280
LAX	Q-400	76	AS	115	8740	115	8740	115	8740	115	8740	115	8740
SNA	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SAN	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SFO	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
DEN	Mix*	66/124	UA	115	9000	115	11500	115	13000	115	14260	115	14260
SEA	Mix*	66/124	AS	115	7590	115	7590	115	9000	115	11500	115	13000
PDX	Mix*	66/124	AS	131	7590	131	9000	131	11500	131	13000	131	14260
LAS	Q-400	76	AS	115	8740	115	8740	115	8740	115	8740	115	8740
PHX	RJ	70	AA	115	8050	115	8050	115	8050	115	8050	115	8050
DFW	A-319	124	AA	64	7936	115	14260	115	14260	115	14260	115	14260
Totals			**91512**	**1403**	**101154**	**1454**	**111388**	**1454**	**116798**	**1454**	**122058**	**1454**	**124818**
	*Mix of RJ and A-319 aircraft				**11%**		**10%**		**5%**		**5%**		**2%**

Spring/Summer/Fall Scheduled Air Service

				2023-24		2024-25		2025-26		2026-27		2027-28	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	222	16872	222	16872	222	16872	222	16872	222	16872
LAX	Q-400	76	AS	82	6232	82	6232	82	6232	82	6232	82	6232
LAX	Q-400	76	AS										
SNA	RJ	66	UA										
SAN	RJ	66	UA	82	5412	82	5412	82	5412	82	5412	82	5412
SFO	RJ	66	UA	82	5412	82	5412	82	5412	82	5412	82	5412
SFO	RJ	66	UA	82	5412	82	5412	82	5412	82	5412	82	5412
DEN	RJ	66	UA										0
SEA	RJ	70	AS										0
PDX	RJ	70	AS										0
LAS	Q-400	76	AS	64	4864	82	6232	82	6232	82	6232	82	6232
PHX	RJ	70	AA	82	5740	82	5740	82	5740	82	5740	82	5740
PHX	RJ	70	AA	82	5740	82	5740	82	5740	82	5740	82	5740
Totals			**49944**	**778**	**55684**	**796**	**57052**	**796**	**57052**	**796**	**57052**	**796**	**57052**
					11%		**2%**		**0%**		**0%**		**0%**

Total Year Round Scheduled Air Service

				2023-24		2024-25		2025-26		2026-27		2027-28	
	Aircraft			Total	Seats	Total	Seats	Total	Seats	Total	Seats	Total	Seats
City	Type	Seats	Airline	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season	Operations	Per Season
LAX	Q-400	76	AS	365	27740	365	27740	365	27740	365	27740	365	27740
LAX	Q-400	76	AS	112	8512	112	8512	112	8512	112	8512	112	8512
LAX	Q-400	76	AS	115	8740	115	8740	115	8740	115	8740	115	8740
SNA	RJ	66	UA	115	7590	115	7590	115	7590	115	7590	115	7590
SAN	RJ	66	UA	197	13002	197	13002	197	13002	197	13002	197	13002
SFO	RJ	66	UA	197	13002	197	13002	197	13002	197	13002	197	13002
SFO	RJ	66	UA	197	13002	197	13002	197	13002	197	13002	197	13002
DEN	RJ	66	UA	115	9000	115	11500	115	13000	115	14260	115	14260
SEA	RJ	70	AS	115	7590	115	7590	115	9000	115	11500	115	13000
PDX	RJ	70	AS	131	7590	131	9000	131	11500	131	13000	131	14260
LAS	Q-400	76	AS	179	13604	197	14972	197	14972	197	14972	197	14972
PHX	RJ	70	AA	279	13790	279	13790	279	13790	279	13790	279	13790
DFW	A-319	124	AA	64	13676	115	20000	115	20000	115	20000	115	20000
Totals			**141456**	**2181**	**156838**	**2250**	**168440**	**2250**	**173850**	**2250**	**179110**	**2250**	**181870**

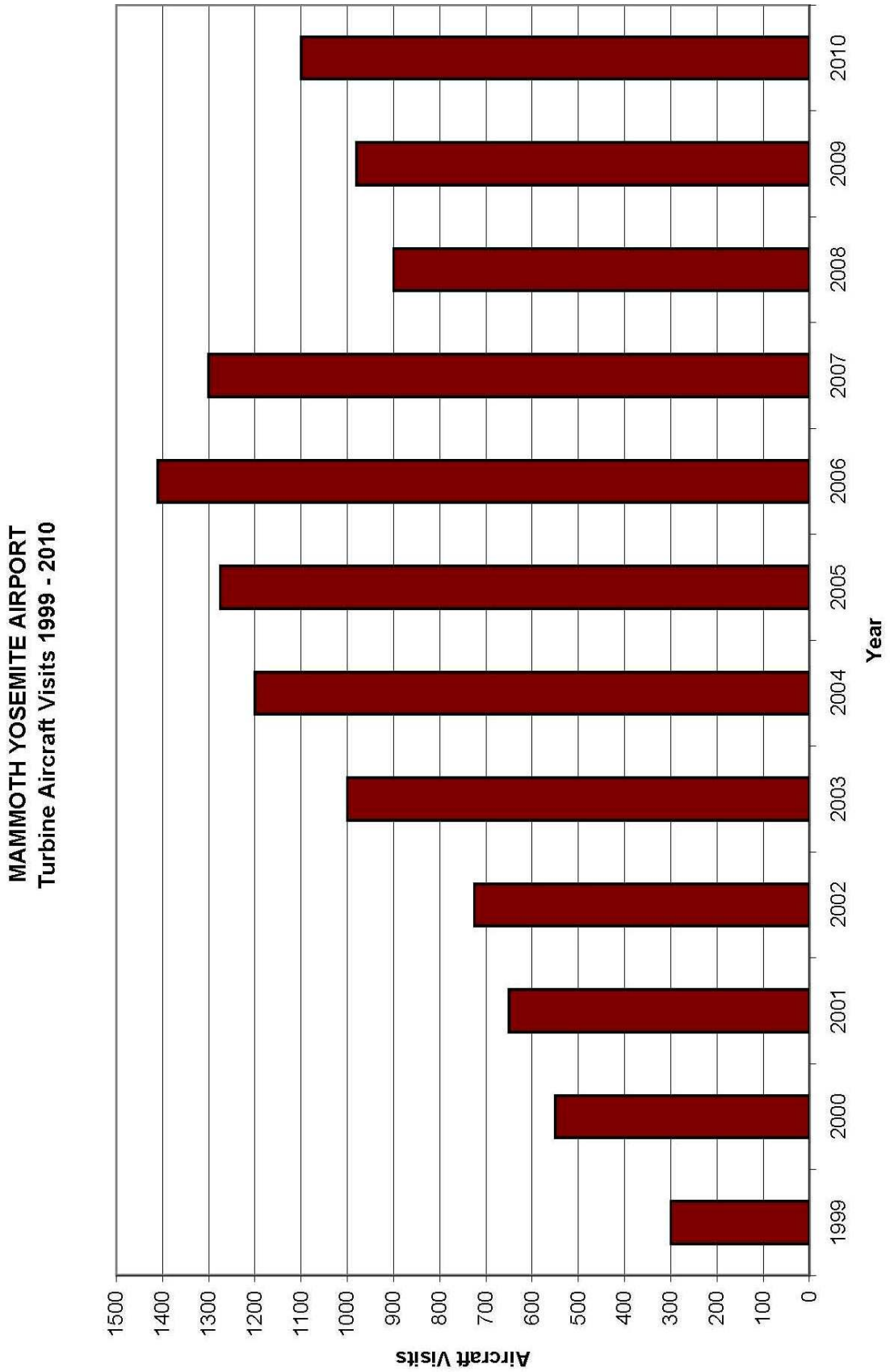
Exhibit 5

TABLE NO. 3-2 - PEER MARKET COMPARISONS							
	Aspen	**Eagle**	**Yampa Valley**	**Montrose**	**Sun Valley**	**Glacier Park**	**Mammoth**
2010 Enplanements	217,434	204,675	111,770	95,622	53,871	174,163	20,564
2010 Population*	15,932	54,216	23,592	41,830	22,740	93,849	13,185
Enplanements per Population unit	13.6	3.8	4.7	2.3	2.4	1.9	1.6
2010 Skier Days	1,400,000	1,620,000	1,000,000	430,000	362,317	360,000	1,460,000
Enplanements per Skier Day	0.16	0.13	0.11	0.22	0.15	0.48	0.01
1Q 2011 Load Factor	64.6%	68.1%	71.5%	71.9%	66.1%	84.5%	61.5%
Percent of Traffic in 1st Quarter	47.1%	73.7%	77.2%	46.2%	35.1%	22.7%	57.8%
1Q 2011 Average Fare	$248	$259	$177	$208	$178	$215	$115

Source: Mammoth Lakes Economic Forecast & Revitalization Strategies; Diio Mi; US Census
ALP Narrative Report - Peer Review - Mead & Hunt (February 2012)

*Mono County Population

Exhibit 6
Peer Market Comparisons



Source: MMH

Exhibit 7

Turbine Aircraft Visits – 1999-2010

April 8, 2013

Katherine Kennedy
Federal Aviation Administration
San Francisco, Airports District Office
1000 Marina Blvd., Suite 220
Brisbane, CA 94005-1853

Dear Katherine,

As part of the process for approving the Mammoth / Yosemite ALP submission, Mammoth Mountain Ski Area were asked to provide a written expression of our commitment to the Mammoth / Yosemite (MMH) air service program. Mammoth Mountain Ski Area has been at the forefront of bringing air service to Mammoth Lakes and the surrounding region since the inception of the program and we are committed to continuing to support the effort to grow air service into MMH as a long-term strategic initiative.

A primary business strategy for Mammoth Mountain Ski Area, and the town of Mammoth Lakes, is to become a year-round, destination resort that attracts visitors from all across the US and from key international countries. Fundamental to this strategy is the need to provide easy access via air to the destination on a year-round basis. As such, our commitment to the growth of the MMH air program is financially significant each year with support for air subsidy payments to the airlines, marketing of air service locally, in the US and abroad, providing transportation services to arriving and departing air passengers, and funding consultants to help with the planning and expansion of the program.

We are committed to continuing this support because it is a fundamental part of our business plan and we know that a robust and growing air service program in Mammoth Lakes and the surrounding region has significant financial benefits. Specifically:

1. Air service provides for significant growth in tourism revenue to Mammoth Mountain, the town of Mammoth Lakes and the entire region. Air service improves the perception of Mammoth/Mono County as a vacation destination and opens markets, beyond those that can drive, to consider a vacation in the area. In addition, our most frequent customers who already drive to Mammoth can now make more trips to the area due to the shorter flight times when compared to driving.

   Several quantitative research studies have shown that many guests flying into Mammoth would not have made the trip without air access, making them incremental visitors to the area. Based on this research, incremental visitors can represent as much as 80-85% of the enplanements in new markets. And even in a primary market like Los Angeles where we have traditionally drawn customers who drive to the region, over 40% of customers on the LAX flights say they would not have made the trip to the area without air service. Given an average stay of 3+ days in the area and spending of over $110 per person/per day in the winter season, this provides a huge financial return to both Mammoth Mountain and the local area. In addition, as tourism grows the local tourism tax base is expanded as well.

Mammoth Mountain Ski Area, LLC • Post Office Box 24 • 10001 Minaret Road • Mammoth Lakes, California 93546 • 800.MAMMOTH • Fax 760.934.0761

Exhibit 8
Letter of Support from MMSA to FAA

Mammoth Yosemite ALP, page 2

To illustrate this, assume that all flights from LAX, SFO, SAN and SNA in winter averaged a 60% incremental rate. Winter enplanements from these flights so far this year (December 2012 through March 2013) were 19,676. As a result, incremental revenue was $3.9MM (19,796 X 60% incremental rate x 3 days per person x $110 per day). This is revenue that would not have been realized had the flights not been in place to bring these guests to the area.

2. Air service helps to broaden the economic base for the region by allowing more businesses and individuals to consider living and working in the area. We know that air service, like roads, water, broadband internet, and cell service, is a fundamental need for a growing community. In a community like Mammoth Lakes that is a significant distance from other population centers, regular flight service is especially critical for economic development. The easy connectivity to other places that regular air service provides allows more people to consider working and living in the area. This then expands the labor pool for local businesses including our own; it increases the market of people buying primary and secondary residences; and it grows the tax base for the region with more business, sales and real estate tax collections.

Since the first winter flights started in December of 2008, the number of air carriers serving MMH has expanded to include both Alaska and United; cities served have grown from just LAX to now include San Francisco (SFO), San Diego (SAN) and Orange County (SNA); service is now year-round from LAX; and the connections provided through SFO and LAX now make MMH easily accessible to just about anywhere in the world. As a result, enplanements have grown from 6,157 in the first full calendar year of 2009, to over 27,000 in calendar year 2012 – a growth of 338% in just three years.

This growth in the MMH air service program, and the potential for future growth, has major financial benefits to Mammoth Mountain Ski Area and to all of the local businesses in the region and we are committed to providing the support needed to continue this key driver of growth and profitability for our business and for the community.

Sincerely yours,

Howard E. Pickett
Chief Marketing Officer
Mammoth Mountain Ski Area, LLC

Exhibit 8
Letter of Support from MMSA to FAA

Mammoth Lakes Tourism
P.O. Box 48
Mammoth Lakes, CA 93546

March 28, 2012

To Whom It May Concern:

On behalf of Mammoth Lakes Tourism, I would like to emphasize our commitment to long term commercial air service for Mammoth Yosemite Airport. Air service has been a major focus of our business plan and the effort gets stronger each and every year. With Mammoth Lakes' somewhat remote location, air service is imperative and will play a major role in our development moving forward and thus we are fully committed to supporting the service.

While I recognize we do not have any long-term agreements with the airlines, we do have long-term partnerships as well as a solid relationship through our air consultant, Kent Myers, at AirPlanners. Our commitment is to continue exploring new markets and carriers to grow air service to Mammoth Yosemite Airport in the coming years both winter, and summer.

The Eastern Sierra Air Alliance, including stakeholders from Mammoth Mountain Ski Area, Town of Mammoth Lakes, Mono County and the Airport Commission, has been developed to explore new funding and service options as we continue to grow. This group will be useful in our plans to expand air service for the future.

The commitment to air service for Mammoth Yosemite Airport is stronger now than it has ever been in the past and our recent successes and growth in both service and enplanements are proof positive that air service will be a major focus for us as we move forward.

Please feel free to contact me at 760-417-2004 with any questions or comments.

Sincerely,

John J. Urdi III
Executive Director
Mammoth Lakes Tourism

Exhibit 9

Letter of Support from Mammoth Lakes Tourism

Mt. Whitney
Highest Mountain
in the Contiguous U.S.
14,497 ft.

Inyo County Superintendent of Schools

Dr. Terence K. McAteer

Brian Pickens, Manager
Mammoth-Yosemite Airport
1300 Airport Road
Mammoth Lakes, CA 93546

May 28, 2013

Dear Mr. Pickens,

On behalf of Mono County Superintendent of Schools, Stacey Adler and I, we wish to tell you how important the Mammoth-Yosemite Airport is for our two public entities. Dr. Adler and I both run charter schools based in Southern California which serve a select clientele —inner-city high school dropouts. We have over 2000 students in 24 sites that we oversee.

The ability to get to Los Angeles on a very frequent basis is absolutely essential. Without the air service, we probably would not have entered into the out-of-county charter school business because of proximity issues. With the charters, Mono and Inyo Schools benefit to the tune of over two million dollars annually along with the employment of many local jobs to provide fiscal and academic expertise to these schools. Staff, community members and the two of us are certainly "frequent fliers" out of your airport.

Many citizens do not know about our charters: YouthBuild Charter School of California, San Diego Urban Corps, Orange County Conservation Corps and the Los Angles Conservation Corps. Check out on the web these successful educational, environmental and youth development programs.

As noted above, without the year-round air service our relationship with our charters would be very difficult. We would be pleased to represent our sincere interests in the continuation of the air service at any opportunity.

In appreciation

Terence K. McAteer

166 Grandview Dr. • Bishop, CA 93514
(760) 873-3262 • Fax (760) 873-3324

Exhibit 10
Letter of Support from Inyo County Superintendent of Schools

CHAPTER 4. DEMAND CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

4-1 Design Standards

The new F.A.A. Advisory Circular 150/5300-13A entitled, *Airport Design,* sets forth recommended runway and taxiway design standards for all Airport Reference Codes (ARC). The F.A.A. classifies airports by Airport Reference Code (ARC), which is based on two separate aircraft characteristics, namely:

- Aircraft Approach Category – Based on the approach speed of the aircraft on landing, and
- Airplane Design Group (ADG) – Based on aircraft wingspan and tail height.

F.A.A. has established runway design standards for airports designed to accommodate aircraft in a given ARC. A listing of the Aircraft Approach Category and Airplane Design Group for each Airport Reference Code (ARC), together with the designated approach speed, tail height, and wing span, is presented below:

TABLE NO. 4-1 - AIRPORT REFERENCE CODE PARAMETERS

Aircraft Approach Category

Category	Approach Speed (knots)
A	< 91
B	91 to < 121
C	121 to < 141
D	141 to < 166
E	166 or more

Airplane Design Group (ADG)

Group No.	Total Height (ft.)	Wing Span (ft.)
I	< 20	< 49
II	20 to < 30	49 to < 79
III	30 to < 45	79 to < 118
IV	45 to < 60	118 to < 171
V	60 to < 66	171 to < 214
VI	66 to < 80	214 to < 262

Airport Reference Code is designated a combination of Aircraft Approach Category and Airplane Design Group; i.e. ARC B III.

MMH is currently approved as an ARC B III airport. Some of the airline aircraft and many of the business jet aircraft currently using MMH are rated as ARC C III. It is proposed to maintain the current classification of MMH as ARC B III. Forecast airline development indicates the potential of requiring a future change of classification to C III. It is, therefore, recommended that all new development at the airport be designed to meet C III standards whenever economically feasible.

The airlines using the airport support upgrading the airport classification to C III. Airport Management has received letters of support from airlines currently operating at MMH. Copies of these letters from Horizon Air, Sky West, and Alaska Air are included in Appendix A.

The design standards for the current and future airport facilities at MMH are set forth in Table No. 4-2. Included in this table are the existing and proposed future parameters for Runway 9-27. Also included are the recommended F.A.A. standards for both ARC B III and C III runways.

4-2 Alternate Airport Study

Whenever a major development for an airport is considered, and there are significant constraints at the existing airport, it is important to evaluate the benefits and costs of expanding the existing airport, reconfiguring the existing airport, or constructing a totally new airport at an alternate site. This evaluation has been prepared and the results are presented in Appendix C. A development study has been conducted for expanding the existing airport, reconfiguring the existing airport, and for developing a totally new airport. A total of six alternative layouts were evaluated. The results of this study show that from an economical, environmental, and land use standpoint it is not feasible to consider reconfiguring the existing airport or developing an entirely new site. As a result, the demand capacity analysis and facility requirements and remaining portions of this report have been prepared for the development of the existing MMH to meet forecast requirements.

4-3 Airfield Capacity

F.A.A. Advisory Circular 150/5060-5, *Airport Capacity and Delay,* contains guidelines for determining airfield capacity and delays. The annual service volume (ASV) is a reasonable estimate of the maximum annual capacity of airfield facilities. The existing MMH with a single runway has an ASV of approximately 230,000 annual operations. In 2013 the total annual operations at MMH were 8,100. By 2020 projected total annual operations is 10,820 and by 2033 projected total annual operations is 13,220, which ranges from 3.5 to 5.7 percent of the ASV. F.A.A. recommends that when the annual demand ASV ratio approaches 60 percent, planning should be underway for increasing the capacity of the facility. By the time it reaches 80 percent the work should be

accomplished to increase the capacity and thus decrease delays. The annual operations at the airport in 20 years are expected to be only 5.9 percent of ASV.

TABLE NO. 4-2 – AIRPORT DESIGN STANDARDS – MMH

RUNWAY DATA TABLE	RUNWAY 9-27		FAA STANDARDS	
	Existing Runway 9 - Runway 27	Future Runway 9 - Runway 27		
Approach Category and Design Group	B-III	C-III	B-III	C-III
Approach Visibility Minimums	Visual - 1 1/4 Mile	Visual - 1 1/4 Mile	> 3/4 Mile	> 3/4 Mile
FAR Part 77 Category Runway	V - NP	V - NP	V - NP	V - NP
Design Aircraft	Q400	B737-700		
Wingspan of Critical Design Aircraft (Ft.)	93.25	112.5		
Approach Speed of Critical Design Aircraft	125	130		
Maximum Certified Takeoff Weight of Critical Design Aircraft (Lbs.)	64,500	154,500		
Percentage Wind Coverage				
10.5 Knot Crosswind	94.3	94.3		
13 Knot Crosswind	95.3	95.3		
16 Knot Crosswind	98.2	98.2		
20 Knot Crosswind	99.4	99.4		
Runway Length (Ft.)	7000	8200		
Runway Width (Ft.)	100	100	100	100
Runway Lighting	MIRL	MIRL		
Effective Gradient (Percent)	1.05	0.96		
Maximum Gradient (Percent)	1.45	1.45		1.5
Runway Marking	NP - NP	NP - NP		
Runway Pavement Surface	Asphalt	Asphalt		
Pavement Design Strength (Kips Gross Aircraft)	80 S, 115 D	80 S, 115 D		
Elevation Runway End (NAVD 88) (Ft.)	7134.7 - 7061.4	7146.5 - 7067.0		
Elevation Runway Touchdown Zone (NAVD 88) (Ft.)	7134.7 - 7097.5	7146.5 - 7097.5		
Elevation Runway High Point (NAVD 88) (Ft.)	7134.7	7146.5		
Elevation Runway Low Point (NAVD 88) (Ft.)	7061.4	7067		
Line of Site Distance	Full Runway Length	Full Runway Length	Half Runway Length	Half Runway Length
Runway Safety Area - Distance Beyond Runway End (Ft.)	1000	1000	600	1000
Runway Safety Area Distance Prior to Runway End (Ft.)	1000	1000	600	600
Runway Safety Area - Width (Ft.)	500	500	300	500
Runway Object Free Area - Distance Beyond Runway End (Ft.)	1000	1000	600	1000
Runway Object Free Area - Distance Prior to Runway End (Ft.)	1000	1000	600	600
Runway Object Free Area - Width (Ft.)	500	728	800	800
Runway Obstacle Free Zone - Distance Beyond Runway End (Ft.)	200	200	200	200
Runway Obstacle Free Zone - Width (Ft.)	400	400	400	400
Hold Bar Distance to Runway Centerline (Ft.)	220	262.5	200	270
Runway Shoulder Width (Ft.)	12	20	20	25
Runway Blast Pad Width (Ft.)	144	144	140	200
Runway Blast Pad Length (Ft.)	200	200	200	200
Runway Centerline to Taxiway Centerline (Ft.)	300	300	300	400
Runway Centerline to Aircraft Parking (Ft.)	400	400	400	500
Taxiway Design Group	3	5	3	5
Taxiway Width (Ft.)	50	75	50	75
Taxiway Shoulder Width (Ft.)	0	25	20	25
Taxiway Edge Safety Margin (Ft.)	8	15	10	15
Taxiway Lighting	NO	NO		
Taxiway Surface Type	Asphalt	Asphalt		
Taxiway Safety Area Width (Ft.)	118	118	118	214
Taxiway Object Free Area Width (Ft.)	181	181	186	320
Taxiway Centerline to Fixed or Movable Object (Ft.)	90.5	90.5	93	160
Taxiway Wingtip Clearance (Ft.)	34	34	34	53
Taxiway Centerline to Taxilane Centerline (Ft.)	--	--	152	267

The single runway will provide adequate capacity for the foreseeable future at this airport with minimal delays.

The maximum hourly capacity at the MMH is 98 VFR operations or 59 IFR operations. The estimated peak hourly VFR operations at MMH were 3.8 in 2013 and increase to 6.8 in 2033, which is well within the hourly capacity of the airport.

Wind data indicate that Runway 9-27 has a wind coverage of 93.3 percent at 10.5 knots, 95.7 percent at 13 knots, 97.8 percent at 16 knots, and 99.1 percent at 20 knots crosswind. F.A.A. recommends runway orientation and number of runways constructed at an airport to provide 95 percent wind coverage. The single runway at MMH meets this requirement. MMH experiences a few short periods where very strong southerly winds occur that are 90 degrees from the runway orientation. These winds reach velocities of 110 to 120 miles per hour. With winds of this velocity it is not practical to land or take off aircraft even if the wind were straight down the runway. It is, therefore, concluded that the single Runway 9-27 will provide adequate operational capacity and that there is no need for a crosswind runway.

4-4 Airline Terminal

When airline service began in 2008, it was necessary to develop a new airline terminal. Environmental constraints required that this interim terminal be located within the walls of existing buildings and that no construction could occur outside these limits. The largest building available was the equipment storage, ARFF, and maintenance facility, which had an area of 5,000 square feet. This building was modified to provide for the requirements of the airlines, TSA, rental car agencies, and passengers. This building, with only one gate and a holding room that can accommodate only one flight, is already too small for its purpose. It was necessary in the fall of 2011 to erect a temporary 2,000 square foot Sprung structure adjacent to the terminal building to be used as an additional passenger holding area. It is urgent that a new terminal facility be constructed that will satisfy and accommodate the rapid growth that is occurring at this airport.

A Terminal Area Study has been completed for this airport. This study shows that initial requirements of the airport for existing traffic and traffic forecast in the short term (0 to 10 years) will require a new terminal having approximately 40,000 square feet consisting of airline ticketing, airline baggage facilities, TSA facilities, holding rooms, food courts, and other amenities.

The current plan provides for three gate positions and has the capability of expanding to a total of six. A new aircraft parking apron will be required, which will have three parking positions that can accommodate a variety of aircraft including the Q400, CRJ700, B737, A319, and other aircraft of that class with capability of expansion to six parking positions.

MMH is located in the Sierra Nevada at an elevation of 7,146.5 feet and experiences significant snow fall and frost in the winter months. Deicing facilities are required for aircraft operating at this airport. A separate deicing apron is included in the Airport Layout Plan to capture and treat deicing liquids used to deice the aircraft. These deicing facilities will meet all proposed F.A.A. requirements.

New automobile parking facilities will be required, which initially will be located on each side of the terminal building because of property ownership constraints at this time. Provision is made to expand the parking lot on the north side of the access road as needed and with the appropriate use permit from the USFS.

Access to the airport is by a single dead-end road (Airport Road) from Hot Creek Hatchery Road. To satisfy safety and operational needs, future expansion calls for the extension of this road to the east to tie into Benton Crossing Road, which will provide access to the airport from two separate locations.

Airport Administration will be included in the terminal on a second floor.

4-5 Runway Length

F.A.A. Advisory Circular 150/5325-4B, *Runway Length Requirements for Airport Design*, provides generalized plans for runway length requirements. The airplane manufacturer provides detailed runway length requirement curves for each aircraft type produced. Variables included in these runway length requirement curves for each aircraft are gross takeoff weight, air temperature, runway altitude, runway gradient, and condition of the runway pavement such as wet or dry. As an example, runway length requirements for two different Boeing 737-700 aircraft for various air temperatures and aircraft takeoff weights have been calculated and are shown in Table No. 4-3.

These calculations show that the B737-700 EP with the 20,000-pound thrust engines is not a suitable choice for operation at this high-altitude airport. The B737-700 with the 26,000-pound thrust engines can operate at MMH on cool days with limited payloads. If the runway is extended to 8,200 feet or 9,000 feet, this aircraft can operate at higher air temperatures and/or higher payloads.

TABLE NO. 4-3 - RUNWAY LENGTH - DRY RUNWAY

Airport Elevation: 7,139 feet

Temperatures:

Standard Day Temperature	33º F.	0.0º C.
Standard Day + 27º F.	60º F.	16.6º C.
Standard Day + 40º F.	73º F.	22.7º C.
Standard Day + 45º F.	78º F.	26.2º C.

Aircraft A - Boeing 737-700/-700 W (CFM56 - TB26 Engines at 26,000 lb. SLST)

Aircraft B - Boeing 737/700EP/-700 C/100 CW/
(CFM56 - TB20/TB29 Engine at 20,000 lb. SLST)

Aircraft	Gross Weight - lb.	Air Temp - ºF	Takeoff Field Length Required (ft.)
A	154,500 MTOW	33	9,300
		60	10,000
		78	15000+
	150,000	33	8,400
		60	9,200
		78	10,100
	145,000	33	7,800
		60	8,200
		78	9,000
	140,000	33	7,000
		60	7,300
		78	8,200
B	154,500 MTOW	33	15,000+
		60	15,000+
		78	15,000+
	150,000	33	15,000+
		60	15,000+
		78	15,000+
	145,000	33	15,000+
		60	15,000+
		78	15,000+
	140,000	33	10,000
		60	11,000
		78	14,000

The current runway at MMH is 7,000 feet long. The Q400 being operated by Alaska/Horizon Airlines has had to off-load passengers on hot days in the summer months because of the short runway and high temperature. With the increase in airline activity, it is critical that the runway be extended.

The airport currently owns enough land at the west end of the runway to extend the runway by 1,200 feet to increase the runway length to 8,200 feet. This extension would meet all F.A.A. design standards. In addition, it is proposed to designate a 1,000-foot long clearway at each end of the runway and utilize "Declared Distances" for each end of the runway, which will increase the "Take Off Distance Available" (TODA) by 1,000 feet and increase the runway takeoff distance available to 9,200 feet after the runway has been extended to 8,200 feet.

The Airport should acquire USFS land between the west end of the airport property and Hot Creek Hatchery Road to provide for the possibility of extending the runway to a total length of 9,000 feet.

With the current airline and large general aviation turbine aircraft operations, there is a demonstrated need for a longer runway at MMH. It is recommended that the runway be extended 1,200 feet, for a total length of 8,200 feet, as soon as funding can be made available and that the capability to develop a 9,000-foot long runway be maintained.

The existing runway is 100 feet wide, which meets F.A.A. requirements for ARC B III and C III airports where maximum takeoff weight of the aircraft using the runway is less than 150,000 pounds. The airport has the capability of increasing the width of the runway to 150 feet to accommodate C III aircraft with takeoff weights exceeding 150,000 pounds. With the uncertainty of what types of aircraft will be used by the airlines, it is not recommended to plan for the 150-foot wide runway until a plan for use of the heavier aircraft has been demonstrated. The paved shoulders on the runway are 12 feet wide. These shoulders should be widened to 20 feet to meet F.A.A. ARC C III standards.

4-6 Pavement Strength

Pavement evaluation studies and pavement design calculations indicate that the current pavements on the runway and taxiways have a load-bearing capacity of 80,000 pound single gear and 115,000 pound dual gear, which is adequate for the airline aircraft proposed to use the airport. If larger aircraft are introduced into the fleet, the runway strengths can be increased by the use of asphalt overlays or by removing the existing asphalt and strengthening the section. The future 10 to 20 year plan allows for increasing the strength of these pavements if and when required.

The existing aprons are not designed for the heavier loads. New construction for the airline terminal apron will provide design for dual wheel loads up to 250,000 pounds to accommodate any future growth. The additional cost in new construction to increase the strength from 115,000 to 250,000 pounds on dual gear aircraft involves the addition of inexpensive aggregate subbase at the bottom of the section; whereas, upgrading an existing apron for a terminal requires expensive complete reconstruction.

4-7 Taxiway System

The existing taxiways serving Runway 9-27 are 50 feet wide and are designed with asphalt pavement surfacing. The parallel taxiway runs full length of the runway and is located 300-foot centerline-to-centerline distance from the runway. There are five cross taxiways. A holding apron exists at each end of the runway. The pavements on these taxiways were reconstructed in 2008 using a polymer-modified asphalt for the bituminous surface course and are in very good condition. These pavements have a strength of 115,000 pounds dual gear and 80,000 pounds single gear. There are no paved shoulders on the existing taxiway.

The FAA standard for an ARC B III airport for runway centerline to taxiway centerline is 300 feet. The existing facility meets this requirement. The new terminal facilities will be located far enough north of the runway to allow for future relocation of the parallel taxiway to meet FAA criteria for ARC C III if necessary.

The FAA standard for an ARC C III airport for runway centerline to taxiway centerline is 400 feet. To increase the spacing of the runway to taxiway, it would be necessary to move all of the aircraft storage hangars and reconstruct a significant section of the general aviation aircraft tie down apron. It is not considered practical at this time to move this taxiway. It is proposed to maintain the 300 foot runway-to-taxiway spacing and request a modification to standards if an ARC C III standard is adopted. If necessary, operational restrictions can be imposed whenever a C III aircraft is using the airport without causing significant delays in any aircraft operation at MMH.

The existing taxiways at MMH are 50 feet wide, which meets F.A.A. standards for B III airports and Taxiway Design Group 3 except that the taxiway safety margin for the Q400 aircraft used by Alaska Airlines is only 8 feet; whereas, F.A.A. Standards are 10 feet minimum. It is proposed to upgrade the Taxiway Design Group to 5 to accommodate existing and forecast design aircraft. It is, therefore, recommended that all taxiways serving the larger aircraft be widened to 75 feet total width and that a 25-foot wide paved shoulder be constructed on each side of the taxiway. All fillets at taxiway-to-runway and taxiway-to-taxiway intersections should be constructed to meet the new F.A.A. standards as set forth in Advisory Circular 150/5300-13A.

4-8 Airfield Safety Areas

Airfield safety area requirements are set forth in F.A.A. Advisory Circular 150/5300-13A and FAR Part 77. The Airport Design Manual defines the requirements for runway protection zones (RPZ), runway safety areas (RSA), and runway object free areas (ROFA). Part 77 defines the surfaces surrounding the airport above which objects penetrating those surfaces will affect navigable airspace. These surfaces include primary surface, approach surface, transitional surface, horizontal surface, and conical surface. MMH currently has several features that deviate from F.A.A. Standards for both ARC B III and ARC C III. These modifications to standards and proposed actions are presented in detail in Chapter 10, Recommendations and on Sheet No. 4 of the Airport Layout Plan drawings. MMH runway and taxiways meet all safety area requirements.

4-9 Navigational Aids

There are no navigational aids at the MMH. Eastern Sierra Regional Airport in Bishop, which is located 32 miles to the southeast, has a VOR but terrain blocks the signal when aircraft descend into the MMH. MMH has published GPS approaches to Runway 27 plus circling to land on Runway 9. As an aid to pilots the airport has an AWOS III P, which operates continuously. New approach procedures are currently being prepared for MMH by the F.A.A.

4-10 Building Restriction Line (BRL)

The building restriction line defines the minimum distance that a building can be located from the centerline of the runway. The distance from the runway centerline that the building restriction line can be set is a function of the height of the building and the controlling F.A.A. criteria. The existing East Hangars are located at a distance of 390 feet from the centerline of the runway. The building restriction line has been set at 400 feet from the centerline of the runway so that it is located at the Runway Object Free Area (ROFA) boundary.

The height of building allowed at this location is set forth in FAR Part 77 and in Advisory Circular 150/5300-13A. At 400 feet from the runway centerline Part 77 indicates that the top of the building should be no more than 21 feet above the elevation of the adjacent runway centerline. Advisory Circular 150/5300-13A Section 308 defines requirements for Obstacle Free Zone (OFZ) penetration and allows a building located 400 feet from runway centerline to be 31 feet above the elevation of the adjacent runway centerline. Advisory Circular 150/5300-13A was published 9-28-2012; whereas, Part 77 is an old publication. Advisory Circular 150/5300-13A also specifically shows the Obstacle Free Zone in the airport operations area and is used in this study as the controlling document. The East Hangars are 10 feet inside the BRL and within the ROFA and are considered to be an obstruction.

4-11 Air Traffic Control Tower

MMH does not have an Air Traffic Control Tower at this time. Should the need arise in the future, provision has been made on the Airport Layout Plan for the siting of a new Air Traffic Control Tower.

4-12 General Aviation Requirements

Currently there are only 8 aircraft based at the airport and the growth in based aircraft is projected to be small. There are 134 hangars at the airport, most of which are privately owned and are used by pilots throughout the Central and Western United States to store their aircraft while visiting Mammoth Lakes for skiing or other recreational activities. Many of these hangars are included in a pool that is operated by the fixed base operator to provide hangar space as available for other aircraft that visit the airport. There is no demand for additional hangars.

The existing general aviation tie down apron has a capacity for 74 tie down spaces, which will accommodate small aircraft. On holidays and many weekends throughout the year there are more than 70 aircraft that visit the airport and require tie down space. These aircraft range from small single-engine airplanes to the large business jets of the G-V category. The Airport has need for additional general aviation apron to accommodate the aircraft that visit the airport on weekends and holidays. It is estimated that an additional 300,000 square feet of apron will be required in the near future.

The southern row of tie down spaces on the general aviation apron is within the F.A.A. standard distance of 500 feet from the runway centerline as required for C III airports but meets the F.A.A. requirements for B III airports. It may be necessary in the future to abandon this row of tie downs. This requirement could require earlier construction of a larger new general aviation apron.

4-13 Fixed Base Operators (FBO) and Administrative Facilities

There is only one FBO at MMH at this time. Provision is made in the Airport Layout Plan to provide space for at least one additional FBO.

The Airport Administration is currently housed in a small building immediately west of the interim airline terminal facility. Additional facilities are needed for Airport Administration. These are planned to be included in the new terminal development.

4-14 Helicopter Facilities

Helicopter operations are few and intermittent at MMH. There is no need for special helicopter landing or parking facilities.

4-15 Fueling

One hundred low-lead aviation fuel and Jet-A fuel are available at the airport. The storage facilities are located in the west hangar area and fueling is performed by truck. This fueling operation is adequate at this time and will be increased as needed.

4-16 Airport Maintenance

Airport maintenance is currently provided by the Town of Mammoth Lakes through the Airport Department. Currently, maintenance equipment is stored in a hangar leased from Hot Creek Aviation. A new maintenance / ARFF building will be required with the development of this facility.

4-17 Utilities

Existing utilities at the airport are adequate and can be expanded to accommodate the development of this airport, except the sewage disposal system. Currently septic tanks and leaching fields are used for sewage disposal. The soils at this site are very pervious and leaching fields are effective. As development progresses it is proposed that a new package sewage treatment plant will be required at the airport and the effluent from that plant will still be disposed of by leaching fields.

4-18 Security

Current fencing at the airport consists of a six-foot chain link fence with automatic gates in the terminal area and barbed wire fencing around the rest of the airport. It is proposed in the near future to completely fence the airport property with an 8-foot chain link fence to provide security and prevent wildlife from entering the airport.

When the new terminal is constructed, security will be enhanced by alarming all doors that open onto the Air Operations Area and installing cameras at critical locations within the building, along the edge of the apron, at gates, and in other strategic locations.

4-19 Land Acquisition

The Airport owns in fee title much of the land on which the airport is currently located. There is a section on the east end of the airport where the land is owned by LADWP. The Airport has a 50-year lease from LADWP for this land and is currently negotiating with LADWP to purchase this land.

The rest of the land surrounding the airport is owned by the USFS or LADWP. The Airport will require future acquisition of portions of this land to provide room for additional automobile parking, future apron construction, and future runway extension.

At the west end of the runway the Airport owns sufficient land to extend the runway to 8,200 feet. Land between the existing airport property and Hot Creek Hatchery Road should be acquired from the USFS to reserve the capability for possible further extension to 9,000 feet of the runway to the west if needed.

Land owned by LADWP indicated for airport use should be acquired in Fee Simple Title.

Land owned by USFS indicated for airport use can be purchased, or long-term special use permits would be satisfactory.

CHAPTER 5. AIRPORT LAYOUT PLAN DEVELOPMENT

5-1 General

The Alternate Site Development Studies show that it is not economically feasible to develop any new site for MMH and that the existing airport facilities should be expanded to accommodate the forecast traffic.

Based on forecast needs, recommendations have been made for future development of MMH. These recommendations are presented in the Airport Layout Plan drawings, which consist of 14 sheets.

This chapter describes the proposed total development of the airport.

5-2 Airfield Facilities

5-2.1 Runway

Runway 9-27 at MMH is 7,000 feet long by 100 feet wide. The airport is located in the Sierra Nevada at an elevation of 7,146.5 feet. With the current airline operations during hot summer weather the airlines have had to off-load passengers due to the short length of runway available. It is indicated that the runway should immediately be extended 1,200 feet, for a total length of 8,200 feet, and reserve the capability of extending it to a total length of 9,000 feet in the future. There are no plans to extend the runway from 8,200 feet to 9,000 feet because the type aircraft to be used by the airlines in the future is unknown. Land should be acquired for a possible runway extension to 9,000 feet, but this possible extension is not shown on the Airport Layout Plan.

It is recommended that declared distances be utilized for both Runway 9 and Runway 27 arrivals and departures. On both ends of the runway a 1,000-foot long by 500-foot wide clearway should be established. Using the clearways the declared distances for each runway will be:

- Takeoff Run Available (TORA) – Full Runway Length
- Takeoff Distance Available (TODA) – Full Runway Length plus 1,000 feet
- Accelerated Stop Distance Available (ASDA) – Full Runway Length
- Landing Distance Available (LDA) – Full Runway Length

Use of a 1,000-foot clearway at each end of the existing 7,000-foot runway and declared distances; approaches to Runway 9 and departures from Runway 9 are clear of any obstructions penetrating the threshold siting distance plane except for the street light and power pole at Benton Crossing Road that penetrate the departure FSS for Runway 9 by 2 to 4 feet.

For approaches to Runway 27 and departures from Runway 27 portions of the west hangars penetrate the northern edge of the threshold siting distance surface. When the runway is extended 1,200 feet to the west, these penetrations only occur at two hangars.

Both ends of the existing runway have blast pads that meet F.A.A. B III standards. When the runway is extended, standard blast pads should be constructed beyond the end of the extended runway.

The paved shoulders on Runway 9-27 are currently 12 feet wide. It is recommended that they be widened to 20 feet to meet F.A.A. standards.

There is adequate capacity with the single runway to accommodate existing and forecast aircraft operations at this airport.

Peak hour forecast operation of the airport only utilizes 7.5 percent of runway capacity in 2033. If necessary, operational restrictions can be imposed during ARC C III operations without having a significant effect on operations or delays.

Wind studies indicate that Runway 9-27 provides more than 95 percent wind coverage. A crosswind runway is not required at MMH.

5-2.2 Heliport

There is no need for special heliport landing and parking facilities at this airport due to the minimal use of this equipment.

5-2.3 Taxiways

The existing taxiways meet ARC B III requirements and adequately serve the existing runway. The holding aprons at each end of the runway will need to be enlarged to accommodate the larger design aircraft. When the runway is extended, new cross taxiway and holding aprons should be completed with the extension.

The runway centerline to taxiway centerline distance does not meet F.A.A. general requirements for an ARC C III airport but it does meet ARC B III standards. It is recommended that a modification to standards be sought to cover this discrepancy if the C III standard is adopted in the future because of the high cost of widening the runway centerline to taxiway centerline dimension.

The existing taxiway-to-taxiway intersections have a fillet radius of 50 feet. The new F.A.A. standard for an ARC C III airport recommends a special configuration for all fillets. All fillets should be adjusted to meet these requirements.

All of the existing taxiways at MMH are 50 feet wide. To meet Taxiway Edge Safety Margin requirements the taxiway width should be 54 feet minimum for the Q400 aircraft. Aircraft using and forecast to use MMH are within Taxiway Design Group (TDG) 5 as defined by F.A.A. TDG 5 taxiways are required to be 75 feet wide. It is recommended that all taxiways at MMH that are used by airline aircraft be widened to 75 feet, properly sized fillets be constructed at each taxiway intersection, and 25-foot wide shoulders be constructed on all taxiways.

The parallel taxiway and both end taxiways are currently designated as Taxiway "A" and the other cross taxiways are designated as Taxiways "A1", "A2", and "A3". New F.A.A. standards recommend that all cross taxiways be designated with a letter and a number. All cross taxiway designations will be changed to meet these requirements, which will require updating existing signs and marking.

5-2.4 General Aviation Facilities

The existing general aviation apron has tie down space available for 74 small aircraft. On holidays and busy weekends there are 74 or more aircraft parked at this airport and several of the aircraft are larger jet-powered aircraft. There is a need for additional apron in the near future for general aviation tie down at this airport.

The outer row of aircraft tie down spaces meet the F.A.A. standards for distance from runway centerline to aircraft parking for B III but not for C III airports. It may be necessary to abandon this row of tie downs if the C III classification for the airport is adopted.

5-2.5 Terminal Facilities

The interim airline terminal that was constructed in 2008 is too small to accommodate the existing passenger loads. The enplaned passengers are expected to grow from 30,000 this year to 120,000 by 2033. The existing interim terminal is only 5,000 square feet. It is necessary to construct a new terminal facility at this airport. This facility will include a new terminal building having 40,000 square feet and three loading gate positions. A new airline apron will be required to accommodate three gate positions. New automobile parking lots will be required and the access road will need to be updated in front of the new terminal. Provisions will be made on all these facilities to expand them to six gate and apron parking positions. Administration facilities will be included in the terminal.

The major airline activity occurs in the winter, and many of the jet aircraft using the airport will require deicing before departure. Deicing on the apron is incompatible from an environmental standpoint. It is, therefore, recommended that a separate deicing pad be constructed to deice these aircraft. This pad

should slope to a center collection inlet structure and all of the deicing fluids diverted to a holding tank and disposed of properly off site.

5-2.6 Access Road

Access to the existing interim terminal facility and proposed new terminal is by a single dead-end road from U.S. Highway 395 by way of Hot Creek Hatchery Road and Airport Road. It is proposed to extend Airport Road to the east to tie into Benton Crossing Road, which also ties into U.S. Highway 395. This will provide two separate access points to the airport, which is important for capacity.

5-2.7 Land Acquisition

In order to provide for the proposed expansion of the airport, it will be necessary to acquire some additional land from the USFS and LADWP. This land is necessary for expansion of the automobile parking facilities, for expansion of the general aviation apron, and for possible future extension of the runway to the west. It is also recommended that all land currently leased from LADWP be acquired in fee simple title.

5-2.8 Obstruction Lighting

On the north side of the airport several obstructions as defined by FAR Part 77 and F.A.A. Advisory Circular 150/5300-13A exist. It is recommended that a row of flashing red obstruction lights be constructed at a distance of 390 feet north of the runway centerline, parallel to the runway centerline and spaced at no more than 3,000 feet to identify the southerly edge of these obstructions. The obstructions include Doe Ridge, the East Hangars, and some of the West Hangars that penetrate the runway end siting plane.

5-2.9 Runway Safety Area (RSA) and Runway Object Free Area (ROFA)

The Runway Safety Areas meet F.A.A. standards for ARC B III and C III category airports. The east hangars, west hangars, and Doe Ridge to the north of the runway, the U.S. Highway 395 right of way fence, and the soil between the RSA and the highway are within the ROFA and do not meet F.A.A. standards for an ARC B III or C III airport. It is recommended that the obstructions to the north of the runway be identified by a row of obstruction lights as identified in Section 5-2.8 above. It is recommended that the existing soil that penetrates the ROFA to the south of the runway be excavated from the outer edge of the RSA to a point 10 feet north of the highway right-of-way fence (approximately 363 feet south of runway centerline) and that a modification to standards be sought from F.A.A. for the soil penetration of the ROFA plane on the outer 37 feet of the ROFA, for the highway right-of-way fence, and for vehicles operating on U.S. Highway 395 next to the airport.

5-2.10 Industrial/Commercial Land

The land surrounding the airport is owned by the USFS and by LADWP and is not generally available at this time for commercial or industrial use.

CHAPTER 6. AIRPORT LAYOUT PLAN UPDATE

The Airport Layout Plan set of drawings has been prepared and is included with this report. Fourteen drawings are included in this set. A table of contents of the drawings is indicated below, along with a general description of information provided on the drawings.

Sheet No. 1 – Title and Index

Sheet No. 2 – Airport Layout Plan – Existing – B III – The Airport Layout Plan shows existing facilities, short-term proposed development, and ultimate development for the existing B III classification. This plan also shows recommended areas to be reserved for unanticipated growth.

Sheet No. 3 - Data Tables – The wind rose, runway data tables, runway end data tables, declared distance tables, and airport data tables are included on this sheet. This information provides the dimensional details of items shown on the Airport Layout Plan.

Sheet No. 4 – Non-Standard Conditions Tables – This drawing indicates items that currently deviate from F.A.A. standards for ARC B III airports. The tables also indicate the actions to be taken to correct or mediate these deviations.

Sheet No. 5 – Terminal Area Layout Plan – This sheet shows an expanded scale drawing of the terminal area facilities.

Sheet No. 6 – Proposed Declared Distance for Runway 9-27 – This drawing shows plan and profile for the proposed declared distances for Runway 9 and Runway 27. On this plan a 1,000-foot clearway is proposed for each end of the runway, which allows a corresponding increase of TODA from 7,000 feet to 8,000 feet for the existing runway.

Sheet No. 7 – Future Declared Distance for Runway 9-27 – This drawing shows plan and profile for the declared distances for future Runway 9 and Runway 27. On this plan a 1,000-foot clearway is proposed for each end of the runway, which allows a corresponding increase of TODA from 8,200 feet to 9,200 feet for the future runway.

Sheet No. 8 – Airport Airspace Drawing – Existing Layout - The Airport Airspace Plan is a drawing that depicts the critical surfaces for this airport as defined by FAR Part 77 and as they relate to existing topography. This plan also shows the areas where existing ground penetrates the Part 77 imaginary surfaces.

Sheet No. 9 – Airport Airspace Drawing – Future Layout – This drawing shows the same information as Sheet No. 8 with required modifications for the future runway extension.

Sheet No. 10 – Airport Airspace Plan and Profile – Existing and Future Layout – This drawing depicts the plan and profile along the runway centerline out to the upper edge of the transitional surfaces. The profile shows the extended runway centerline and the composite profile based on the higher terrain across the width of the approach surface.

Sheet No. 11 – Inner Portion of Approach Surface Plan – Existing - This drawing shows the plan/profile of the approaches to Runway 9 and Runway 27 for existing conditions. This drawing also shows all items that penetrate the imaginary surface.

Sheet No. 12 – Inner Portion of Approach Surface Plan – Future – This drawing shows the same information as Sheet No. 11 modified as required for the runway extension.

Sheet No. 13 – ALUC Airport Safety Zone Plan/Land Use Plan (Existing Runway) – This drawing represents the land use recommendations as developed by the State of California Department of Transportation. The plan is based on frequency of accidents that have occurred on airports throughout the state and provides recommendations for zoning to be considered by sponsors.

Sheet No. 14 – Airport Property Map – Exhibit A – The Airport Property Map includes property boundary descriptions for all land owned or leased by the Airport and indicates areas recommended to be acquired.

MAMMOTH YOSEMITE AIRPORT
MAMMOTH LAKES, CALIFORNIA

AIRPORT LAYOUT PLAN

AUGUST 2013

SHEET INDEX

TOWN OF MAMMOTH LAKES :

APPROVED: _____ **DATE:** _____

Peter Bernasconi (Acting Director of Public Works)

REINARD W. BRANDLEY No. C 8944 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DESIGNED BY :

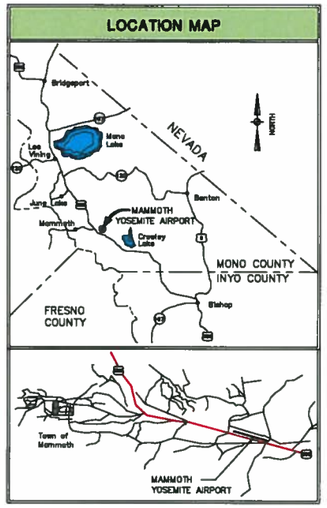
Reinard W. Brandley

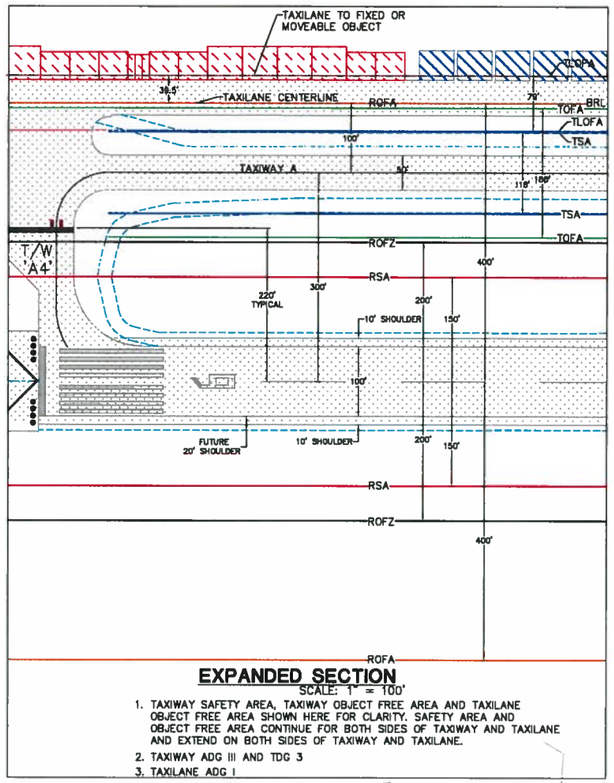
CONSULTING AIRPORT ENGINEER
LOOMIS, CALIFORNIA

_____

DATE

LOCATION MAP





EXPANDED SECTION

SCALE: 1" = 100'

1. TAXIWAY SAFETY AREA, TAXIWAY OBJECT FREE AREA AND TAXILANE OBJECT FREE AREA SHOWN HERE FOR CLARITY. SAFETY AREA AND OBJECT FREE AREA CONTINUE FOR BOTH SIDES OF TAXIWAY AND TAXILANE AND EXTEND ON BOTH SIDES OF TAXIWAY AND TAXILANE.
2. TAXIWAY ADG III AND TDG 3
3. TAXILANE ADG I

INVENTORY

No.	FACILITY	TOP ELEV.
1	EXISTING INTERIM TERMINAL BUILDING & BEACON FUTURE ADMINISTRATION BUILDING	7144.4
2	SHORT TERM PASSENGER HOLD ROOM-(SPRUNG STRUCTURE)	7127.0
3	AIRPORT OFFICE	7122.2
4	ELECTRICAL & TELEPHONE VAULT	7120.3
5	AIRPORT FUEL STORAGE	
6	EXISTING PILOTS LOUNGE	7121.9
7	EXISTING FBO OFFICE	7125.8
8	AIRCRAFT HANGARS A1 THRU A8 (PRIVATE ON LEASE LAND)	7138.9
9	AIRCRAFT HANGARS B1 THRU B6 & C1 THRU C6	7136.8
10	AIRCRAFT HANGARS D1 THRU D5	7140.0
11	AIRCRAFT HANGARS E1 THRU E4	7142.3
12	AIRCRAFT HANGARS F1 THRU F2	7141.6
13	AIRCRAFT HANGARS FBO1 THRU FBO3 (HOT CREEK)	7158.1
14	AIRCRAFT HANGARS G1 THRU G8 (AIRPORT HANGARS)	7145.7
15	AIRCRAFT HANGAR PADS ONLY – F3 THRU F4 (HOT CREEK)	
16	WEST EXECUTIVE HANGARS 1 THRU 72 (HOT CREEK)	
16A	HANGAR 3 THRU 6 (HIGH POINT)	7153.4
16B	HANGAR 15 THRU 16 (HIGH POINT)	7154.4
16C	HANGAR 25 THRU 28 (HIGH POINT)	7154.0
16D	HANGAR 38 THRU 39 (HIGH POINT)	7153.8
16E	HANGAR 50 THRU 53 (HIGH POINT)	7153.7
16F	HANGAR 62 THRU 65 (HIGH POINT)	7153.8
17	EAST CORPORATE HANGARS 1 THRU 19 (HOT CREEK)	
17A	CORPORATE HANGAR 1 (HIGH POINT)	7134.9
17B	CORPORATE HANGAR 5 (HIGH POINT)	7131.1
17C	CORPORATE HANGAR 10 (HIGH POINT)	7128.0
17D	CORPORATE HANGAR 15 (HIGH POINT)	7123.2
18	TERMINAL APRON	
19	TIEDOWN APRON	
20	P.A.P.I.	
21	REIL	
22	AWOS TOWER	7097.8
23	WIND CONE AND SEGMENTED CIRCLE	
24	SUPPLEMENTAL WIND CONES	
25	FUEL STORAGE TANKS (HOT CREEK)	
26	AV. GAS STORAGE. SELF SERVICE (HOT CREEK)	
27	WATER STORAGE TANK	7123.6
28	WATER STORAGE PUMP HOUSE	7119.4
29	WELL #99-1 GRND. ELEV. 7095.4'	
30	WELL #99-2 GRND. ELEV. 7094'	
31	AIRPORT WELL (ABANDONED)	
32	EXISTING POWER POLE WITH OBSTRUCTION LIGHT	7157.0
33	EXISTING TELEPHONE POLE WITH OBSTRUCTION LIGHT	7096.0
34	EXISTING STREET LIGHT	7086.3
35	EXISTING POWER POLE	7085.0
36	DOE RIDGE OBSTRUCTION LIGHT	
37	EXISTING LONG TERM VEHICLE PARKING (HOT CREEK)	
38	FUTURE TERMINAL BUILDING	
39	FUTURE TERMINAL APRON	
40	FUTURE DEICING RAMP	
41	LONG TERM VEHICLE PARKING (HOT CREEK)	
42	FUTURE AUTOMOBILE PARKING	
43	FUTURE RENTAL CAR PARKING LOT	
44	FUTURE TIEDOWN APRON	
45	FUTURE ATCT	
46	FUTURE ARFF / SNOW EQUIPMENT BUILDING	
47	FUTURE AWOS	
48	FUTURE FIXED BASED OPERATOR SITE	
49	FUTURE SEGMENTED CIRCLE	
50	FUTURE SEWAGE TREATMENT PLANT AND LEACHING FIELD	
51	FUTURE APRON & PARKING LOT STORM WATER LEACHING FIELD	
52	FUTURE OBSTRUCTION LIGHT	
53	EXISTING GREEN CHURCH – PUBLIC ASSEMBLY	7074.8
54	AC SURFACE BLAST PAD	
55	EXISTING AIRPORT BEACON	7147.9
56	FUTURE TERMINAL APRON EXPANSION	
57	HIGHWAY 395 TRUCK TRAFFIC	7156.0

OBSTRUCTIONS TO RUNWAY 27 DEPARTURE THRESHOLD SITING SURFACE #8 (TSS)

No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	PROPOSED CORRECTION	FAA ACTION INITIAL	FAA ACTION DATE
16B	HANGAR 15 THRU 16	433' RT	7154.4	INSTALL ROW OF RED OBSTRUCTION LIGHTS		
16C	HANGAR 25 THRU 28	433' RT	7154.0	INSTALL ROW OF RED OBSTRUCTION LIGHTS		
16D	HANGAR 38 THRU 39	433' RT	7153.8	INSTALL ROW OF RED OBSTRUCTION LIGHTS		
16E	HANGAR 50 THRU 53	433' RT	7153.7	INSTALL ROW OF RED OBSTRUCTION LIGHTS		
57	HIGHWAY 395 TRUCK TRAFFIC	440' LT	7156.0	MODIFICATION TO STANDARDS		

NOTE: NO PENETRATION OF RUNWAY 9 APPROACH TSS

OBSTRUCTIONS TO RUNWAY 9 DEPARTURE THRESHOLD SITING SURFACE #8 (TSS)

No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	PROPOSED CORRECTION	FAA ACTION INITIAL	FAA ACTION DATE
34	EXISTING STREET LIGHT	425' LT	7086.3	INSTALL RED OBSTRUCTION LIGHT		
35	EXISTING POWER POLE	355' LT	7085.0	INSTALL RED OBSTRUCTION LIGHT		

NOTE: NO PENETRATION OF RUNWAY 27 APPROACH TSS

LEGEND

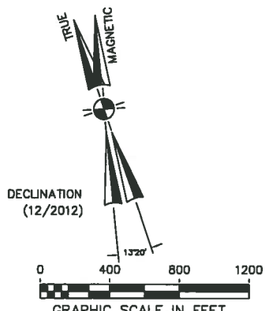
	EXISTING	FUTURE
GROUND CONTOUR	7070	
AIRPORT PROPERTY LINE		
RUNWAY SAFETY AREA (RSA)	RSA	
RUNWAY OBJECT FREE AREA (ROFA)	ROFA	
RUNWAY OBJECT FREE ZONE (OFZ)	OFZ	
BUILDING RESTRICTION LINE (BRL)	BRL	
RUNWAY PROTECTION ZONE		
THRESHOLD SITING SURFACE	APPROACH / DEPARTURE	
TAXIWAY SAFETY AREA (TSA)		
TAXIWAY OBJECT FREE AREA (TOFA)		
TAXILANE OBJECT FREE AREA (TLOFA)		
AIRFIELD PAVEMENT AIRCRAFT MOVEMENT AREA	AC / PCC	AC / PCC
AIRPORT PROPERTY		
FACILITIES		
ROAD (PAVED)		
DIRT/GRAVEL ROAD		
FENCE		
RUNWAY THRESHOLD LIGHT		
SUPPLEMENTAL WINDCONE		
HOT CREEK LEASE		
SECTION CORNER		
AIRPORT REFERENCE POINT		
OBSTRUCTION LIGHT		

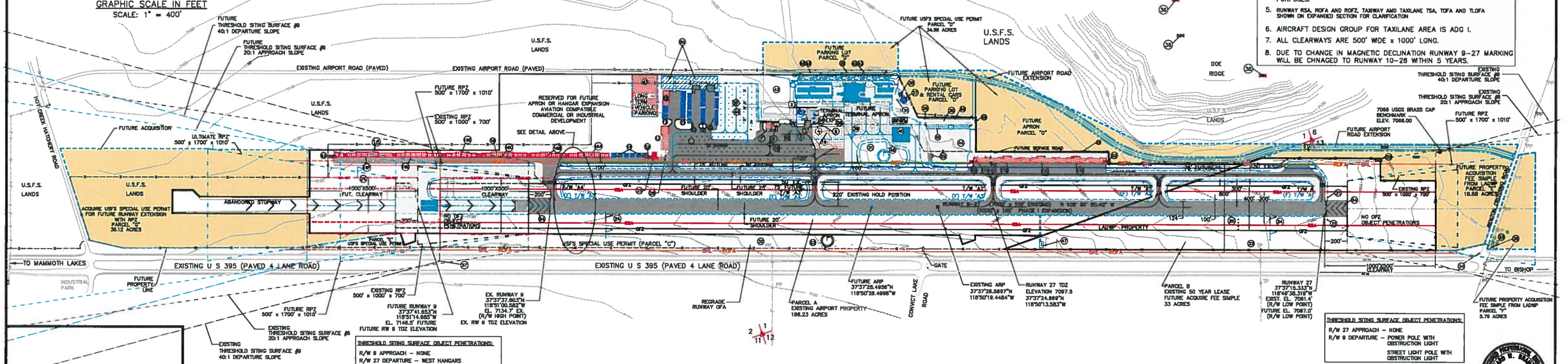
DECLARED DISTANCES

	RUNWAY 9 – 27 EXISTING R/W 9 — R/W 27	RUNWAY 9 – 27 FUTURE R/W 9 — R/W 27
TAKEOFF RUN AVAILABLE	7000 ---- 7000	8200 ---- 8200
TAKEOFF DISTANCE AVAILABLE	8000 ---- 8000	9200 ---- 9200
ACCELERATE STOP DISTANCE AVAILABLE	7000 ---- 7000	8200 ---- 8200
LANDING DISTANCE AVAILABLE	7000 ---- 7000	8200 ---- 8200

NOTES:

1. ALL COORDINATES BASED ON NORTH AMERICAN DATUM (NAD 83)
2. ALL ELEVATIONS BASED ON NAVD 88. REFERENCE USGS BENCH MARK 7066 B 1905 B 10, PID #HR0401.
3. WIND DATA FROM AWOS ON SITE 12/30/00 TO 9/10/12.
4. THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.
5. RUNWAY RSA, ROFA AND ROFZ, TAXIWAY AND TAXILANE TSA, TOFA AND TLOFA SHOWN ON EXPANDED SECTION FOR CLARIFICATION
6. AIRCRAFT DESIGN GROUP FOR TAXILANE AREA IS ADG I.
7. ALL CLEARWAYS ARE 500' WIDE x 1000' LONG.
8. DUE TO CHANGE IN MAGNETIC DECLINATION RUNWAY 9–27 MARKING WILL BE CHNAGED TO RUNWAY 10–28 WITHIN 5 YEARS.





FAA APPROVAL

FAA DISCLAIMER

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APPROVED DATE

PETER BERNASCONI – ACTING DIRECTOR OF PUBLIC WORKS

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
8125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

AIRPORT LAYOUT PLAN - EXISTING - BIII

NO.	REVISIONS	BY	APP	DATE

REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

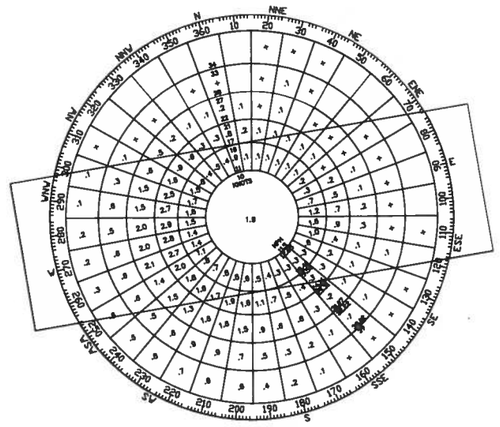
SHEET NUMBER 2 OF 14 SHEETS

RUNWAY DATA TABLE

			RUNWAY 9 – 27 EXISTING R/W 9 ---- R/W 27	RUNWAY 9 – 27 FUTURE R/W 9 ---- R/W 27	FAA STANDARDS	
	AIRPORT REFERENCE CODE (ARC)		B-III	C-III	B-III	C-III
	APPROACH VISIBILITY MINIMUMS		VISUAL ---- 1 1/4 MI.	VISUAL ---- 1 1/4 MI.	>1 MI.	>1 MI.
	FAR PART 77 CATEGORY RUNWAY		V ---- NP	V ---- NP		
	RUNWAY REFERENCE CODE (RRC)		B/III/VIS ---- B/III/VIS	C/III/VIS ---- C/III/VIS		
	DESIGN AIRCRAFT		Q400	B737-700		
	DESIGN AIRCRAFT MAIN GEAR WIDTH (MGW)	FT.	33.2	23.0		
	WINGSPAN of CRITICAL DESIGN AIRCRAFT (FT.)	FT.	93.3	112.5		
	APPROACH SPEED of CRITICAL DESIGN AIRCRAFT	KNOTS	129	130		
	MAXIMUM CERTIFIED TAKEOFF WEIGHT of CRITICAL DESIGN AIRCRAFT (LBS)	LBS.	65,200	154,500 (1)		
	MAXIMUM CERTIFIED LANDING WEIGHT of CRITICAL DESIGN AIRCRAFT (LBS)	LBS.	62,000	129,200		
	PERCENTAGE WIND COVERAGE					
	10.5 KNOT CROSSWIND	PERCENT	93.3	93.3		
	13 KNOT CROSSWIND	PERCENT	95.6	95.6		
	16 KNOT CROSSWIND	PERCENT	97.8	97.8		
	20 KNOT CROSSWIND	PERCENT	99.1	99.1		
RUNWAY GRADIENT	RUNWAY LINE OF SIGHT		FULL	FULL		
	MAXIMUM RUNWAY GRADIENT	PERCENT	1.45	1.45	0 TO +/- 2.00	0 TO +/- 1.50
	EAST QUARTER OF RUNWAY GRADIENT (R/W 27)	PERCENT	1.06 – 1.45	0.80	0 TO +/- 2.00	0 TO +/- 0.80
	WEST QUARTER OF RUNWAY GRADIENT (R/W 9)	PERCENT	0.48 – 1.03	0.80	0 TO +/- 2.00	0 TO +/- 0.80
RUNWAY DESIGN	RUNWAY DESIGN CODE (RDC)		B-III	C-III	B-III	C-III
	RUNWAY LENGTH	FT.	7000	8200	–	–
	RUNWAY WIDTH	FT.	100	100	100	100
	SHOULDER WIDTH	FT.	12	20	20	20
	RUNWAY PAVEMENT SURFACE		ASPHALT	ASPHALT		
	PAVEMENT DESIGN STRENGTH	1,000 LB GROSS AIRCRAFT	80 S, 115 D	80 S, 115 D		
	RUNWAY MARKING		NP ---- NP	NP ---- NP		
	RUNWAY LIGHTING		MIRL	MIRL		
	BLAST PAD WIDTH	FT.	144	144	140	140
	BLAST PAD LENGTH	FT.	200	200	200	200
	CROSSWIND COMPONENT	KNOTS	16	16	16	16
RUNWAY PROTECTION	RUNWAY SAFETY AREA – LENGTH BEYOND DEPARTURE END	FT.	600	1000	600	1000
	RUNWAY SAFETY AREA – LENGTH PRIOR TO THRESHOLD	FT.	600	600	600	600
	RUNWAY SAFETY AREA – WIDTH	FT.	300	500	300	500
	RUNWAY OBJECT FREE AREA – LENGTH BEYOND RUNWAY END	FT.	600	1000	600	1000
	RUNWAY OBJECT FREE AREA – LENGTH PRIOR TO THRESHOLD	FT.	600	600	600	600
	RUNWAY OBJECT FREE AREA – WIDTH	FT.	500	720	800	800
	RUNWAY OBSTACLE FREE ZONE– LENGTH BEYOND RUNWAY END	FT.	200	200	200	200
	RUNWAY OBSTACLE FREE ZONE – WIDTH	FT.	400	400	400	400
	APPROACH RUNWAY PROTECTION ZONE – LENGTH	FT.	1000	1700	1000	1700
	APPROACH RUNWAY PROTECTION ZONE – INNER WIDTH	FT.	500	500	500	500
	APPROACH RUNWAY PROTECTION ZONE – OUTER WIDTH	FT.	700	1010	700	1010
	APPROACH RUNWAY PROTECTION ZONE – ACRES	FT.	13.770	29.485	13.770	29.485
	DEPARTURE RUNWAY PROTECTION ZONE – LENGTH	FT.	1000	1700	1000	1700
	DEPARTURE RUNWAY PROTECTION ZONE – INNER WIDTH	FT.	500	500	500	500
	DEPARTURE RUNWAY PROTECTION ZONE – OUTER WIDTH	FT.	700	1010	700	1010
	DEPARTURE RUNWAY PROTECTION ZONE – ACRES	FT.	13.770	29.465	13.770	29.465
RUNWAY SEPERATION			–	–	–	–
	RUNWAY CENTERLINE TO HOLDING POSITION	FT.	220	270	200	270
	RUNWAY CENTERLINE TO PARALLEL TAXIWAY/TAXILANE CENTERLINE	FT.	300	300	300	400
	RUNWAY CENTERLINE TO AIRCRAFT PARKING AREA	FT.	400	500	400	500
TAXIWAY DESIGN			–	–	–	–
	TAXIWAY DESIGN GROUP (TDG)		3	5	3	5
	TAXIWAY WIDTH	FT.	50	75	50	75
	TAXIWAY EDGE SAFETY MARGIN	FT.	8.4	26	10	15
	TAXIWAY SHOULDER WIDTH	FT.	0	25	20	25
	TAXIWAY PAVEMENT SURFACE		ASPHALT	ASPHALT		
	TAXIWAY PAVEMENT DESIGN STRENGTH	1,000 LB GROSS AIRCRAFT	80 S, 115 D	80 S, 115 D		
TAXIWAY PROTECTION						
	TAXIWAY SAFETY AREA – WIDTH	FT.	118	118	118	118
	TAXIWAY OBJECT FREE AREA – WIDTH	FT.	181 (90.3' NORTH)	181 (90.3' NORTH)	186	186
	TAXILANE OBJECT FREE AREA – WIDTH	FT.	67 (33.5' NORTH)	67 (33.5' NORTH)	162	162
TAXIWAY SEPERATION						
	TAXIWAY CENTERLINE TO PARALLEL TAXIWAY/TAXILANE CENTERLINE	FT.	100	100	152	152
	TAXIWAY CENTERLINE TO FIXED OR MOVABLE OBJECT	FT.	90.3	90.3	93	93
	TAXILANE CENTERLINE TO FIXED OR MOVABLE OBJECT	FT.	33.5 (NORTH)	33.5 (NORTH)	39.5(2)	39.5 (2)
	TAXIWAY WINGTIP CLEARANCE	FT.	35 (WEST TAXILANE), 44 (EAST HGR)	26 (WEST TAXILANE), 34 (EAST HGR)	34	34
	TAXILANE WINGTIP CLEARANCE	FT.	15	15	15 (2)	15 (2)

(1) STAGE LENGTH AND RESTRICTIONS WILL LIMIT B737-700 MCTOW TO 150,000 LBS.

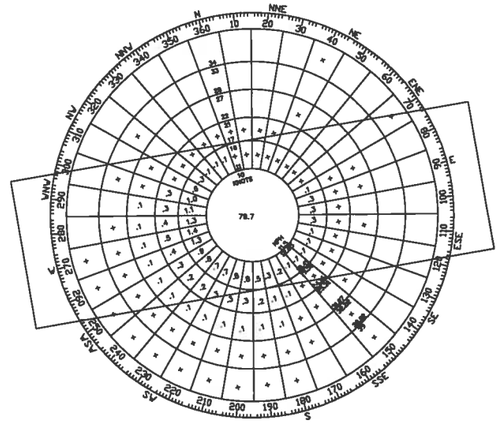
(2) WEST TAXILANE LIMITED TO B-I AIRCRAFT.



MAX HOURLY GUST WIND COVERAGE

TIME PERIOD	R/W 9-27 10.5 Kts 11.5 MPH	13.0 Kts 15 MPH	16.0 Kts 18.4 MPH	20.0 Kts 23 MPH
ALL DAY	53.32%	62.41%	71.87%	82.89%

SOURCE: MAMMOTH YOSEMITE AIRPORT AWOS
CLIMALOGICAL DATA (BASED ON MAGNETIC NORTH)
FOR MAMMOTH YOSEMITE AIRPORT,
JAN. 9, 2001 TO SEPT. 9, 2012 (9,240 HOURLY READINGS).



AVERAGE HOURLY WIND WIND COVERAGE

TIME PERIOD	R/W 9-27 10.5 Kts 11.5 MPH	13.0 Kts 15 MPH	16.0 Kts 18.4 MPH	20.0 Kts 23 MPH
ALL DAY	93.33%	95.67%	97.8%	99.1%

SOURCE: MAMMOTH YOSEMITE AIRPORT AWOS
CLIMALOGICAL DATA (BASED ON MAGNETIC NORTH)
FOR MAMMOTH YOSEMITE AIRPORT,
DEC. 30, 2000 TO SEPT. 10, 2012 (33,496 HOURLY READINGS).

RUNWAY END DATA

	RUNWAY 9 – 27 EXISTING R/W 9 ---- R/W 27	RUNWAY 9 – 27 FUTURE R/W 9 ---- R/W 27
RUNWAY END COORDINATES	37°37'37.803"N ---- 37°37'15.333"N 118°51'00.582"W ---- 118°49'38.319"W	37°37'41.653"N ---- 37°37'15.333"N 118°51'14.685"W ---- 118°49'38.319"W
APPROACH SURFACE SLOPE – TSS #6	20:1 ---- 20:1	20:1 ---- 20:1
DEPARTURE SURFACE SLOPE – TSS #9	40:1 ---- 40:1	40:1 ---- 40:1
NAVIGATIONAL AIDS	NONE ---- GPS	NONE ---- GPS
VISUAL AIDS	NONE ---- REIL, PAPI	NONE ---- REIL, PAPI
APPROACH VISIBILITY MINIMUMS	VISUAL ---- 1 1/4 MI.	VISUAL ---- 1 1/4 MI.
TOUCHDOWN ZONE ELEVATION	7134.7 ---- 7097.5	7146.5 ---- 7097.5
RUNWAY HIGHEST ELEVATION	7134.7	7146.5
RUNWAY LOWEST ELEVATION	7061.4	7067.0
OFZ PENETRATIONS – POWER POLE WITH OBSTRUCTION LIGHTS	YES ---- YES	YES ---- YES
THRESHOLD SITING SURFACE OBJECT PENETRATIONS	YES ---- YES	YES ---- YES

AIRPORT DATA TABLE

	EXISTING	FUTURE
AIRPORT ELEVATION	7134.7	7146.5
AIRPORT REFERENCE POINT (ARP) COORDINATES	37°37'26.5697"N 118°50'19.4484"W	37°37'28.4956"N 118°50'26.4998"W
AIRPORT NAVIGATION AIDS	GPS, BEACON	GPS, BEACON
MEAN MAX. TEMP. (HOTTEST MONTH)	82° F (JULY)	82° F (JULY)
AIRPORT REFERENCE CODE (ARC)	B-III	C-III

DECLARED DISTANCES

	RUNWAY 9 – 27 EXISTING R/W 9 ---- R/W 27	RUNWAY 9 – 27 FUTURE R/W 9 ---- R/W 27
TOUCHDOWN ZONE ELEVATION	7134.7 ---- 7097.5	7146.5 ---- 7097.5
TAKEOFF RUN AVAILABLE (TORA)	7000 ---- 7000	8200 ---- 8200
TAKEOFF DISTANCE AVAILABLE (TODA)	8000 ---- 8000	9200 ---- 9200
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	7000 ---- 7000	8200 ---- 8200
LANDING DISTANCE AVAILABLE (LDA)	7000 ---- 7000	8200 ---- 8200

FAA APPROVAL

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APPROVED DATE
PETER BERNASCONI – ACTING DIRECTOR OF PUBLIC WORKS

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

DATA TABLES

NO.	REVISIONS	BY	APP	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER 3 OF 14 SHEETS

ARC B III NON-STANDARD CONDITIONS - AC 150/5300-13A

TO BE CORRECTED AS FUNDING BECOMES AVAILABLE

ITEM No.	DESCRIPTION	EXISTING	B III STANDARD	PROPOSED ACTION
1	RUNWAY			
a.	RUNWAY SHOULDER WIDTH – FT.	12	20	WIDEN SHOULDERS
2	RUNWAY OBJECT FREE – ROFA			
a.	SOIL BETWEEN RSA LIMIT AND US HIGHWAY 395 ROW	250	400	GRADE FROM 250' TO 360' SOUTH OF RUNWAY
3	TAXIWAY OBJECT FREE AREA – TOFA			
a.	EAST HANGARS – FT. *	90.5	93	INSTALL ROW OF OBSTRUCTION LIGHTS
b.	SUPPLEMENTAL WINDCONES – FT.	150	200	RELOCATE SUPPLEMENTAL WINDCONES
4	RUNWAY APPROACH AND DEPARTURE SURFACES – TSS			
a.	WEST HANGARS #25–#28 – TSS APPROACH SURFACE *	433' NORTH	500' +	INSTALL ROW OF OBSTRUCTION LIGHTS
b.	WEST HANGARS #15–#53 – TSS DEPARTURE SURFACE *	433' NORTH	500' +	INSTALL ROW OF OBSTRUCTION LIGHTS
c.	ONE STREET LIGHT, ONE POWER POLE AT BENTON CROSSING ROAD – TSS DEPARTURE R/W 9 40:1	PENETRATING TSS PLANE		INSTALL OBSTRUCTION LIGHTS
5	TAXIWAY			
a.	TAXIWAY EDGE SAFETY MARGIN – FT.	8.4	15	WIDEN ALL TAXIWAYS TO 75'
b.	TAXIWAY FILLET RADIUS – TAXIWAY TO TAXIWAY – FT.	50	TAPER FILLET	TAPER FILLET TO TAXIWAY DESIGN GROUP 5
c.	TAXIWAY SHOULDER WIDTH – FT.	0	25	ADD 25' SHOULDER

* FORM 7460 APPROVED BY FAA PRIOR TO CONSTRUCTION

ARC B III NON-STANDARD CONDITIONS - AC 150/5300-13A

FAA ACTIONS

ITEM No.	DESCRIPTION	EXISTING	B III STANDARDS	FAA ACTION	
1	RUNWAY OBJECT FREE AREA – OFA				
a.	US HIGHWAY 395 ROW FENCE & 14' SOIL SLOPE – FT.	360' SOUTH SIDE	400		
b.	EAST HANGARS – FT. *	390.5' NORTH SIDE	400	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 5/26/99 OBSTRUCTION LIGHTS ON TOP OF HANGARS PROPOSE TO INSTALL ADDITIONAL ROW OF OBSTRUCTION LIGHTS	
c.	ONE POWER POLE AND ONE TELEPHONE POLE SOUTH OF RUNWAY – FT. **	374' SOUTH SIDE	400	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 6/25/09 OBSTRUCTION LIGHTS TOP OF POLES	
2	RUNWAY APPROACH AND DEPARTURE SURFACES – TSS				
a.	US HIGHWAY 395 FENCE – TSS SURFACE RUNWAY 27 DEPARTURE 40:1 OR APPROACH 20:1	374' SOUTH SIDE	500' +		
b.	VEHICLES ON US HIGHWAY 395 – TSS SURFACE RUNWAY 27 DEPARTURE 40:1 OR APPROACH 20:1	440' SOUTH SIDE	500' +		
3	TAXIWAY				
a.	TAXIWAY CENTERLINE TO TAXILANE CENTERLINE – WEST HANGARS – FT. *	100	152	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 5/26/99	
b.	TAXIWAY CENTERLINE TO FIXED OR MOVEABLE OBJECT – EAST HANGARS – FT. *	90.5	93	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 5/26/99 OBSTRUCTION LIGHTS ON TOP OF HANGARS PROPOSE TO INSTALL ADDITIONAL ROW OF OBSTRUCTION LIGHTS	
4	TAXILANE – WEST HANGARS *, ***				
a.	TAXILANE OBJECT FREE AREA – WEST HANGARS – FT. *, ***	67	79	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 5/26/99 PROPOSE TO INSTALL ADDITIONAL ROW OF OBSTRUCTION LIGHTS	
b.	TAXILANE CENTERLINE TO FIXED OR MOVEABLE OBJECT – WEST HANGARS – FT. *, ***	33.5	39.5	FAA DETERMINATION LETTER (FORM 7460–1) ISSUED – 5/26/99 PROPOSE TO INSTALL ADDITIONAL ROW OF OBSTRUCTION LIGHTS	

* FORM 7460 APPROVED BY FAA PRIOR TO CONSTRUCTION

** LIGHTED WITH SOLAR POWERED OBSTRUCTION LIGHTS

*** WEST TAXILANE LIMITED TO B–I AIRCRAFT

NOTES:

1. MAMMOTH YOSEMITE AIRPORT IS CURRENTLY ARC–B III.
2. FAR PART 77 STANDARDS HAVE BEEN INCLUDED IN DETERMINING NON–STANDARD CONDITIONS.

FAA APPROVAL

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

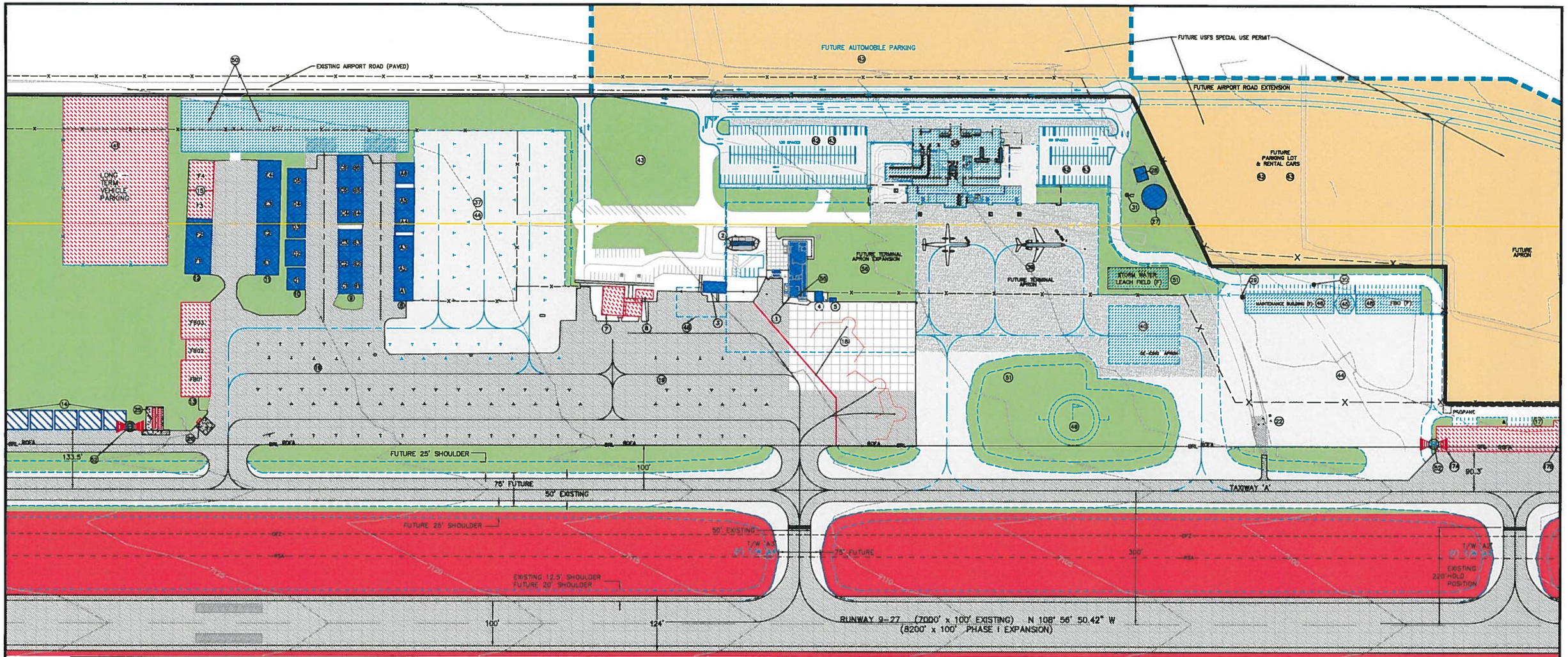
NON-STANDARD CONDITIONS TABLES

NO.	REVISIONS	BY	APP	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8944 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER 4 OF 14 SHEETS



BUILDING INVENTORY

No.	FACILITY	TOP ELEV.
1	EXISTING INTERIM TERMINAL BUILDING & BEACON FUTURE ADMINISTRATION BUILDING	7144.4
2	SHORT TERM PASSENGER HOLD ROOM-(SPRUNG STRUCTURE)	7127
3	AIRPORT OFFICE	7122.2
4	ELECTRICAL & TELEPHONE VAULT	7120.3
5	AIRPORT FUEL STORAGE	
6	EXISTING PILOTS LOUNGE (HOT CREEK)	7121.9
7	EXISTING FBO OFFICE (HOT CREEK)	7125.8
8	AIRCRAFT HANGARS A1 THRU A6 (PRIVATE ON LEASE LAND)	7138.9
9	AIRCRAFT HANGARS B1 THRU B3 & C1 THRU C3	7136.8
	AIRCRAFT HANGARS B4 THRU B6 & C4 THRU C6	7138.7
10	AIRCRAFT HANGARS D1 THRU D2	7141.2
	AIRCRAFT HANGARS D3 THRU D5	7140
11	AIRCRAFT HANGARS E1 THRU E4	7142.3
12	AIRCRAFT HANGARS F1 & F2	7141.6
13	AIRCRAFT HANGARS FBO1 (HOT CREEK)	7158.1
	AIRCRAFT HANGARS FBO2 (HOT CREEK)	7149.7
	AIRCRAFT HANGARS FBO3 (HOT CREEK)	7147.9
14	AIRCRAFT HANGARS G1 THRU G8 (AIRPORT HANGARS)	7145.7
15	AIRCRAFT HANGAR PADS ONLY – F3 & F4 (HOT CREEK)	

		TOP ELEV.
17	EAST CORPORATE HANGARS 1 THRU 19 (HOT CREEK)	
17A	CORPORATE HANGAR 1 (HIGH POINT)	7134.9
17B	CORPORATE HANGAR 5 (HIGH POINT)	7131.1
18	EXISTING TERMINAL APRON	
19	TIEDOWN APRON	
22	AWOS TOWER	7097.8
25	FUEL STORAGE TANKS (HOT CREEK)	
26	AV. GAS STORAGE. SELF SERVICE (HOT CREEK)	
27	WATER STORAGE TANK	7123.6
28	WATER STORAGE PUMP HOUSE	7119.4
29	WELL #99-1 GRND. ELEV. 7095.4'	
30	WELL #99-2 GRND. ELEV. 7094'	
31	AIRPORT WELL (ABANDONED)	
37	EXISTING LONG TERM VEHICLE PARKING (HOT CREEK)	
38	FUTURE TERMINAL BUILDING	
39	FUTURE TERMINAL APRON	

		TOP ELEV.
40	FUTURE DEICING RAMP	
41	LONG TERM VEHICLE PARKING (HOT CREEK)	
42	FUTURE AUTOMOBILE PARKING	
43	FUTURE RENTAL CAR PARKING LOT	
44	FUTURE TIEDOWN APRON	
45	FUTURE ATCT	
46	FUTURE ARFF / SNOW EQUIPMENT BUILDING	
48	FUTURE FIXED BASED OPERATOR BUILDING	
49	FUTURE SEGMENTED CIRCLE	
50	FUTURE SEWAGE TREATMENT PLANT AND LEACHING FIELD	
51	FUTURE APRON & PARKING LOT STORM WATER LEACHING FIELD	
52	FUTURE OBSTRUCTION LIGHT	
55	EXISTING AIRPORT BEACON	7147.9
56	FUTURE TERMINAL APRON EXPANSION	

NOTES:

1. PORTIONS OF THE EAST HANGARS PENETRATE THE RUNWAY OBJECT FREE AREA (ROFA) AND THE BUILDING RESTRICTION LINE (BRL). ACTION TAKEN – FAA DETERMINATION LETTER (FORM 7460-1) ISSUED 5/26/99.

LEGEND	EXISTING	FUTURE
AIRPORT PROPERTY LINE		
RUNWAY SAFETY AREA (RSA)	RSA	
RUNWAY OBJECT FREE AREA (ROFA)	ROFA	
RUNWAY OBJECT FREE ZONE (OFZ)	OFZ	
BUILDING RESTRICTION LINE (BRL)	BRL	BRL
AIRFIELD PAVEMENT AIRCRAFT MOVEMENT AREA		
RUNWAY SAFETY AREA		
AIRPORT PROPERTY		
FACILITIES		
HOT CREEK LEASE		
ROAD (PAVED)		
DIRT/GRAVEL ROAD		
FENCE		

TRUE MAGNETIC
DECLINATION (01/10)
13°38'

0 100 200 300
GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

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STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

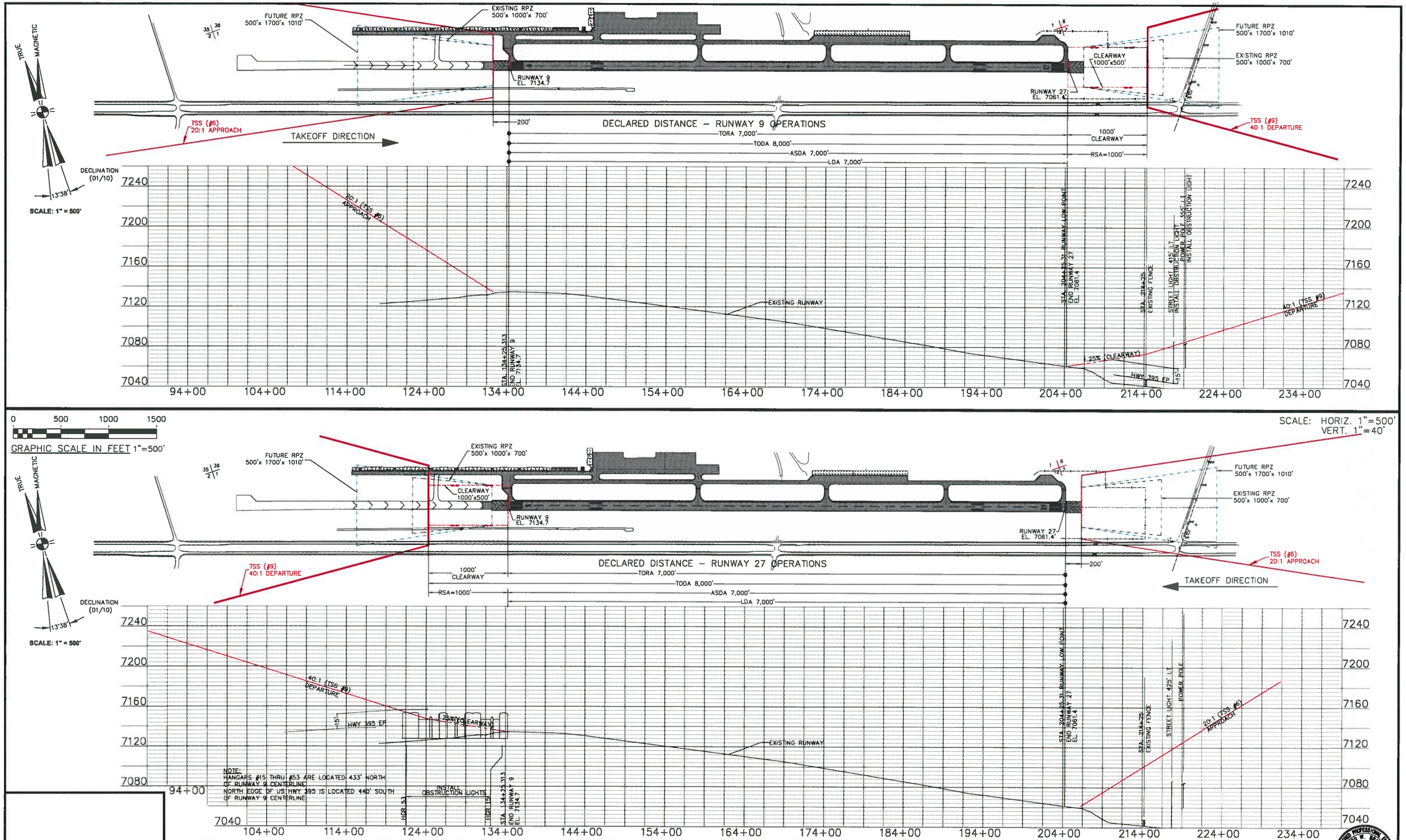
TERMINAL AREA LAYOUT PLAN

NO.	REVISIONS	BY	APR	DATE

REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER 5 OF 14 SHEETS



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C.E. 8044

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

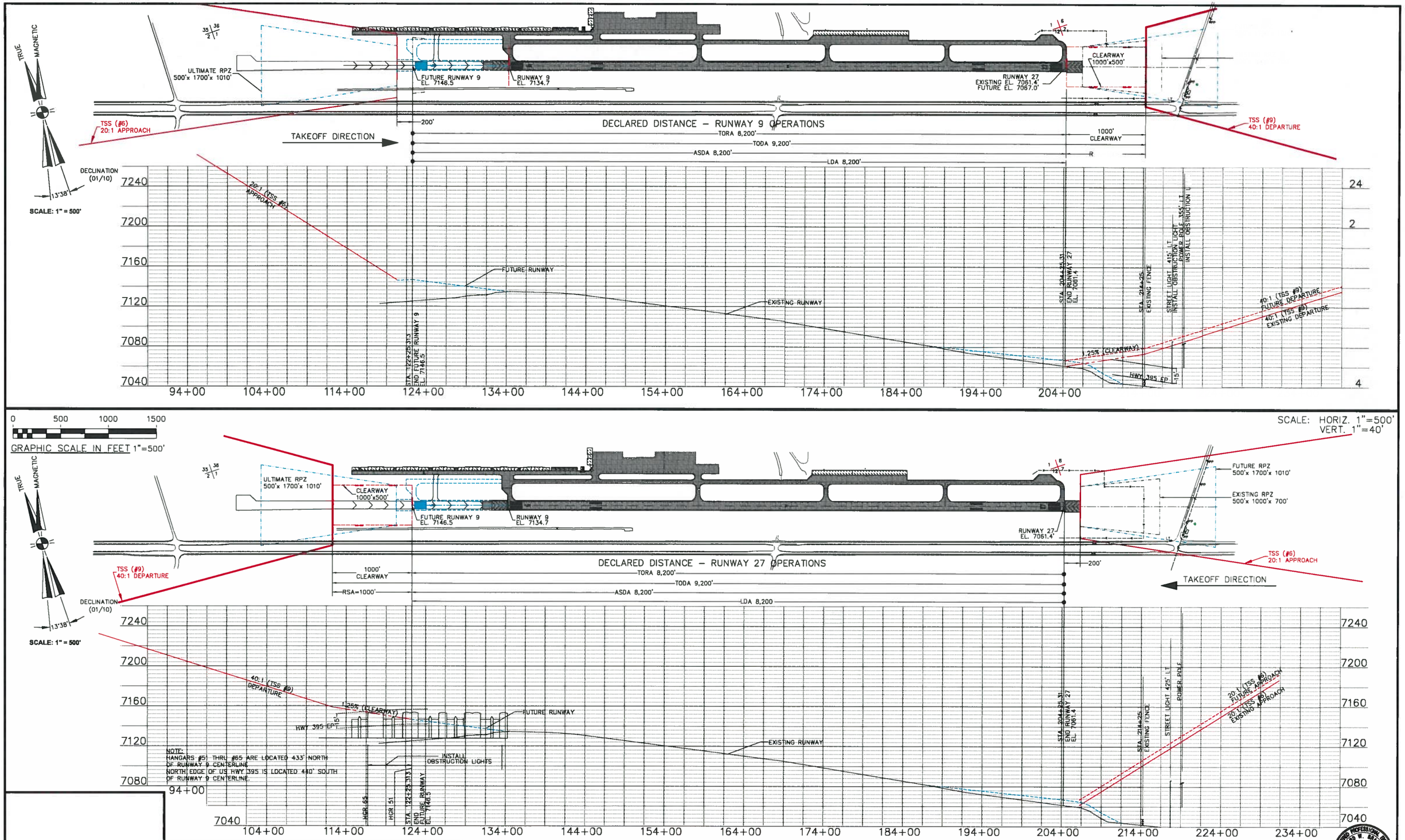
PROPOSED DECLARED DISTANCES FOR RUNWAY 9-27

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER 6 OF 14 SHEETS



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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

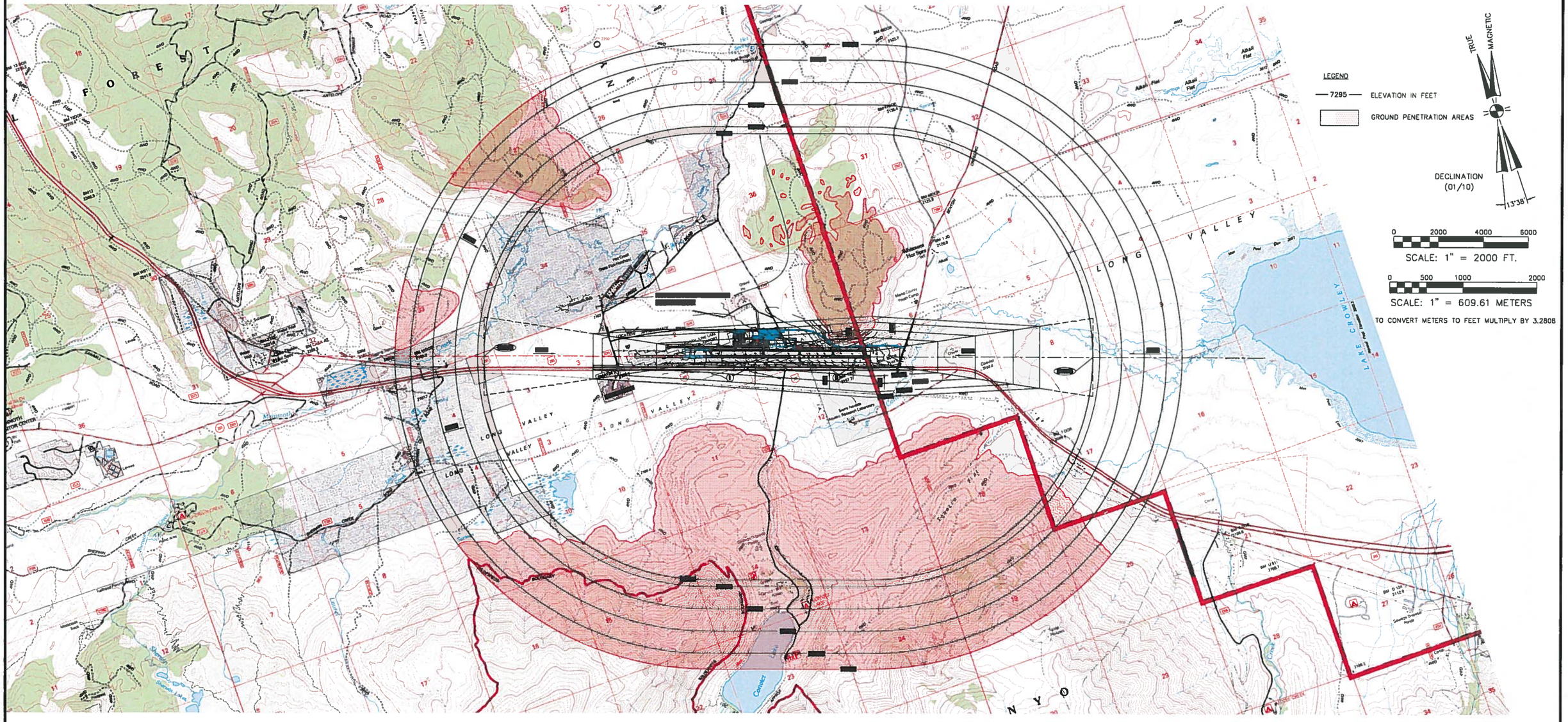
FUTURE DECLARED DISTANCES FOR RUNWAY 9-27

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2014
CIVIL
STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER
7 OF 14 SHEETS



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP SHEET 11
6. GROUND PENETRATIONS TO FAA PART 77. TREES ON GROUND WERE NOT EVALUATED.
7. PRIMARY SURFACE WIDTH = 500'
8. SEE SHEET No. 10 FOR PLAN AND PROFILE OF RUNWAY APPROACH AND DEPARTURE CORRIDOR.

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COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

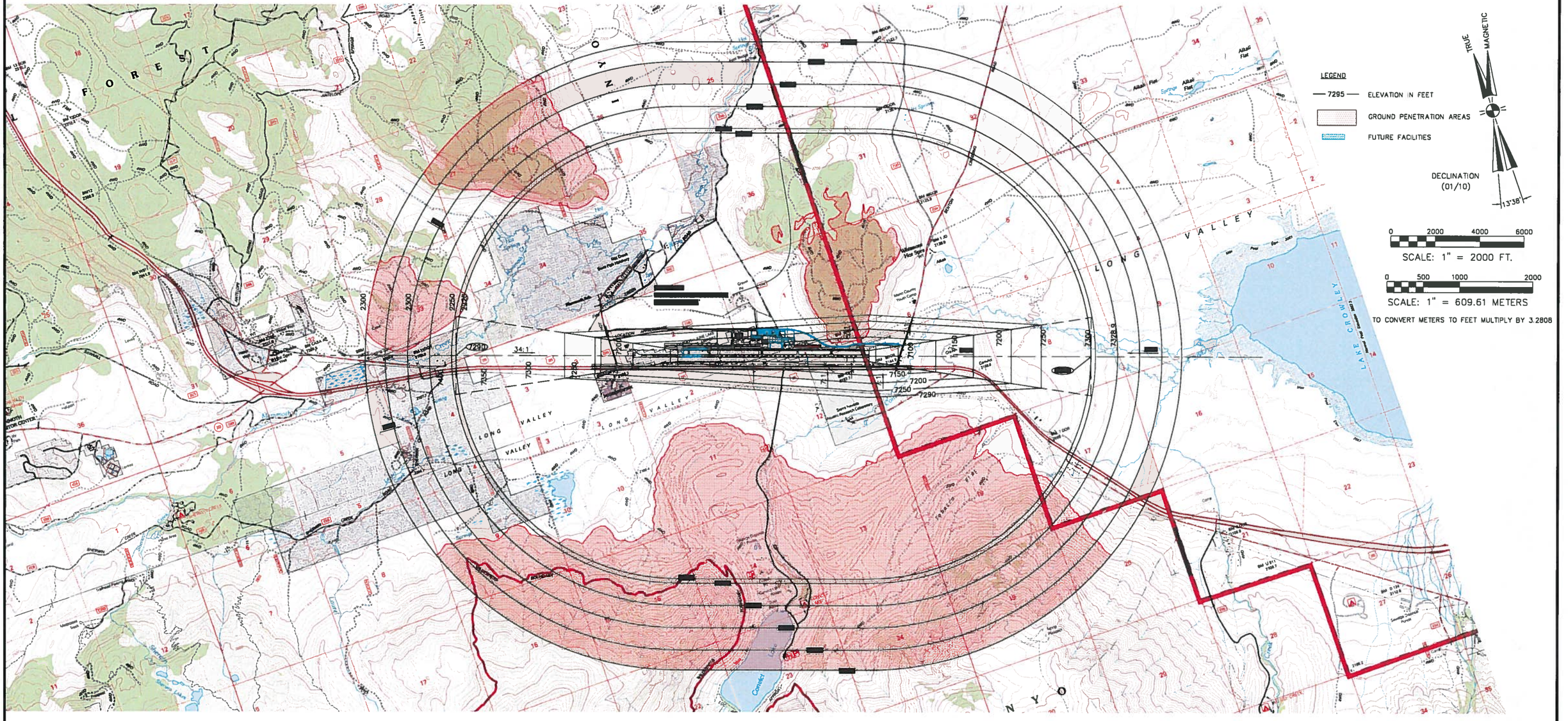
AIRPORT AIRSPACE DRAWING - EXISTING LAYOUT

NO.	REVISIONS	BY	APP	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8944
Exp. 9-30-2014
CIVIL
STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER
8 OF 14 SHEETS



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

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6. GROUND PENETRATIONS TO FAA PART 77. TREES ON GROUND WERE NOT EVALUATED.
7. PRIMARY SURFACE WIDTH = 500'
8. SEE SHEET No. 10 FOR PLAN AND PROFILE OF RUNWAY APPROACH AND DEPARTURE CORRIDOR.

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COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE DRAWING - FUTURE LAYOUT

NO.	REVISIONS	BY	APR	DATE

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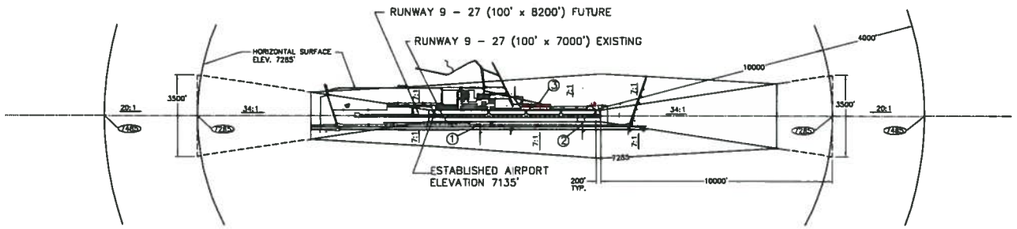
Exp. 9-30-2014
CIVIL
STATE OF CALIFORNIA

DATE DEC. 21, 2012

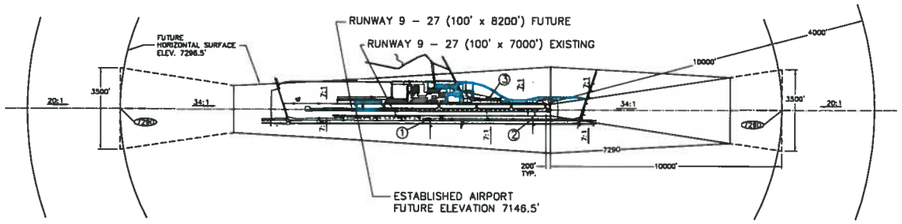
SHEET NUMBER
9 OF 14 SHEETS



EXISTING RUNWAY APPROACH AND DEPARTURE CORRIDOR PLAN

SCALE 1"= 3000'

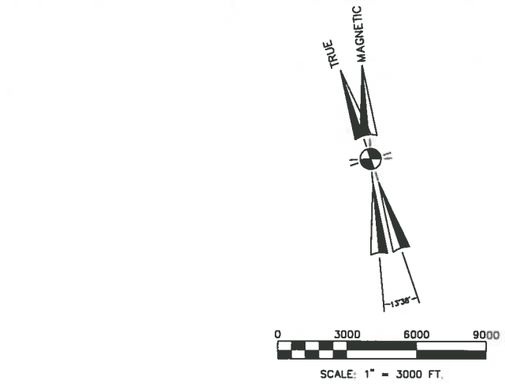
NOTE: SEE SHEET No. 8 FOR OVERALL AIRPORT AIRSPACE DRAWING



FUTURE RUNWAY APPROACH AND DEPARTURE CORRIDOR PLAN

SCALE 1"= 3000'

NOTE: SEE SHEET No. 9 FOR OVERALL AIRPORT AIRSPACE DRAWING



SCALE: 1" = 3000 FT.

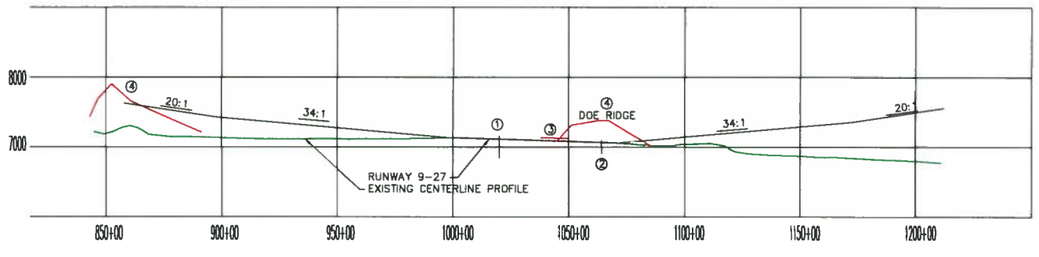
PART 77 PENETRATIONS

① SO. CAL. EDISON POLE (WITH OBSTRUCTION LIGHT) AND LINE CROSSING HWY 395, 1355' FROM RUNWAY 9 AND 370 FT. RIGHT. ELEV. TOP OF POLE 7157'

② VERIZON POLE (WITH OBSTRUCTION LIGHT) AND POWER LINE CROSSING HWY 395, 580' FROM RUNWAY 27 AND 374 FT. LEFT. ELEV. TOP OF POLE 7098

③ EAST HANGARS, 390.3' FROM RUNWAY CENTERLINE, TOP ELEVATION 7123 TO 7135, PENETRATE TRANSITIONAL SURFACE UP TO 17'.

④ GROUND PENETRATIONS SEE SHEET No. 8 AIRPORT AIRSPACE DRAWING



EXISTING RUNWAY APPROACH AND DEPARTURE CORRIDOR PRIFILE

SCALE: HORIZ. 1"= 3000'
VERT. 1"= 1000'

NOTE: SEE SHEET No. 8 FOR OVERALL AIRPORT AIRSPACE DRAWING

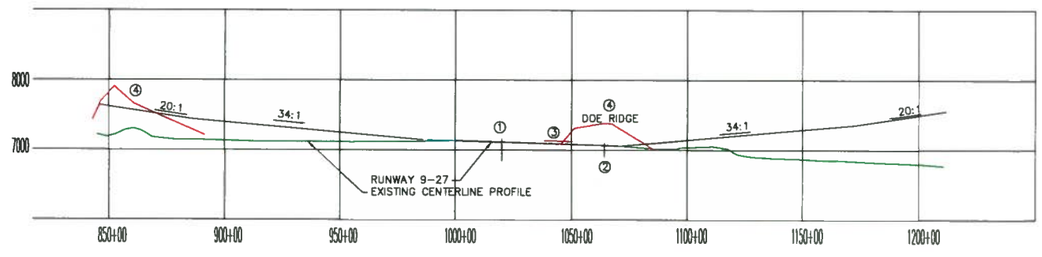
PART 77 PENETRATIONS

① SO. CAL. EDISON POLE (WITH OBSTRUCTION LIGHT) AND LINE CROSSING HWY 395, 1355' FROM RUNWAY 9 AND 370 FT. RIGHT. ELEV. TOP OF POLE 7157'

② VERIZON POLE (WITH OBSTRUCTION LIGHT) AND POWER LINE CROSSING HWY 395, 580' FROM RUNWAY 27 AND 374 FT. LEFT. ELEV. TOP OF POLE 7098

③ EAST HANGARS, 390.3' FROM RUNWAY CENTERLINE, TOP ELEVATION 7123 TO 7135, PENETRATE TRANSITIONAL SURFACE UP TO 17'.

④ GROUND PENETRATIONS SEE SHEET No. 9 AIRPORT AIRSPACE DRAWING



FUTURE RUNWAY APPROACH AND DEPARTURE CORRIDOR PRIFILE

SCALE: HORIZ. 1"= 3000'
VERT. 1"= 1000'

NOTE: SEE SHEET No. 9 FOR OVERALL AIRPORT AIRSPACE DRAWING

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APPROVED DATE

PETER BERNASCONI – ACTING DIRECTOR OF PUBLIC WORKS

Reinard W. Brandley
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COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

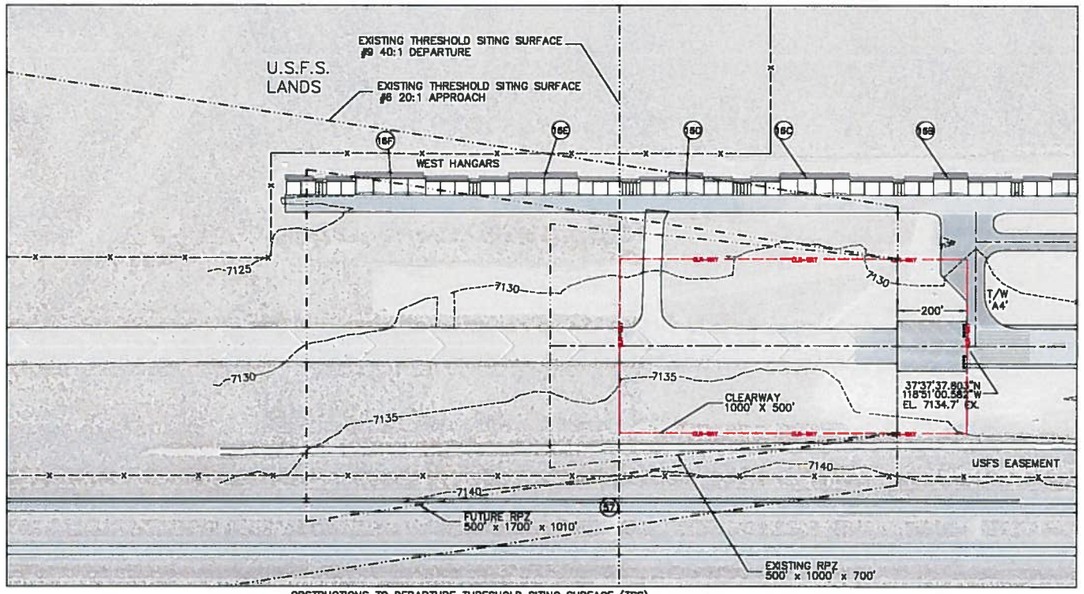
AIRPORT AIRSPACE PLAN AND PROFILE - EXISTING AND FUTURE LAYOUT

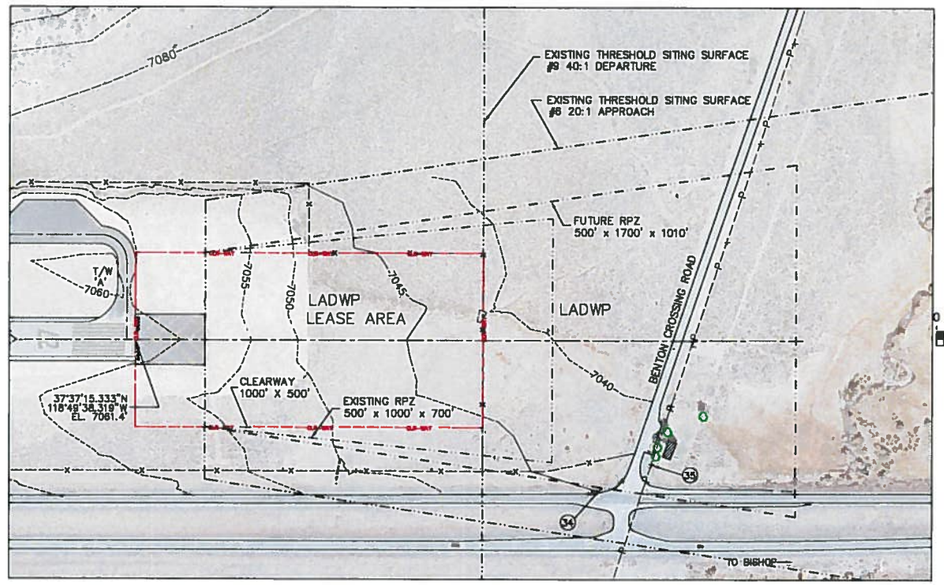
NO.	REVISIONS	BY	APR	DATE

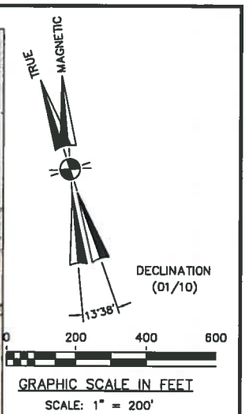
REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2014
CIVIL
STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER
10 OF 14 SHEETS







OBSTRUCTIONS TO DEPARTURE THRESHOLD SITING SURFACE (TSS)

No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	DISPOSITION
16B	HANGAR 15 THRU 16	433' RT	7154.4	INSTALL RED OBSTRUCTION LIGHT
16C	HANGAR 25 THRU 28	433' RT	7154.0	INSTALL RED OBSTRUCTION LIGHT
16D	HANGAR 38 THRU 39	433' RT	7153.8	INSTALL RED OBSTRUCTION LIGHT
16E	HANGAR 50 THRU 53	433' RT	7153.7	INSTALL RED OBSTRUCTION LIGHT
57	HIGHWAY 395 TRUCK TRAFFIC	440' LT	7156.0	MODIFICATION TO STANDARDS

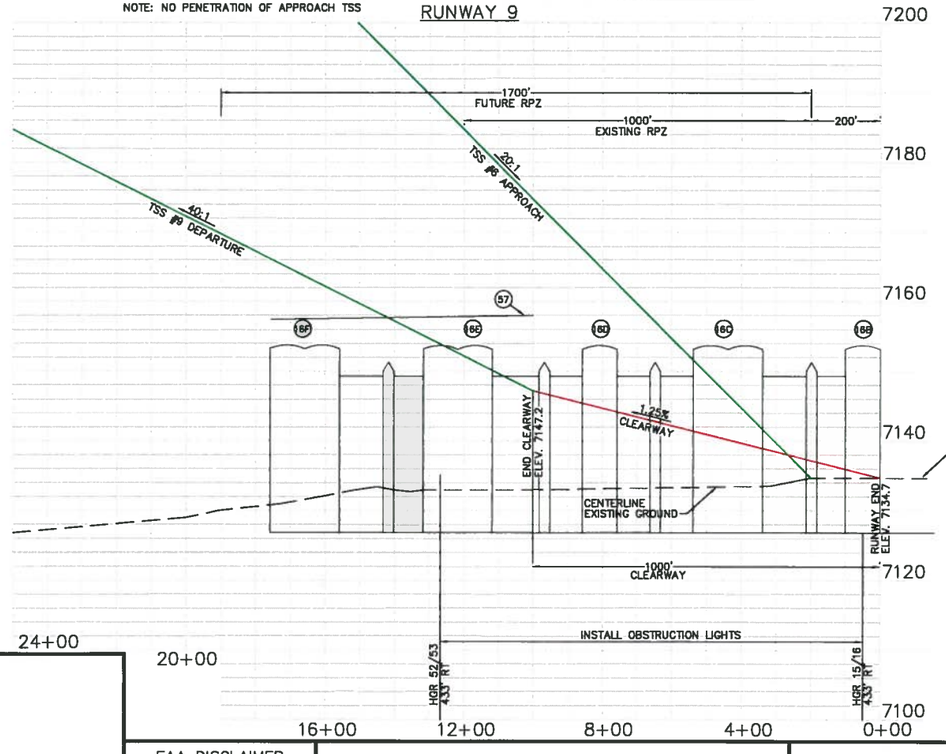
NOTE: NO PENETRATION OF APPROACH TSS

OBSTRUCTIONS TO DEPARTURE THRESHOLD SITING SURFACE (TSS)

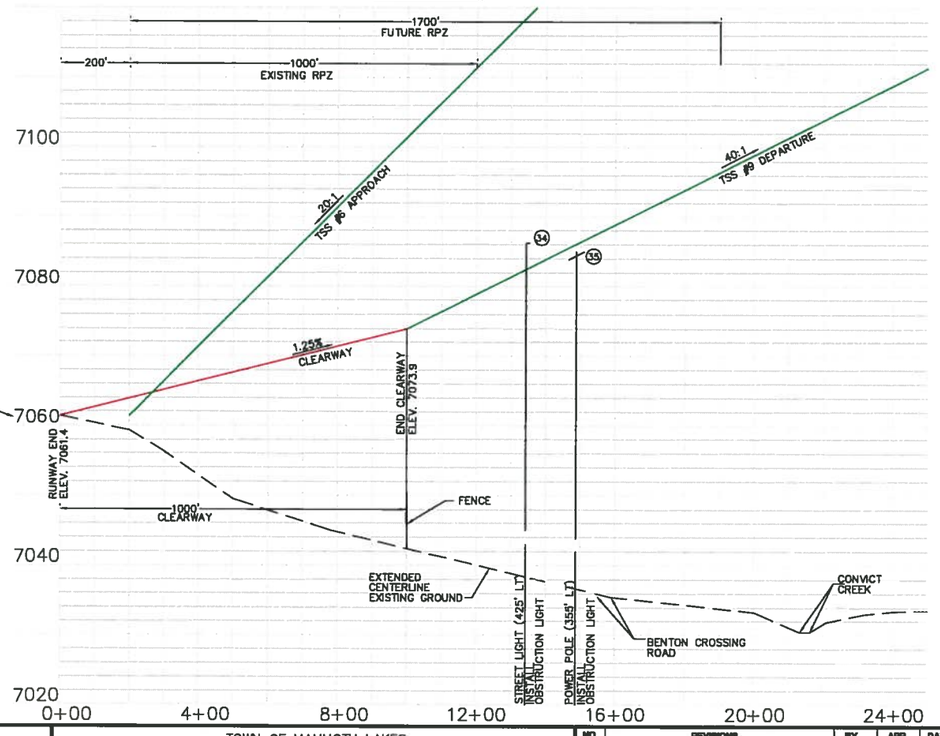
No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	DISPOSITION
34	EXISTING STREET LIGHT	425' LT	7086.3	INSTALL RED OBSTRUCTION LIGHT
35	EXISTING POWER POLE	355' LT	7085.0	INSTALL RED OBSTRUCTION LIGHT

NOTE: NO PENETRATION OF APPROACH TSS

PLAN



RUNWAY 9-27



PROFILE

SCALE:
HORIZ: 1"=200'
VERT: 1"=10'

SCALE:
HORIZ: 1"=200'
VERT: 1"=10'

FAA APPROVAL

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APPROVED DATE
PETER BERNASCONI – ACTING DIRECTOR OF PUBLIC WORKS

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

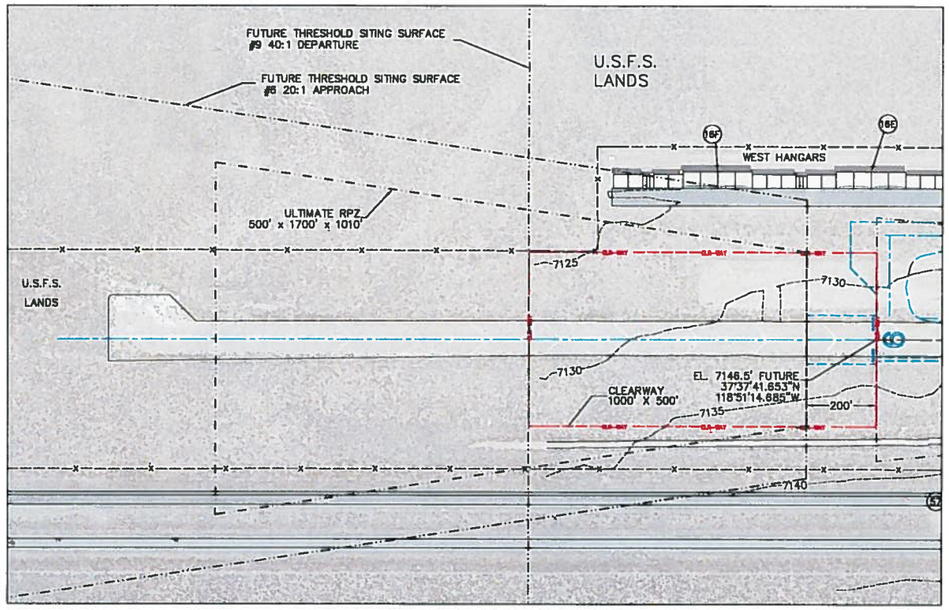
MAMMOTH LAKES, CALIFORNIA

INNER PORTION OF APPROACH SURFACE PLAN (EXISTING)

NO.	REVISIONS	BY	APR	DATE

REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012
SHEET NUMBER
11 OF 14 SHEETS

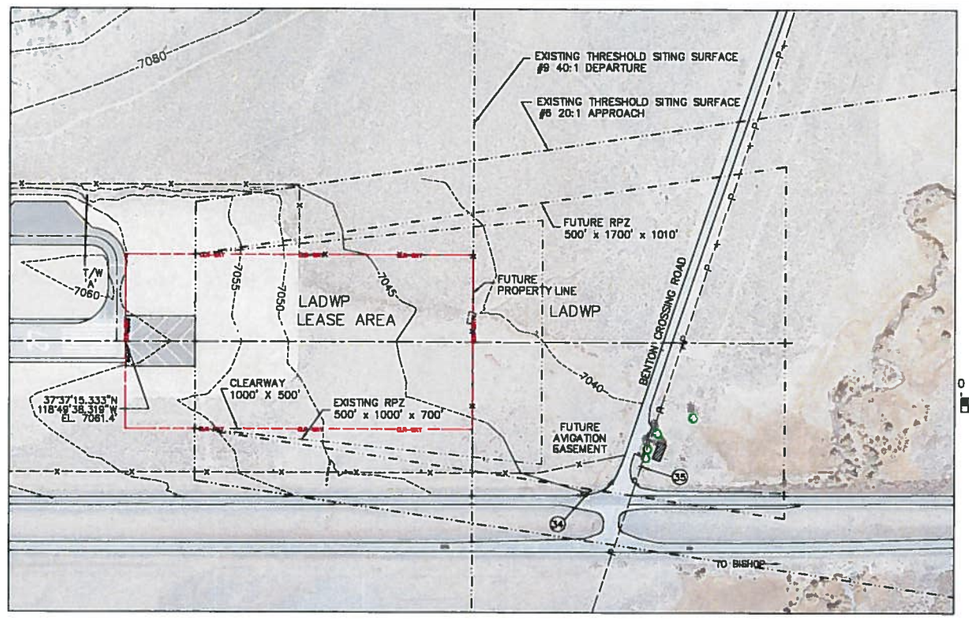


OBSTRUCTIONS TO DEPARTURE THRESHOLD SITING SURFACE (TSS)

No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	DISPOSITION
16E	HANGAR 50 THRU 53	433' RT	7153.7	INSTALL RED OBSTRUCTION LIGHT
16E	HANGAR 62 THRU 65	433' RT	7153.8	INSTALL RED OBSTRUCTION LIGHT

NOTE: NO PENETRATION OF APPROACH TSS

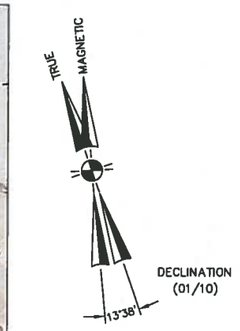
PLAN



OBSTRUCTIONS TO DEPARTURE THRESHOLD SITING SURFACE (TSS)

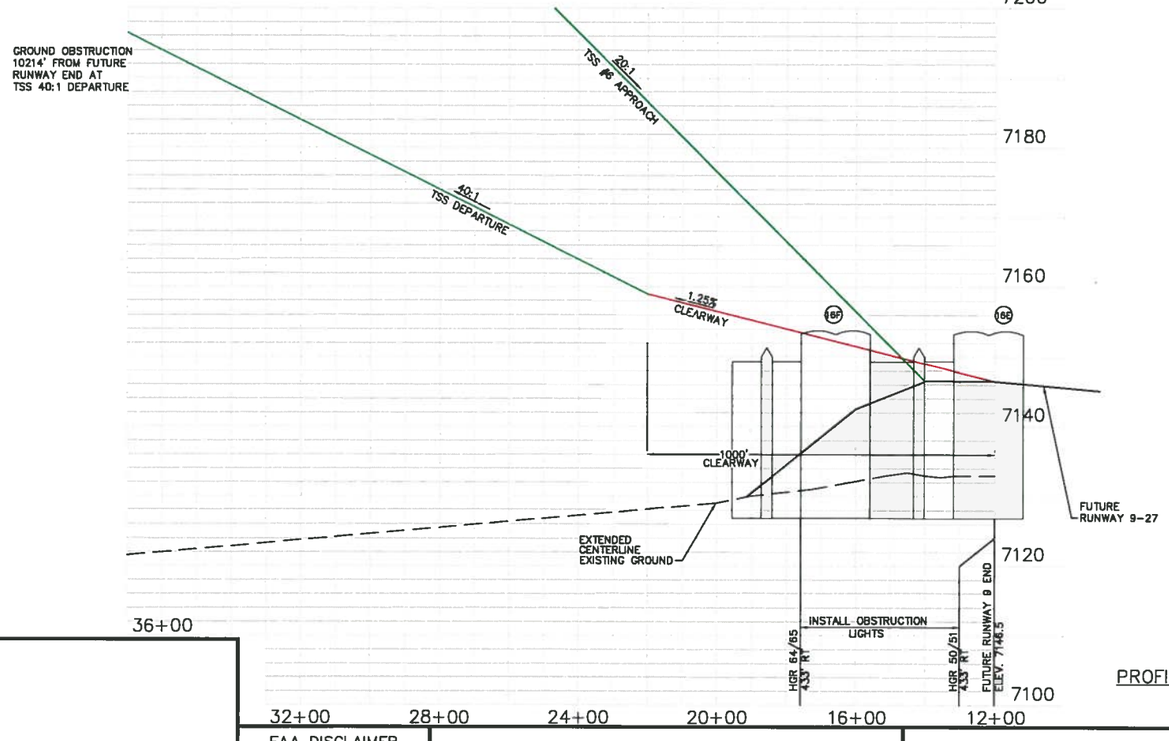
No.	FACILITY	OFFSET FROM R/W ℄	TOP ELEV.	DISPOSITION
34	EXISTING STREET LIGHT	425' LT	7088.3	INSTALL RED OBSTRUCTION LIGHT
35	EXISTING POWER POLE	355' LT	7085.0	INSTALL RED OBSTRUCTION LIGHT

NOTE: NO PENETRATION OF APPROACH TSS



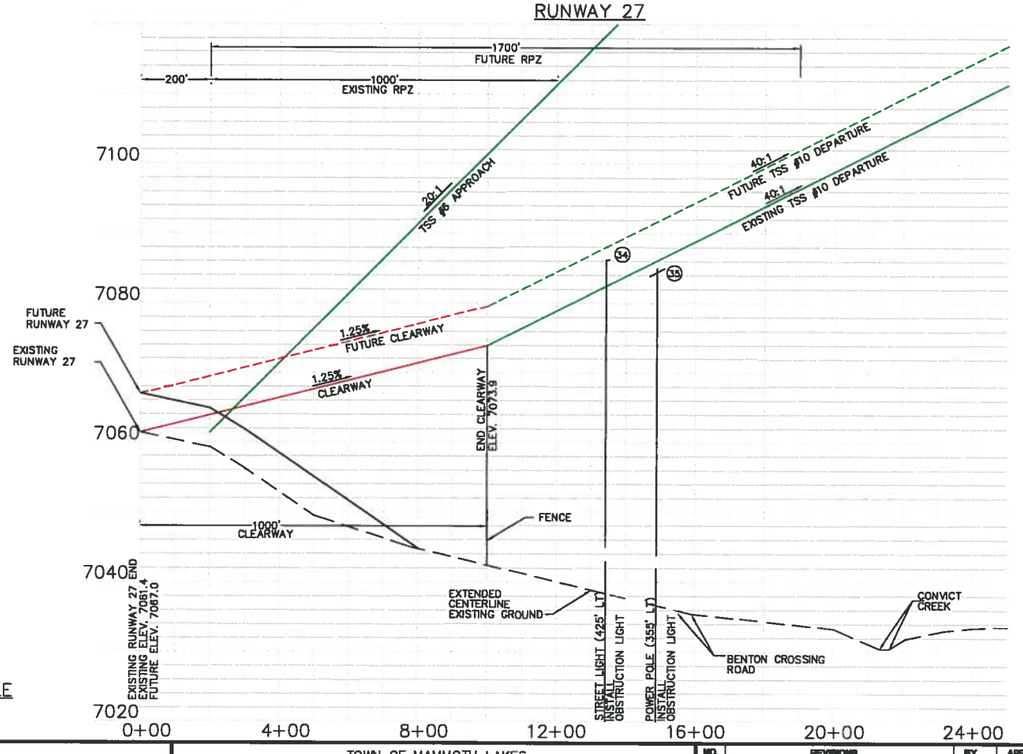
GRAPHIC SCALE IN FEET
SCALE: 1" = 200'

RUNWAY 9



PROFILE

RUNWAY 27



SCALE:
HORIZ: 1"=200'
VERT: 1"=10'

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

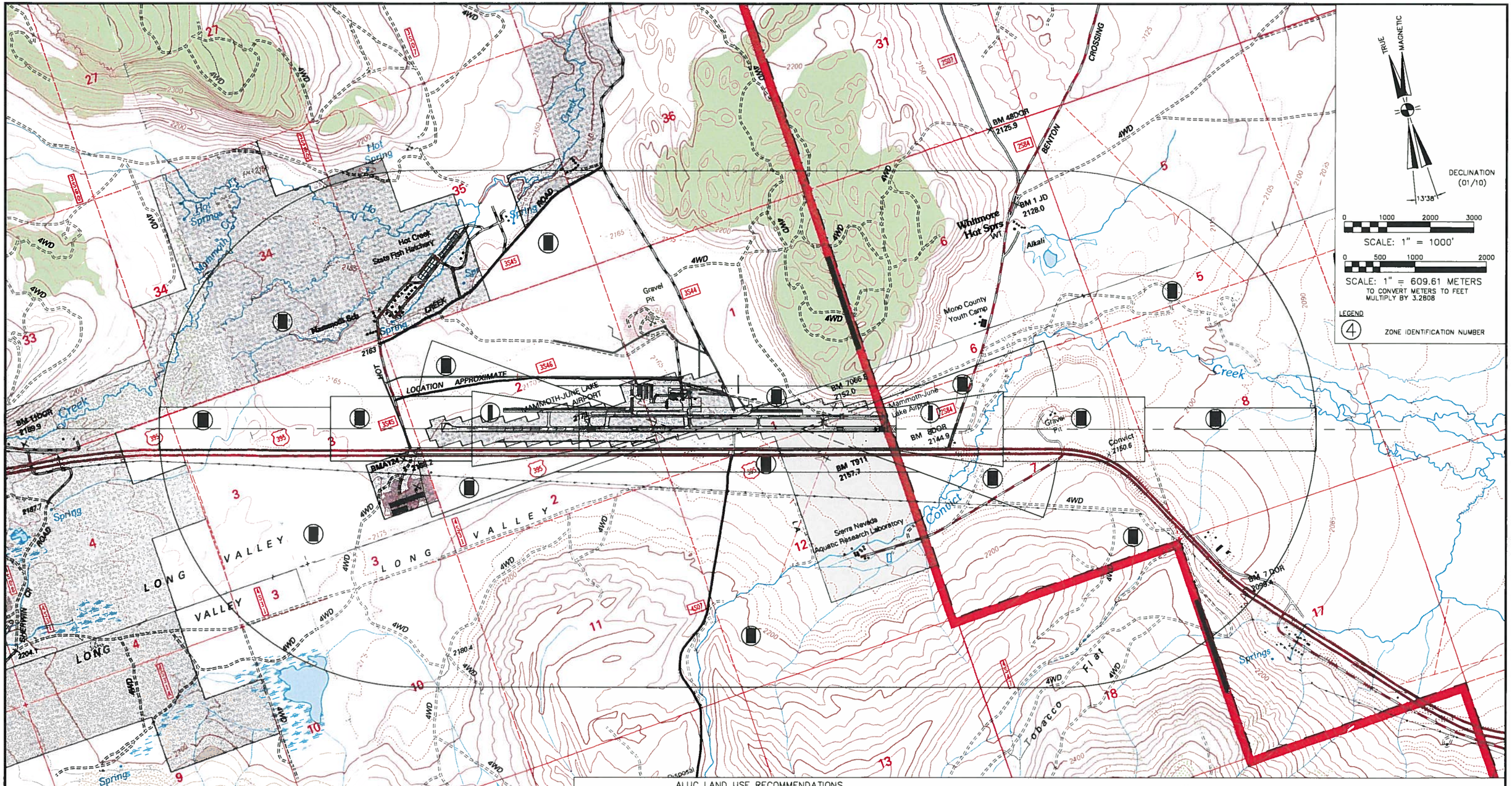
MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

INNER PORTION OF APPROACH SURFACE PLAN (FUTURE)

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 21, 2012
SHEET NUMBER
12 OF 14 SHEETS



ALUC LAND USE RECOMMENDATIONS

ZONE	SAFETY ZONE NAME	POPULATION DENSITY OF USE	RESIDENTIAL LAND USE	SPECIAL FUNCTIONS
1	RUNWAY PROTECTION ZONE	0–10/ACRE	PROHIBITED	PROHIBITED
2	INNER SAFETY ZONE	40–60/ACRE	10 ACRES/DWELLING	PROHIBITED
3	INNER TURNING ZONE	40–60/ACRE	2–10 ACRES/DWELLING	PROHIBITED
4	OUTER SAFETY ZONE	60–100/ACRE	2–5 ACRES/DWELLING	AVOIDED
5	SIDELINE SAFETY ZONE	40–60/ACRE	2–5 ACRES/DWELLING	AVOID ASSEMBLIES OVER 60/ACRE
6	TRAFFIC PATTERN ZONE	150/ACRE	4–6 DWELLINGS/ACRE	AVOID ASSEMBLIES OVER 150/ACRE

PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP SHEET 11.
6. SAFETY COMPATIBILITY ZONES SHOWN FROM CALIFORNIA AIRPORT LAND USE PLANNING HANDBOOK – 2011 – PG. 3–17, FIG 3A.

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

ALUC AIRPORT SAFETY ZONE PLAN / LAND USE PLAN (EXISTING RUNWAY)

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINERD W. BRANDLEY No. C 8044 Exp. 9-30-2014 CIVIL STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET NUMBER 13 OF 14 SHEETS

LEGEND

- ORIGINAL AIRPORT PROPERTY RELEASED TO USFS (SEE NOTE 1)
- ACQUIRED AIRPORT PROPERTY FROM USFS (SEE NOTE 1)
- EXISTING LADWP LEASED AREA TO BE ACQUIRED FEE SIMPLE
- EXISTING HOT CREEK AVIATION LEASE AREA
- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- ORIGINAL PATENT LINE
- BRL BUILDING RESTRICTION LINE
- E (3) PARCEL OR LEASE NUMBER

INFORMATION OBTAINED FROM DATA FOUND IN:

RECORD OF SURVEY NO. 36-127
SHEET 1 - 5
DATED JUNE 1998

BLM DEPENDENT SURVEY 44 292-C,D,E & (R.S. 36-127, BK.3, PG 60)

AIRPORT AND SURROUNDING AREA PROPERTY

PARCEL No.	DESCRIPTION		AREA IN ACRES	FAA PARTICIPATION	REMARKS
A	AIRPORT PROPERTY	EXISTING	196.23	NONE	CORRECTED PATENTS 04-85-171 & 04-85-0108, FEE SIMPLE ACQUIRED, SEE NOTE 1
B	50 YEAR LEASE (2010-2060) LADWP PROPERTY	EXISTING	33	-	TO BE ACQUIRED - FEE SIMPLE
C	USFS SPECIAL USE PERMIT TO REMAIN	EXISTING	17.3	NONE	AIRPORT PROPERTY LINE TO US 395 ROW
D	ACQUIRE USFS SPECIAL USE PERMIT	FUTURE	34.86	-	ACQUIRE FEE SIMPLE OR LONG TERM SPECIAL USE PERMIT FROM USFS
E	RPZ RUNWAY 27 - LADPW	FUTURE	18.88	-	ACQUIRE FEE SIMPLE TITLE FROM LADPW
F	RPZ RUNWAY 27 - LADPW	FUTURE	5.76	-	ACQUIRE FEE SIMPLE TITLE FROM LADPW
G	RPZ RUNWAY 9 - USFS	FUTURE	39.12	-	ACQUIRE FEE SIMPLE OR LONG TERM SPECIAL USE PERMIT FROM USFS

AIRPORT LEASES

LEASE No.	DESCRIPTION		AREA IN ACRES	LEASE HOLDER
1	EAST HANGARS - Corporate Units 1-19	EXISTING	1.61	HOT CREEK AVIATION
2	WEST HANGARS - Executive Units 1-72	EXISTING	2.46	HOT CREEK AVIATION
3	FUEL STORAGE TANKS AND SELF SERVE STATION	EXISTING	0.06	HOT CREEK AVIATION
4	FBO HANGARS - 3 HANGARS	EXISTING	0.30	HOT CREEK AVIATION
5	CONCRETE HANGAR PADS F3 & F4		0.17	
6	HOT CREEK OFFICE AND GENERAL AVIATION TERMINAL	EXISTING	0.22	HOT CREEK AVIATION
7	LONG TERM VEHICLE PARKING	EXISTING	2.04	HOT CREEK AVIATION
8	LONG TERM VEHICLE PARKING	FUTURE	2.04	HOT CREEK AVIATION

NOTES:

1. ORIGINAL PATENT 04-85-0171 - SEPT. 4, 1985
   04-86-0108 - JULY 15, 1986

   ORIGINAL PATENTS CANCELLED - AUG. 6, 1998
   PATENT CORRECTED 04-85-0171 - 57.5 ACRES
   PATENT CORRECTED 04-86-0108 - 196.23 ACRES
   ELIMINATE STAIR STEP CONFIGURATION OF PROPERTY LINE
   TOWN OF MAMMOTH LAKES ACQUIRE BY SIMPLE FEE AUG. 6, 1998

   ANNEXATION AND DETACHMENT OF APPROXIMATELY 29 ACRES - DEC. 21, 1999

TRUE MAGNETIC
13°34" DECLINATION (10/10)

0 400 800 1200
GRAPHIC SCALE IN FEET
SCALE: 1" = 400'

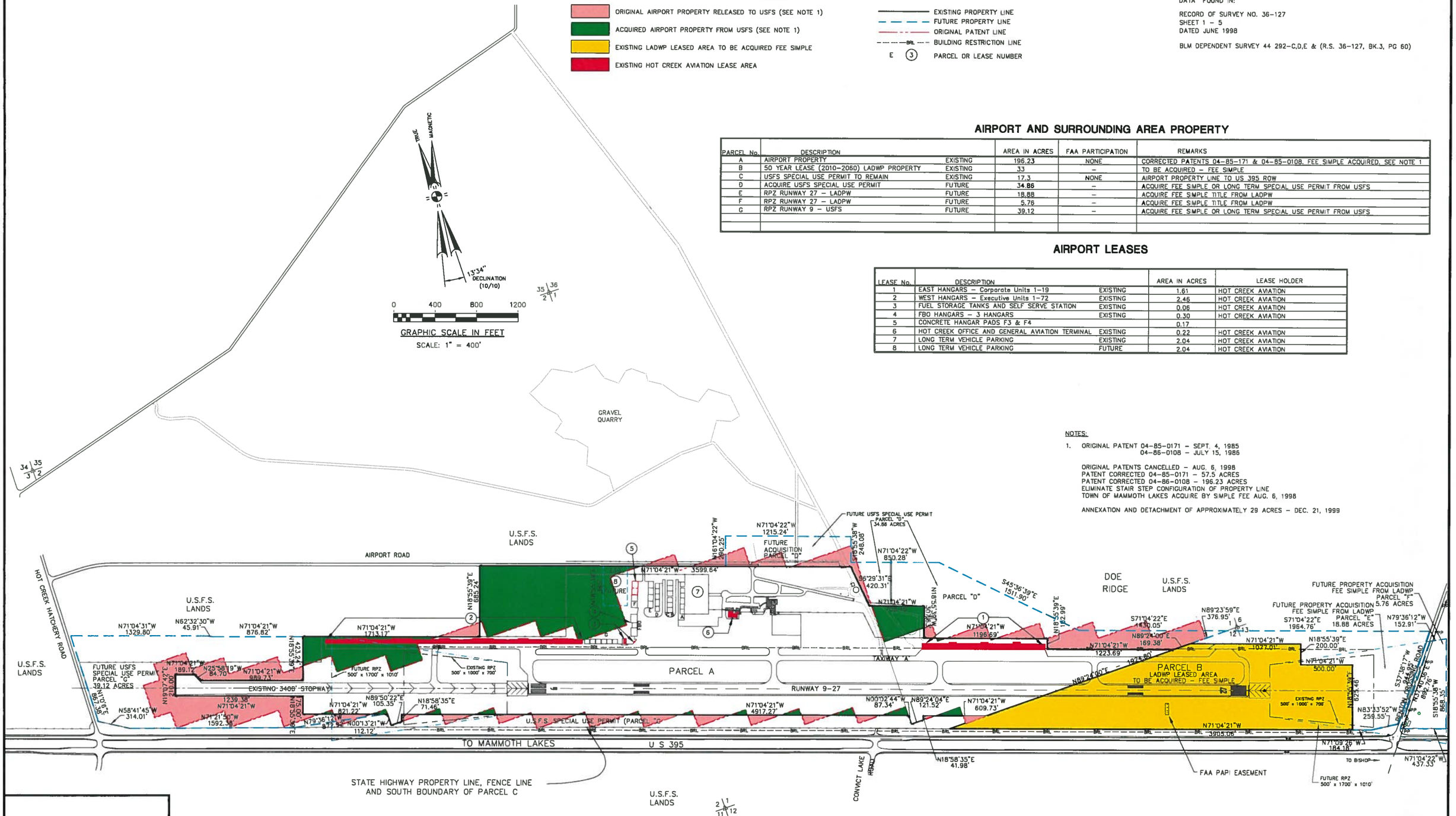

EXHIBIT A

FAA APPROVAL

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

AIRPORT PROPERTY MAP - EXHIBIT "A"

NO.	REVISIONS	BY	APP	DATE

REINARD W. BRANDLEY — No. C 8044 — Exp. 9-30-2014 — CIVIL — STATE OF CALIFORNIA

DATE DEC. 21, 2012

SHEET 14 OF 14 SHEETS

CHAPTER 7. ENVIRONMENTAL

The development of the new terminal facilities, other airport improvements, and grading required to improve ROFA deviations to the south of the runway will require detailed environmental reviews and clearances. Upon approval of the ALP, an application will be filed with the Federal Aviation Administration for funding of all environmental studies required.

CHAPTER 8. AIRPORT FINANCIAL PLAN

There are several Capital Improvement Projects required to maintain adequate aviation activity at MMH. Most of these projects are eligible for Federal grants to aid in the financing of these projects. The Federal aid program is the F.A.A. Airport Improvement Program (AIP) and it contributes up to 90 percent of the development costs.

Annually, each airport submits to the F.A.A. an Airport Capital Improvement Program (ACIP) in which they list the projects for which the Airport desires funding and prioritize the projects in order of importance to the Airport. The ACIP also includes a cost estimate of each project. An ACIP has been prepared, which has been submitted to F.A.A. this year. A copy of this ACIP Summary of Project Costs table anticipated to be submitted this year is included in Appendix D to this report.

Local funding is required for the following items at the airport:

- Matching funds for Federal grants
- Cost of construction of Capital Improvement Projects not eligible for Federal funding
- Maintenance costs
- Operating costs
- Administrative costs

It is the goal of the Airport to develop income sources so the airport development and operation costs are financed by airport income and grants. Sources of income available to the Airport include:

- Federal airport improvement program grants (AIP)
- Landing fees
- Apron fees
- Terminal building rents
- Passenger facility charges (PFC)
- Fuel sales
- Hangar rent
- Tie down fees
- FBO and commercial/industrial land leases and sales
- Airplane and airport local taxes

It will require a significant early expenditure to construct the required new terminal facility. If adequate Federal funding is not available to cover these costs, the Airport could consider obtaining a Letter of Intent (LOI) from the F.A.A. to include future year funding and the possible sale of bonds to cover the capital costs. These bonds can be

paid off from income from the airport and from future F.A.A. airport improvement program grants and/or Passenger Facility Charges (PFC).

CHAPTER 9. UTILITIES AND DRAINAGE

Storm water drainage at this site is accommodated by percolation into the existing soils. There is no runoff into or off from the airport. The only runoff that is experienced during storms is that on paved areas. The storm water runoff from these paved areas is carried to shallow ditches or leaching fields and allowed to infiltrate into the ground. The soils at this site are so pervious that it only requires short ditches to accommodate all the storm water from large paved areas. This drainage system will continue to be used for future development.

Domestic water and water for fire protection is provided by wells, which is stored in a 450,000 gallon storage tank. These facilities are adequate to serve the water requirements for the development and for fire protection.

Electrical and telephone services are provided by Southern California Edison and Verizon. Both agencies are capable of expanding service for the new development.

Existing sewage disposal is accommodated by septic tank and leaching fields, which are very effective at this location. For future development it is proposed to construct a package sewage treatment plant, but still dispose of the effluent by leaching fields.

CHAPTER 10. RECOMMENDATIONS

As a result of the Airport Layout Plan Update study, a series of recommendations have been developed to provide a guide for the future development of MMH. These recommendations are summarized in this chapter.

10-1 Airport Reference Code (ARC)

MMH is currently classified as a B III airport with visibility minimums greater than ¾-mile. Due to the proximity of the airport to mountains and other obstructions, the visibility minimums at MMH have been established at 1¼ mile and ceiling minimums of 1,300 feet. It is recommended that the ARC be maintained as B III with appropriate visibility minimums until traffic clearly indicates the requirement to change the ARC to C III.

It is recommended that the airport operate under ARC B III but that any new development at the airport meets ARC C III standards so they will not need to be modified if ARC C III is approved.

10-2 Site Analysis

An evaluation of the six alternate site developments as compared to developing the existing airport to accommodate forecast traffic showed that all sites, except for the development of the existing airport, had a prohibitive development cost and also had significant land use and environmental barriers. As a result of these studies, it is concluded that none of the alternate sites are viable options. It is, therefore, recommended that the existing airport be expanded to accommodate the forecast traffic without jeopardizing safety.

10-3 Runway

10-3.1 Single Runway

Currently MMH has one runway, Runway 9-27, which is 7,000 feet long by 100 feet wide. Wind studies and capacity studies indicate that a single runway oriented in the east-west direction is adequate. A crosswind runway is not justified and, because of the large mountains to the south, would not be usable for most aircraft.

10-3.2 Length

The 7,000-foot runway is currently inadequate in length for full operation for airline and business jets without reduced loads. The runway can be extended 1,200 feet to the west without the necessity to acquire additional land from the USFS. By acquiring the USFS land between the airport west property line and

Hot Creek Hatchery Road, the runway can be extended a total of 2,000 feet to the west to provide a 9,000-foot runway if required. The process of acquiring land from the USFS takes considerable time. It is recommended that the runway be extended to 8,200 feet as early as possible and that the Airport maintain the potential for a total length of 9,000 feet with a 2,000-foot extension to the west. In order to extend the runway to 9,000 feet, property rights will need to be acquired from the USFS. It is recommended that efforts be made to acquire the necessary leases or ownership of this property so as to provide the capability of anticipated and unanticipated runway extension.

10-3.3 Width

The runway currently is 100 feet wide, which meets both ARC B III and C III requirements for aircraft with takeoff weights less than 150,000 pounds. No widening of the runway will be required within the forecast period. Provision should be made to widen the runway to 150 feet in the future if required.

10-3.4 Shoulders

The shoulders on the runway are non-standard. The current paved shoulders are 12 feet wide. ARC C III standards require 25 foot wide paved shoulders if the runway is widened to 150 feet. Twenty-foot wide shoulders are standard for a 100-foot wide runway used by C III or B III type aircraft weighing less than 150,000 pounds. It is recommended that the shoulders be expanded to a 20-foot width.

10-3.5 Gross Allowable Aircraft Weight

The runway and taxiways at MMH were reconstructed in 2008. The new pavement section consists of 3 inches of AC, 6 inches of aggregate base, 10 inches of aggregate subbase, and 16 inches of recompacted sand subgrade. The California Bearing Ratio (CBR) of the recompacted sand subgrade soil is 12 and of the undisturbed sand subgrade soil is 6. These pavement sections will adequately support and provide a minimum 20-year life for operations of aircraft having a gross weight of 115,000 pounds on dual gear and 80,000 pounds on single gear. This will allow 6,000 annual departures of aircraft of these weights. If the number of departures of aircraft on dual gear weighing more than 115,000 pounds is less than 1,200 per year, then the allowable gross weight of aircraft on the runway and taxiways is increased to 150,000 pounds for dual gear aircraft for the minimum 20-year operational life of the existing pavement.

The aprons are not designed with the heavier sections and will not support these loadings, but these pavements will be reconstructed as part of the terminal development project. Aprons designed to support airline aircraft should be designed to support dual gear aircraft with a gross weight of 250,000 pounds to provide a long life pavement and capability to support larger aircraft in the future.

The added cost of constructing a new pavement section to support a heavier aircraft is small since it only requires the construction of a slightly thicker section of aggregate subbase.

10-3.6 Declared Distances

Declared distances are feasible and recommended for this site in order to allow turbojet aircraft to operate with heavier loadings. The take-off run available (TORA), accelerated stop distance available (ASDA) and landing distance available (LDA) will be total length of existing paved runway or extended paved runway since there are no threshold displacements or relocations. There is the capacity and need to use a 1,000-foot clearway at each end of the runway, present and future, and use declared distance such as to increase the take-off distance available (TODA) by 1,000 feet more than the TORA for each direction of operation and for current and future lengths of runway. The TORA, ASDA, and LDA will be the total length of the runway.

10-3.7 Runway Lighting

Runway lighting is by medium intensity runway edge lights, which are 30 inches above the ground to accommodate heavy snow conditions. These are satisfactory for current conditions, but the Airport should maintain the capability to upgrade these lights to high intensity runway lights if required.

10-4 Taxiways

All existing taxiways, both parallel and cross, are 50 feet wide, which meets the Taxiway Design Group requirements for TDG 3 aircraft but TDG 5 aircraft require a 75-foot wide taxiway.

The Q400 aircraft currently used at MMH has a wheel base on the main gear that has a taxiway edge margin of 8 feet with the 50-foot wide taxiways; whereas, F.A.A. standards call for a 10-foot minimum margin for B III and C III class aircraft. To accommodate the Q400 aircraft and future large aircraft it is recommended that all taxiways used by the airline and large business jet aircraft be widened to 75 feet, that all fillets at taxiway intersections be reconstructed to F.A.A. minimums, and that a 25-foot wide paved shoulder be added to each side of the taxiways.

The parallel taxiway centerline is 300 feet from the centerline of Runway 9-27. ARC C III requirements call for a 400-foot spacing. The 300-foot spacing with the type of aircraft currently using and forecast to use the airport meets the ARC B III standards. Aircraft with wingspans less than 100 feet can operate with a 300-foot runway to taxiway centerline spacing without penetrating the runway Object Free Zone (OFZ) or Runway Safety Area (RSA).

There are no taxiway lights on any of the taxiways because of heavy snow and snow plowing problems. The Airport uses retroreflective markers, which has proven to be satisfactory.

It is recommended that the parallel taxiway remain in its present location. If the ARC C III airport is adopted in the future, then it is recommended that modifications to standards be pursued as required.

The parallel taxiway and both end taxiways are currently designated as Taxiway "A" and the other cross taxiways are designated as Taxiways "A1", "A2", and "A3". New F.A.A. standards recommend that all cross taxiways be designated with a letter and a number. All cross taxiway designations will be changed to meet these requirements, which will require updating existing signs and marking.

The east hangar buildings are within the Object Free Area of both the runway and the parallel taxiway by approximately 10 feet. If aircraft are parked in front of the hangars, it will not be possible to taxi large aircraft on the parallel taxiway past these east hangars. This is an operational concern, and Airport Management will work with the F.A.A. and airlines to develop and implement operational procedures that will allow safe operational conditions for the airline and other ARC C III aircraft.

10-5 Airline Terminal

The existing interim airline terminal constructed in 2008 is only 5,000 square feet. The limitation on size was due to constraints imposed on new construction by the controlling environmental document. The terminal is already too small for airline operations, and a Sprung structure was erected in 2011 to accommodate traffic. A Terminal Area Study has been completed for this site, and it is recommended that a new terminal building of approximately 40,000 square feet be constructed as soon as possible. This new terminal will have three gates, which can accommodate aircraft up to the B737 size, and is expandable to six gate positions. Airport apron, deicing pads, roads, automobile parking, and other amenities capable of accommodating forecast traffic and of expanding to accommodate future unanticipated traffic should be planned, but only those facilities forecast to be required in the 20-year forecast period constructed.

The site selection study described in Appendix C of this narrative indicates the recommended location of the new airline terminal. Two specific sites were identified. One site has the south edge of the airline apron matching the south edge of the existing general aviation apron to provide close proximity to the runway and taxiways. This location precludes the reconstruction of the airfield to meet all ARC C III standards, which would move the runway approximately 40 feet to the north and the taxiway approximately 140 feet to the north. The second site moves the terminal facilities to the north so that the terminal itself is adequately served by an extension of Airport Road. This site allows possible

relocation of the runway and taxiway without affecting the terminal or terminal apron and is the recommended site for the new development.

The major airline activity occurs in the winter, and many of the jet aircraft using the airport will require deicing before departure. Deicing on the apron is incompatible from an environmental standpoint. It is, therefore, recommended that a separate deicing pad be constructed to deice these aircraft. This pad should slope to a center collection inlet structure and all of the deicing fluids diverted to a holding tank and disposed of properly off site.

10-6 General Aviation

10-6.1 General Aviation Activity

General Aviation (GA) is and is forecast to continue to be the major operation at MMH regardless of the growth of airline operations due to the large number of itinerate aircraft that use the airport. Itinerant aircraft operations at MMH are significant and are forecast to have significant growth during the 20-year forecast period. The major facilities that attract itinerant aircraft to MMH are the winter skiing at Mammoth Mountain, summer hiking, boating and fishing, and mountain sightseeing. Mammoth is also the eastern entrance to Yosemite National Park.

Itinerant aircraft that visit MMH range from small single engine and twin-engine propeller driven aircraft to larger turboprop aircraft to small to medium sized turbojet to large turbojet aircraft, including the Falcon 50 and Gulfstream G V. Several GA aircraft using MMH are classified as ARC C III.

Local GA activity, as measured by the number of based aircraft and local aircraft operations, is small due to the small local population and type of employment available. There are only 8 small aircraft currently based at MMH and the 20-year forecast anticipates a small growth to 10 aircraft.

10-6.2 Existing General Aviation (GA) Facilities

The existing facilities available to serve GA consists of the following:

- 1 Fixed Base Operator (FBO)
- 1 Pilots' Lounge associated with the FBO Office
- 1 Fueling Facility providing 100 LL AvGas and Jet-A Fuel
- 74 Tie Down Positions for Small Aircraft
- 134 Hangars.

10-6.3 General Aviation Forecast Needs

The existing and proposed runway and taxiway system at MMH is adequate to serve all forecast needs of the entire general aviation fleet.

The existing aviation fueling facilities at MMH are adequate or can readily be expanded as needed to serve the forecast general aviation and airline fleet.

Currently there is only one fixed base operator (FBO) at MMH. Provision should be made as shown on the Airport Layout Plan to add one or two FBOs as needed. All FBO plots should be large enough to accommodate full-service FBOs or special service FBOs.

The existing aircraft parking apron at MMH consists of 475,000 square feet of pavement, 58,000 square feet of which consists of 12 inches of Portland cement concrete over aggregate base and the remaining 417,000 square feet consists of an asphalt pavement surface. These aprons have the capacity to tie down 74 small single or twin engine aircraft. Currently these aprons are filled to capacity on holiday periods and on many weekends with aircraft ranging from the small single engine aircraft to the large turbojet aircraft.

The airlines operating out of the itinerant terminal building use most of the Portland cement concrete apron and the asphalt apron to the south of the concrete apron, leaving space for only 36 small aircraft tie down spaces. When the new terminal is constructed, the apron space currently used by the airlines will revert back to general aviation use as long as the airline operation only requires three gate positions.

It is recommended that an additional aircraft tie down apron of at least 300,000 square feet be constructed at MMH soon to provide tie down space for the itinerant aircraft using and forecast to use the airport.

The 12-inch Portland cement concrete (PCC) apron is in good condition and is designed to support dual gear aircraft weighing up to 80,000 pounds and single gear aircraft weighing up to 50,000 pounds. The asphalt pavement sections are in poor to good condition with significant pavement cracking and some raveling. The bearing capacity of these pavements is fairly low and they need to be reconstructed soon. With the type operation experienced at MMH when there are times that several large turbojet aircraft are at the airport at the same time, flexibility in operating procedures is required. It is recommended that the existing PCC pavements be maintained as is and that the joints be resealed to protect the pavement section. It is also recommended that all existing asphalt pavement sections be reconstructed and that the new 300,000 square foot apron be constructed. To provide flexibility in operation of the aprons it is recommended that all general aviation aprons be designed to support dual gear aircraft weighing 80,000 pounds and single gear aircraft weighing 50,000 pounds at gross takeoff conditions.

10-6.4 Hangars

There are currently 134 hangars at the airport ranging in size from small glider storage facilities to large turbojet hangar facilities. These hangars are privately owned on leased ground. There is no current demand for additional hangars and none in the foreseeable future.

Ninety one of the hangars are located close to the runway and taxiway and some of them infringe on the object free area and/or threshold siting planes of both the runway and taxiway. Depending on the development of the airport, it may require relocation of many of these hangars in the future. F.A.A. Form 7460-1 was filed and accepted by the F.A.A. for the construction of both the east and west hangars (90 hangars) before they were constructed. It is recommended that a confirmation of F.A.A. modification to standards for siting of both the east hangars and the west hangars be obtained.

10-7 Access Roads

Currently MMH is served from U.S. Highway 395 by Hot Creek Hatchery Road and Airport Road. Airport Road is not a through road at this time and, therefore, there is only one point of access to the airport. To provide emergency access to the airport and to simplify passenger access, it is recommended that Airport Road be continued to the east and tie into Benton Crossing Road, which also connects to U.S. Highway 395.

10-8 Land

All of the land surrounding the airport belongs to the USFS or LADWP. The Airport has fee simple title to significant portions of the airport and long-term leases from USFS and LADWP for the remaining land. It is recommended that the Airport obtain ownership or long-term lease of additional land as shown on Exhibit A of the Airport Layout Plan to serve the following potential expansion:

Parcel A – 196.23 Acres – Existing airport property owned in fee title and obtained from the USFS by Mono County and transferred to the Town of Mammoth Lakes. The original airport property had irregular boundaries, which were corrected where some property was returned to the USFS and some USFS property released to the Airport as shown on the Airport Property Map, Exhibit A, Sheet No. 14.

Parcel B – 33.00 Acres – 50-year lease from LADWP - Existing. It is proposed to acquire this property in fee simple.

Parcel C – 17.30 Acres - USFS Special Use Permit - Existing. Consists of USFS property located between the current airport property line and the U.S. Highway 395 right of way.

Parcel D – 34.86 Acres - Auto Parking Lot and Apron – Future. Acquire fee simple or long-term Special Use Permit from USFS.

Parcel E – 18.88 Acres - RPZ Runway 27 – LADWP – Future. Acquire fee simple title from LADWP.

Parcel F – 5.76 Acres - RPZ Runway 27 – LADWP – Future. Acquire fee simple title from LADWP.

Parcel G – 39.12 Acres - RPZ Runway 9 – USFS – Future. Acquire fee simple or long-term Special Use Permit from USFS.

The land surrounding the airport is either USFS land or LADWP land. It is important that the airport work closely with these agencies to make sure that none of this land is released for any development that has an adverse effect on the operation or safety of operations at MMH.

10-9 Security

Current fencing at the airport includes chain link fencing in the terminal area and barb wire fencing for the remaining portion of the airport. The existing terminal building and facilities are equipped with required security facilities including coded locks on gates and doors and security cameras. It is recommended that chain link fencing be constructed around the entire airport. This fencing should be 6-foot chain link in the terminal area and 8-foot chain link in all other areas. The 8-foot chain link is desirable to discourage deer from jumping the fence. All access gates should be coded. With the new terminal building, doors that have access to the apron should be alarmed and security cameras installed at critical areas within the terminal, on the apron, and at the access gates.

10-10 Deviation From Standards

The location of a number of facilities and existing land masses at MMH deviate from standards as set forth in F.A.A. Advisory Circular 150/5300-13A. The listing of these deviations is included on Sheet No. 4, Non-Standard Condition Tables, of the Airport Layout Plan. Many of the deviations from standards can be corrected as soon as funding becomes available. These are listed separately under the table entitled, “ARC B III Non-Standard Conditions – AC 150/5300-13A, To be Corrected as Funding Becomes Available.” There is also a series of deviations from standards that from an economical, environmental, and land use standpoint cannot readily be corrected. These are listed under the table entitled “ARC B III Non-Standard Conditions – AC 150/5300-13A, FAA Modification to

Standards Requested". In this table the deviation to standard is listed and a column is provided for F.A.A. action and date.

There are also some obstructions to the FAR Part 77 surfaces, which are identified on Sheets No. 8 and 9 of the Airport Layout Plans, Airport Airspace Drawings. These obstructions include the following:

TABLE NO. 10-1
OBSTRUCTIONS TO FAR PART 77 SURFACES

Item No.	Description	Surfaces Penetrated
1	Doe Ridge	Transitional Surface Horizontal Surface
2	Mountains to the South, West and Northwest of the Airport	Horizontal Surface Conical Surface
3	Power Pole and Telephone Pole South of Runway along Highway 395 ROW Line – Both poles have obstruction lights on top	Transitional Surfaces: Power Pole – 22 ft. Telephone Pole – 13 ft.
4	East Hangars	Transitional Surfaces by up to 17 feet

The Doe Ridge obstruction will be located behind the proposed line of obstruction lights. The power pole and telephone pole south of the runway have obstruction lights on them. The mountains to the southwest and northwest of the airport only penetrate the outer edge of the horizontal surface and the conical surface. The East Hangars will be located behind the proposed line of obstruction lights.

Safety of operations at this airport is of prime importance. Due to the obstructions, high approach minimums have been established. These minimums are visibility 1¼ mile, ceiling 1,300 feet. These high minimums allow the pilot to visually identify any deviations from standards that exist as he/she is landing on or taking off from the runway. If necessary, to approve deviations to standards in the form of modification to standards the Airport would accept specific operational procedures during the operation of large C III aircraft on the runway.

The major deviations from standards are the penetration of the runway object free area and taxiway object free area by the hangar buildings on the north side of the runway and soil, highway right-of-way fence, and traffic on sections of Highway 395 that penetrate the outer edges of the Runway OFA and the threshold siting distance plane on the south side of the runway. Depending on the size of aircraft operating, these deviations from standards can be safely accommodated as required by maintaining the high minimums of ceiling and visibility and/or instituting operational constraints. Operational constraints will

not have a significant effect on aircraft operations or cause significant delays because the frequency of operation at the airport is not large enough to cause significant delays. Most of the other deviations from standards are caused by objects located in the outer edges of the runway and taxiway object free areas. Doe Ridge and several of the hangars penetrate the runway and taxiway object free area and/or Part 77 surfaces on the north side of the airport. It is recommended that a line of obstruction lights be constructed parallel to the runway and located 390 feet from the centerline of the runway to clearly identify the inner edge of these obstructions. Airport Layout Plan Sheet No. 4 identifies the deviations from standards.

MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE

Appendix A
Letters of Commitment

Mammoth.

April 3, 2012

To Whom It May Concern,

Mammoth Mountain has been a leader and avid supporter of the Town of Mammoth Lakes' initiative to build an air service program at Mammoth Yosemite Airport (MMH). Over the years, we have consistently and continuously provided significant financial support by, among other things, funding airline subsidies and sharing the substantial costs incurred through numerous government approval processes. We have also provided extensive executive support from leaders of our company, and have invested in outside consulting expertise to help guide our efforts. All of this support has been provided because we are strongly committed to the growth of air service to MMH as a core part of our business growth strategy.

The growth in air service at MMH, and the development of the appropriate infrastructure to support it, is a key business strategy that Mammoth Mountain intends to continue to pursue in partnership with local, state and federal government. As a business, and as a key community stakeholder, we intend to continue to play an active supporting role in the growth of air service into MMH on a year round basis by providing both financial and human resource support to these very important efforts to expand air service to our community.

Please feel free to contact me at 76-934-0711 with any questions you may have.

Sincerely yours,

Howard E. Pickett
Chief Marketing Officer
MMSA, LLC

Cc: Jim Smith, Vice President, Development, MMSA, LLC
John Urdi, Executive Director, Mammoth Lakes Tourism
Dave Wilbrecht, Town Manager, Town of Mammoth Lakes

Horizon Air

April 3, 2012

Mr. William Manning
Airport and Transportation Director, Mammoth Yosemite Airport
1300 Airport Road
Mammoth Lakes, CA 93546
Subject: Airport designation from B-III to C-III

Dear Mr. Manning,
Mammoth Yosemite airport (KMMH) currently has an airport reference code of B-III. In order to better facilitate CFR 14 Part 121 scheduled passenger service, Horizon Air requests that the reference code for the Mammoth Yosemite airport be changed to C-III.

Thank you for your consideration.

Sincerely,

Perry Solmonson
Director of Flight Operations and Training

8070 N.E. Airtrans Way / Portland, Oregon 97218 / 503-384-4000

SkyWest AIRLINES

April 24, 2012

Mr. David Wilbrecht, Town Manager
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Subject: Airport Classification ARC C-III Designation

Dear Mr. Wilbrecht:

SkyWest Airlines, providing service as United Express, is interested in your future plans to improve airport facilities and services. Your work on the Airport Layout Plan and future terminal are important to enhancing our air service at MMH. As part of your efforts, we strongly urge you to seek obtaining an ARC C-III designation airport from the Federal Aviation Administration.

We look forward to continuing our safe and successful air service at MMH.

Sincerely,

Brent Wilson (jij)

Brent Wilson
Manager Aircraft Services
SkyWest Airlines
O: 435.668.1964
brent.wilson@skywest.com

Copy: Mammoth Lakes Town Council
William Manning, Airport and Transportation Director
Mark Wardlaw, Community Development Director
Mammoth Mountain Ski Area

Alaska Air Group, Inc.

May 7, 2012

Mr. David Wilbrecht, Town Manager
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

Subject: Airport Classification ARC C-III Designation

Alaska Airlines has had a great experience providing air service to the Mammoth Yosemite Airport (MMH). We remain committed to working with the Town of Mammoth Lakes, Mammoth Mountain Ski Area, and the community through public and private partnerships in the future to maintaining operations at MMH.

We are aware and keenly interested in your future plans to improve airport facilities and services. Your work on the Airport Layout Plan and future terminal are important to us at MMH. As part of these efforts, we support obtaining an ARC-III designation airport from the Federal Aviation Administration. As you know, this designation will make reduce special procedures for us to operate at MMH.

We look forward to continuing our safe and successful air service at MMH.

Sincerely,

M. McQueen

Mike McQueen
Alaska Air Group
Representing Alaska Airlines and Horizon Air
Director, Schedule Planning

Copy: Mammoth Lakes Town Council
Mr. William Manning, Airport and Transportation Director
Mr. Mark Wardlaw, Community Development Director
Mammoth Mountain Ski Area

MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE

Appendix B
Alpine Resort Air Service Overview
By Kent Myers

Alpine Resort Air Service Overview

Most resort communities involved in air service have developed a funding vehicle to increase the growth opportunity and cover the shortfalls. The majority of the models are funded by both the public and private sectors, with a "skin in the game" concept. All of the air programs below have been in place for a minimum of 15 years; the funding vehicles have evolved based on the needs, business culture of the communities, role of the ski companies and success levels of the programs. Most of the communities are reluctant disclose all of the funding details, the funding vehicles change from time to time and none of the information should be published. Each airport and community has different challenges because of passenger demand, summer heat, altitude, runway length, seasonal service and obstructions. The challenges dictate the airlines to use different types of aircraft and in some cases have weight restrictions on departing flights.

1. Yampa Valley Regional Airport (HDN) – Steamboat Springs, CO
    a. General overview
        i. 2011-12 season - 7 Non-stop winter markets - DFW, ORD, ATL, DEN, IAH, MSP and EWR
        ii. 160,000 Available winter seats
        iii. 1 Non-stop summer markets (2 airlines) - DEN
        iv. 20,000 Available summer seats
        v. 2011 FY Enplanements ending in September were 109,000
        vi. Moffat and Routt Counties 2010 population 37,300
    b. Funding and Marketing
        i. Local program – only in the Steamboat Spring
        ii. Primary focus is winter and summer
        iii. Private/Public Alliance – Marketing District – In November there was a .25% general sales tax referendum past with an annual revenue target of $1.3 mm for shortfall support plus the ski corp. contribution.
        iv. Payout is TBD

2. Montrose County Regional Airport (MTJ) and Telluride (TEX) Airports – Telluride, CO
    a. General overview
        i. 2011-12 season - 7 Non-stop winter markets - DFW, ORD, IAH, ATL, DEN, EWR and LAX
        ii. 88,000 Available winter seats
        iii. 4 Non-stop summer markets - DEN, IAH and DFW
        iv. 41,000 Available summer seats
        v. 2011 FY Enplanements (MJT and TEX) ending in September were 104,000
        vi. Montrose and San Miguel Counties 2010 population 48,600
    b. Funding and Marketing

i. Regional program includes the City of Montrose (approximately 20%) – The County of Montrose owns the airport.
ii. Private/Public Alliance – Telluride/Montrose Air Organization via the Town of Telluride
iii. Primary focus is winter, summer and fall service
iv. Ski Corporation contributes approximately 20% of the total fund
v. Prorated payout
vi. 2% sales tax on lodging and restaurants only in the Town of Telluride and Mountain Village. The City of Montrose contributes $200K and private funding from companies and organizations outside of the hospitality industry
vii. Total shortfall budget is $1.8mm
viii. Ski corporation and hospitality industry integrates the air message into all marketing programs. There is a separate air budget but it is not public.

3. Gunnison/Crested Butte Regional Airport (GUC) – Crested Butte, CO
    a. General overview
        i. 3 Non-stop winter markets - DEN, DFW and IAH
        ii. 36,500 Available winter seats
        iii. 1 Non-stop summer market - DEN
        iv. 12,500 Available seats
        v. 2011 FY Enplanements ending in August were 36,000
        vi. Gunnison County 2010 population 15,300
    b. Funding and Marketing
        i. County wide program
        ii. Public organization – Rural Transportation Authority (RTA) but the ski company volunteers financial and marketing support
        iii. Elected officials make up the RTA Board
        iv. Primary focus is winter service
        v. Tiered payout
        vi. 0.6% sales tax in the resort communities and 0.03% sales tax in the Town of Gunnison
        vii. Total shortfall budget is $1.4mm with ski corp. contributing 50%
        viii. Tourism Association offers marketing support for the air service program with approximately $600K but the amount varies from year to year
        ix. Ski corporation and hospitality industry integrates the air message into all marketing programs. The ski corp. has a separate air budget but it is not public

4. Eagle County Regional Airport (EGE) – Vail/Beaver Creek, CO
    a. General overview – summer

i. 3 Non-stop summer markets – DFW and DEN
ii. 51,000 Available summer seats
iii. 2011 FY Enplanements ending in August were 192,000
iv. Eagle County 2010 population 52,200
v. $400K to $600K budget for shortfalls

b. Funding and marketing – summer/fall
i. EGE Air Alliance - local program
ii. Private/Public Alliance – non profit organization
iii. 5 member BOD – no elected officials
iv. Tiered payout
v. 100% of the marketing support comes from the private sector membership

c. General overview – winter
i. 11 Non-stop winter markets
ii. DFW, ORD, IAH, ATL, DEN, EWR, MSP, LGA, JFK, MIA and LAX
iii. 234,000 Available winter seats

d. Funding and marketing - winter
i. Privately funded via Vail Resorts
ii. 10 year annual payout averaged through 2010-11 is $1,075,000
iii. 5 year annual payout averaged through 2010-11 is $312,000
iv. 100% of the marketing is managed and funded by Vail Resorts

5. Jackson Hole Regional Airport (JAC) – Jackson Hole, WY
a. General overview
i. 6 Non-stop winter markets
ii. DFW, ORD, ATL, SLC, LAX and DEN
iii. 130,000 Available winter seats
iv. 5 Non-stop summer markets
v. DFW, ORD, MSP, SLC and DEN
vi. 170,000 Available summer seats

b. Funding and marketing
i. Regional program includes Grand Targhee Resort – The executive director primary responsibility is fund raising, the ski corporation negotiates the airline contracts
ii. Winter only program – leverage the summer demand to support winter
iii. Over 150 businesses and organizations are “members” - Ski pass benefits
iv. Private/public Alliance - Volunteer
v. No dedicated tax revenues support the program but there public money from the general fund
vi. $1.8MM annual budget
vii. Ski corporation and hospitality industry integrates the air message into all marketing programs. There is a separate air budget but it is not public

6. Aspen Pitkin County Sardy Field (ASE) – Aspen, CO
    a. General overview
        i. 6 Non-stop winter markets – DFW, LAX, ORD, DEN, SFO and IAH
        ii. 225,000 Available inbound seats
        iii. 1 Non-stop summer market - DEN
        iv. 100,000 Available inbound seats
        v. 2011 FY Enplanements ending in August were 210,000
        vi. Pitkin County 2010 population 17,100
    b. Funding and marketing
        i. The focus is primarily on winter service due to altitude and air density challenges in the summer
        ii. Privately funded via non-profit community organizations
        iii. Primary focus is winter and summer
        iv. Local program limited to the Aspen and Snowmass business community
        v. All the air service support funded via the Aspen/Snowmass Central Reservations up until 2010 included marketing support. That changed this in the summer 2011 with the announcement of AA service from DFW and LAX. The Visit Aspen/Snowmass Reservations developed an $800K proposal to persuade AA to service the routes.

MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE

Appendix C
Alternate Airport Site Development Study

MAMMOTH YOSEMITE AIRPORT
AIRPORT LAYOUT PLAN UPDATE NARRATIVE
TOWN OF MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

APPENDIX C – ALTERNATE AIRPORT SITE DEVELOPMENT STUDY

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APPENDIX C. ALTERNATE AIRPORT SITE DEVELOPMENT STUDY

C-1 Purpose and Need

MMH is located in the eastern slopes of the Sierra-Nevada Mountain Range. It is difficult to develop an airport in this region that meets all F.A.A. standards due to the existence of mountains and ridges in this area. The existing airport is located in a valley between the high mountain ridges to the south and Doe Ridge to the north. Further to the north another range of high mountains exists. The original airport was designed as a general aviation airport and meets most F.A.A. requirements for an Airport Reference Code (ARC) B III category airport. Airlines are now serving the airport with Bombardier Q400 aircraft and the CRJ 700 aircraft and it is proposed to upgrade the airport to an ARC C III.

It is anticipated that aircraft of the Boeing 737 class will be utilized in the near future for additional service at the airport. It is forecast that in five years the annual enplaned passenger total will reach 56,000, which is constrained largely by terminal capacity. Major airlines are currently discussing with the MMSA and the Town of Mammoth Lakes the possibility of providing service using aircraft up to the Boeing 737 class.

The airport has extensive itinerant operations in which aircraft fly into the Mammoth area in the winter for skiing and in the summer for mountain recreation activities. Aircraft using this facility range from the small single-engine propeller-driven aircraft to the large business jets up to the Grumman Gulfstream G V. Many of these business jets are classified as ARC C III. The airport occasionally experiences enough aircraft parked at the airport to fill the entire tie down apron.

MMH is located at an elevation of 7,135 feet. Aircraft operations at this altitude require long runways and gentle approaches. It is proposed to design the airport as an ARC C III airport so as to meet all existing and possible future requirements and to provide the runway width and length to accommodate these aircraft at the high altitudes.

The major specific areas in which the existing airport does not meet F.A.A. standards for an ARC C III include:

- Runway/taxiway centerline spacing is 300 feet; whereas, 400 feet is recommended Runway Shoulder Width is inadequate
- Taxiway width is 50 feet whereas 54 feet is required to provide 10-foot taxiway edge safety margin for the Q400 aircraft
- Taxiway shoulder width is inadequate
- Runway object free areas are encroached upon by the ground and fence at the northern portion of Highway 395 right of way and the East Hangars
- Taxiway object free areas are encroached upon by existing hangars

- ✈ Portions of Doe Ridge penetrate the runway object free zone as defined in F.A.A. Advisory Circular 150/5300-13 and the FAR Part 77 7:1 transitional areas and horizontal surface areas
- ✈ Mountains to the southwest and northwest penetrate the Part 77 horizontal surface and conical surface.

Reconstruction of the existing airport to meet the most critical requirements of F.A.A. would require:

- ✈ Moving the runway centerline 37 feet to the north such that the runway object free area is outside of the highway right-of-way and fence
- ✈ Constructing widened shoulders on the runway
- ✈ Abandoning the existing parallel taxiway and constructing a new taxiway 400 feet from the new runway location
- ✈ Removing and replacing all of the existing hangars, a total of 134 units
- ✈ Removing and replacing all administrative buildings, FBO buildings, and FBO apron
- ✈ Relocating the access road and parking lots.

Doe Ridge, as it currently exists with relation to the existing runway as shown in this study, penetrates the Part 77 transitional 7:1 surfaces and horizontal surface. Significant excavation will be required from Doe Ridge to modify the shape of Doe Ridge such that it will not penetrate these surfaces. In order to show a visual concept of the effect of Doe Ridge, a series of photographs were taken from the east side of Doe Ridge looking west and from the west side of Doe Ridge looking east.

Plates No. C-1 through C-4 are a West View of Doe Ridge showing the following:

- On Plate No. C-1 a photograph of the west view of Doe Ridge shows as lines those portions of the ridge that penetrate the Part 77 7:1 transitional surface, the Part 77 horizontal surface, and the OFZ surface 6:1 slope. F.A.A. Advisory Circular 150/5300-13 specifies a minimum object free zone (OFZ) on both sides of a runway. For MMH this OFZ begins 400 feet from the centerline of the runway, rises vertically 28 feet, and then extends at a 6:1 slope. The OFZ slope is above the Part 77 7:1 transitional surface, as shown on this plate.
- On Plate No. C-2 the westerly view photograph of Doe Ridge has been photo- shopped to show the appearance of Doe Ridge after the OFZ surface is removed.
- On Plate No. C-3 the westerly view photograph of Doe Ridge has been photo- shopped to show the appearance of Doe Ridge after the excavation to meet Part 77 transitional surface - 7:1 only.

- On Plate No. C-4 a photo of the westerly view has been photo-shopped to show the appearance of Doe Ridge after excavating to meet Part 77 7:1 transitional surfaces and horizontal surface.

Plates No. C-5 through C-8 are the East View of Doe Ridge showing the following:

- Plate No. C-5 is a photo from the west looking east that shows Doe Ridge with the Part 77 and OFZ surfaces designated.
- Plate No. C-6 is a photo of an easterly view of Doe Ridge that has been photo-shopped to show the appearance of Doe Ridge after excavation has been made to meet the OFZ surface 6:1 only.
- Plate No. C-7 is an easterly view photo of Doe Ridge showing the appearance of Doe Ridge after excavation has been made to meet Part 77 transitional surface - 7:1 only.
- Plate No. C-8 is an easterly view of Doe Ridge where the photo has been photo-shopped to show the appearance of Doe Ridge after the excavation has been completed to meet Part 77 transitional surface 7:1 and horizontal surface.

In order to indicate the extent of excavation required on Doe Ridge to meet various requirements of F.A.A., Plate No. C-9 was prepared which shows the area of Doe Ridge that would require excavation to meet the OFZ surface - 6:1 only requirements. Plate No C-10 indicates the area of Doe Ridge that would be affected to meet the Part 77 transitional surface - 7:1 only. Plate No. C-11 shows the area of Doe Ridge that would be affected to meet all requirements of Part 77 transitional surfaces - 7:1 and horizontal surface.

Extensive modifications of Doe Ridge would be required to meet F.A.A. requirements for obstruction clearance. To meet the requirements for object free zone as defined in F.A.A. Advisory Circular 150/5300-13, it would be necessary to remove approximately 3 million cubic yards of material from the south end of Doe Ridge. To meet the Part 77 7:1 transitional surface requirements, it would be necessary to remove approximately 9 million cubic yards of material from the south end of Doe Ridge. To meet Part 77 horizontal surface requirements, it would be necessary to remove an additional 20 million cubic yards from the top of Doe Ridge for a total of 29 million cubic yards.

In cases where it is not practical to remove major obstructions F.A.A. allows the use of obstruction lights to identify the line behind which obstructions occur. If the existing airport is expanded, it is proposed to install a line of flashing red obstruction lights along the south edge of Doe Ridge to clearly identify the edge of the area that is considered to be an obstruction. The east hangar units and some of the west hangar units are also considered obstructions. If the existing

airport is expanded, the row of obstruction lights will extend along the south face of the hangars.

Whenever a major development, as proposed for MMH, is considered and there are significant constraints at the existing airport, it is important to evaluate the benefits and costs of expanding the existing airport, reconfiguring the existing airport, or constructing a totally new airport at an alternate site. This evaluation has been prepared and a development study has been conducted for expanding the existing airport, reconfiguring the existing airport, and for developing a totally new airport. Six alternate reconfigurated layouts or new sites were evaluated. The results of this study are summarized in this chapter of the Airport Layout Plan Narrative.

C-2 Design Requirements

The basic design requirements for the Mammoth Yosemite Airport have been determined and are listed in Table No. C-1.

For comparison purposes, the F.A.A. design standards for the ARC C III have been summarized and are included in Table No. C-2.

TABLE NO. C-1
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
DESIGN REQUIREMENTS

Airport Reference Code (ARC)	C III
Design Aircraft	Boeing 737
Design Approach	Non Precision Instrument No Vertical Guidance
Approach Visibility	Greater than ¾ mile
Enplaned Passengers	5 year - 60,000 20 year - 135,000
Airline Parking Apron to Accommodate:	Initial - 3 – B 737 Ultimate - 6 – B 737
RPZ	500’ x 1,010’ x 1,700’ – 34:1 Approach Slope
Departure Slope (Threshold Siting)	Instrument 40:1 to 10,200 feet
Runway Length	9,000 feet
Access Road	2 – 12 foot lanes + 8 foot shoulders
Obstruction Removal	All obstructions removed that penetrate Part 77 primary surfaces, runway protection zone, and 7:1 transitional surfaces. Obstructions not removed that penetrate horizontal surface or conical surface.
Existing Hangars	No new or relocated hangars required for Site No. 6, but area set aside for future hangars.
Land Acquisition Constraints	Same at each site – Forest Service and/or LADWP ownership.

TABLE NO. C-2
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
F.A.A. DESIGN STANDARDS – ADVISORY CIRCULAR 150/5300-13

Airport Reference Code (ARC)	C III
Approach Visibility – Statute Mile	> 3/4
Primary Surface Width (feet)	500
Runway Centerline to Taxiway Centerline (feet)	400
Runway Width (feet)	100
Runway Shoulder Width (feet)	20
Runway Blast Pad Width (feet)	140
Runway Blast Pad Length (feet)	200
Runway Safety Area Width (feet)	500
Runway Safety Area Length Prior to Landing Threshold (feet)	600
Runway Safety Area Length Beyond R/W End (feet)	1,000
Runway Object Free Area Width (feet)	800
Runway Object Free Area Length Beyond R/W End (feet)	1,000
Runway Obstacle Free Zone Width (feet)	400
Runway Instrument Departure Surface Slope	40:1
Taxiway Width (feet)	50
Taxiway Shoulder Width (feet)	20
Taxiway Safety Area Width (feet)	118
Taxiway Object Free Area Width (feet)	186

In the mountainous regions of the Mammoth Lakes area it is difficult to develop an airport that meets all F.A.A. requirements for obstruction clearance, provides unobstructed approach and departure paths, and is in a location that is readily accessible from the Town of Mammoth Lake and the ski area. The goal in this study is to evaluate the ability of each site considered to meet all F.A.A. requirements, to provide adequate access to the town and ski facilities, and to provide the best approach and departure paths and least obstacles to airplane operations.

C-3 Site Selection and Analysis

C-3.1 Basis of Selection

Factors that were considered in the selection analysis of the Alternate Airport are as follows:

- Disturbance to existing airport during construction
- Accommodate forecast traffic
- Reserve space for unanticipated growth beyond forecast
- Conform to F.A.A. standards as much as possible
- Minimize obstructions to flight operations
- Distance and access to Town of Mammoth Lakes and ski areas
- Costs

- ✈ Environmental constraints

C-3.2 Sites Selected for the Study

Six different sites have been selected for this study and are designated as Sites 1 through 6. These sites are described below:

Site No. 1 – Site No. 1 uses the existing runway location and alignment. The centerline of the runway is moved 37 feet to the north such that the highway right of way and fence are outside of the object free area and the runway is extended 2,000 feet to the west. Site No. 1 is hereinafter referred to as, "Existing Runway Extended 2,000 ft. to the West."

Site No. 2 – Site No. 2 uses the existing runway location and alignment. The centerline of the runway is moved 37 feet to the north such that the highway right of way and fence are outside of the object free area and the runway is extended 2,000 feet to the east. With this extension Benton Crossing Road is relocated. Site No. 2 is hereinafter referred to as, "Existing Runway Extended 2,000 ft. to the East."

Site No. 3 – The total runway and airport is moved 7,000 feet to the west so the 40:1 departure surface clears Doe Ridge. The centerline of the runway is located parallel to Highway 395 and 400 feet north of the north highway right-of-way line. Site No. 3 is hereinafter referred to as, "Relocate Airport 7,000 ft. to the West."

Site No. 4 – For Site No. 4 Highway 395 is relocated to the south side of the valley, the runway, existing electrical power and telephone lines, and other airport facilities are relocated to the south such that they parallel the relocated highway, and the runway centerline is located 400 feet north of the north right-of-way line for the relocated highway. The east end of the runway is located immediately south of the east end of the existing runway and the runway is extended 2,000 feet to the west. Site No. 4 is hereinafter referred to as, "Move Runway 750 to 1,550 ft. South and Extend 2,000 ft. to the West."

At Sites No. 4 and 5 it would be possible to leave the existing hangars, FBO, and general aviation apron as they now exist and provide extended taxiway access to the new runway. This possibility has been analyzed for Site No. 4. Site No. 4A considers entirely new airport facilities where all general aviation facilities are relocated convenient to the new runway. Site No. 4B considers the condition where all existing general aviation facilities would remain where they currently exist. The same options are available for Site No. 5 but no special detailed study was prepared since the same facility orientation and cost determined for Site No. 4 would apply for Site No. 5.

Site No. 5 – For Site No. 5 Highway 395 is relocated to the south side of the valley, the runway, existing electrical power and telephone lines, and other airport facilities are relocated to the south such that they parallel the relocated highway, and the runway centerline is located 400 feet north of the north right-of-way lien for the relocated highway. The west end of the runway is located immediately south of the west end of the existing runway and the runway is extended 2,000 feet to the east. With this extension Benton Crossing Road is relocated. Site No. 5 is hereinafter referred to as, "Move Runway 750 to 1,550 ft. South and Extend 2,000 ft. to the East."

Site No 6 – Site No. 6 is located on an entirely new site, which is located approximately 7 miles to the northeast of the existing airport on a large open area. This site is located immediately north of Lake Crowley and is adjacent to the northern portion of Benton Crossing Road. Site No. 6 is hereinafter referred to as, "Relocate Airport 7 miles to Northeast."

The location of the runway for each of these sites is indicated on the U.S. quad sheet as shown on Plate No. C-12.

C-3.3 Site Analysis

A description of each site and an analysis of the constraints, advantages, and benefits of each site are included in this section.

C-3.3.1 Site No. 1

On Site No. 1 the runway centerline is moved 37 feet to the north of the existing runway centerline so that the highway right of way and fence are outside the runway object free area. The parallel taxiway is located with 400-foot spacing between runway centerline and taxiway centerline. All of the existing hangars are removed and relocated. The existing FBO operations and access road and general aviation apron are relocated. The drawings depicting Site No. 1 are included in this report as follows:

- Plate No. C-13 – Alternate Airport - Airport Layout Plan – Site #1 – This drawing shows the details of the proposed development
- Plate No. C-14 - Airport Airspace Drawing showing the Part 77 surfaces and all obstructions to those surfaces
- Plate No. C-15 – Airport Airspace Photograph – The same Part 77 surfaces and obstructions as shown on Plate No. C-14 are included on a Google Earth aerial photograph.

- ✈ Plate No. C-16 – Runway Profile - A proposed profile for the new runway is shown.
- ✈ Plate No. C-17 – Approach Profiles - The approach profiles for the runway are shown. These profiles include the 34:1 approach, the Part 77 approach surfaces, the 40:1 departure plane, and a 3º approach surface.

The layout of the airport meets F.A.A. requirements for an ARC C III airport and satisfies the requirements for airline operation, aircraft storage facilities, aircraft apron, FBO, access roads, and other facilities. The approach surface drawings show significant areas that have land obstructions that are above the Part 77 control surfaces. Doe Ridge violates the 7:1 transitional surface and the horizontal surface. The mountains to the south, west and northwest violate the horizontal surface requirements and the conical surface requirements. A summary showing the existing obstructions at Site 1 is included in Table No. C-3.

TABLE NO. C-3
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY
SITE NO. 1 – EXISTING RUNWAY EXTENDED 2,000 FT. TO THE WEST

Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	Doe Ridge
Part 77 – Horizontal Surface	Doe Ridge, Mountains to South, West & Northwest of Runway
Part 77 – Conical Surface	Mountains to South, West, & Northwest of Runway
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	Mountains at the West End of the Departure Surface
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None

Remarks - Site 1 Runway Location:
- Move existing runway centerline 37’ to north of existing runway centerline such that Runway OFA is outside of highway right of way.
- Extend runway 2,000 feet to the west

Plate No. C-16 shows the runway profile for this site. Ideally, sight distances on an airport of this type provide clear sight distance for the full length of the runway. However, with a parallel taxiway half runway

clear sight distance is acceptable. At this site the airport only has half runway clear sight distance.

The approach profiles depicted on Plate No. C-17 show that there are no obstructions to the Part 77 surfaces, the 40:1 departure surfaces, or a 3º approach surface.

With this site access to the highway, to the town and to the ski area is good and access to the terminal, parking lot, and general aviation facilities is also good. The access road runs between the terminal and the future main parking lot, which is satisfactory in this instance since the access road only serves the airport and related activities.

C-3.3.2 Site No. 2

Site No. 2 is the same as Site No. 1 except that the 2,000-foot extension is to the east of the existing runway instead of to the west. All airfield facilities, spacing, and location are the same as in Site No. 1. The extension to the east requires relocation of the Benton Crossing Road intersection with Highway 395 and the relocation of a portion of Benton Crossing Road. This relocation requires the crossing of an existing creek in this area. Significant fill ranging up to 24 feet deep is required for the east portion of the extension and the existing creek will either have to be piped through the runway protection zone or relocated around it. The drawings depicting Site No. 2 are included in this report as follows:

- Plate No. C-18 – Alternate Airport - Airport Layout Plan – Site #2
- Plate No. C-19 - Airport Airspace Drawing showing the Part 77 surfaces and all obstructions to those surfaces
- Plate No. C-20 – Airport Airspace Photograph – The same Part 77 surfaces and obstructions as shown on Plate No. 23 are included on a Google Earth aerial photograph.
- Plate No. C-21 – Runway Profile
- Plate No. C-22 – Approach Profiles

A summary showing the existing obstructions remaining at Site 2 is included in Table No. C-4.

With this plan Doe Ridge is still an obstruction to the Part 77 7:1 transitional surfaces and the horizontal surface. The mountains to the south, west and northwest are still obstructions as defined by Part 77, although the amount of land that is an obstruction in the west and the northwest is less than shown in Site No. 1.

The overall approaches to the airport from the west are somewhat better than for Site No. 1 since the threshold is further east. The runway clear sight distance is full length.

With this site access to the highway, to the town and to the ski area is good and access to the terminal, parking lot, and general aviation facilities is also good. The access road runs between the terminal and the future main parking lot, which is satisfactory in this instance since the access road only serves the airport and related activities.

TABLE NO. C-4
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY
SITE NO. 2 – EXISTING RUNWAY EXTENDED 2,000 FT. TO THE EAST

Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	Doe Ridge
Part 77 – Horizontal Surface	Doe Ridge, Mountains to South & Northwest of Runway
Part 77 – Conical Surface	Mountains to South, West, & Northwest of Runway
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	None
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None

Remarks - Site 2 Runway Location:
- Move existing runway centerline 37' to north of existing runway centerline such that Runway OFA is outside of highway right of way.
- Extend runway 2,000 feet to the east

C-3.3.3 Site No. 3

On Site No. 3 the runway is moved 7,000 feet to the west but is still located parallel to and 400 feet north of the north right-of-way line and fence of existing Highway 395. The existing obstructions at this site are shown on Table No. C-5. The drawings depicting Site No. 3 are included in this report as follows:

- ✈ Plate No. C-23 - Airport Airspace Drawing showing the Part 77 surfaces and all obstructions to those surfaces

- ✈ Plate No. C-24 – Airport Airspace Photograph – The same Part 77 surfaces and obstructions as shown on Plate No. C-23 are included on a Google Earth aerial photograph.

With this site location Doe Ridge is still an obstruction to the horizontal surface requirements, the mountains to the west and northwest are much more significant obstructions to aircraft operations, and approaches from the west are inhibited by terrain. The southern portion of Doe Ridge is also within the 40:1 departure plane on the east end of the runway.

The terrain in the area of Site No. 3 makes it impractical to give further consideration to this site.

TABLE NO. C-5
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY
SITE NO. 3 – RELOCATE AIRPORT 7,000 FT. TO THE WEST

Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	Doe Ridge, Mountains to the West
Part 77 – Horizontal Surface	Doe Ridge, Mountains to South, West, Northwest, and North
Part 77 – Conical Surface	Mountains to South, West, Northwest, and North
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	Doe Ridge, Mountains to the West
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None

Remarks - Site 3 Runway Location:

- Move existing runway centerline 37' to north of existing runway centerline such that Runway OFA is outside of highway right of way.
- Move runway 7,000 feet west of existing runway and extend it 2,000 feet to the west.

C-3.3.4 Site No. 4

On Site No. 4 the runway is relocated to the south of the existing runway and reoriented slightly so that the Part 77 7:1 transitional surfaces are not violated by either the mountains to the south or Doe Ridge. With this plan Highway 395 and the existing power and telephone lines must be relocated to the south of the new runway. With this plan the existing hangars and part of the existing aircraft tie

down apron are not impacted, but will be located a significant distance from the runway, making taxiway access awkward.

In order to analyze the impact of leaving the general aviation facilities (hangars, FBO, and apron) at their current location and as an alternate relocating the general aviation facilities so they will have convenient access to the runway, two different airfield layouts were analyzed:

Site 4A – In Site 4A the existing general aviation facilities are abandoned and new facilities constructed that are convenient to the runway. Plate No. C-25 shows the general layout of the airport with all general aviation facilities relocated.

Site 4B – In Site 4B the existing general aviation facilities are left in place and new taxiways are constructed to provide aircraft access to the runway. Plate No. C-26 shows the general layout of the airport with all existing general aviation facilities remaining at the existing location.

The drawings depicting Site No. 4 are included in this report as follows:

- Plate No. C-25 – Alternate Airport - Airport Layout Plan – Site #4A – Relocate Existing Facilities – The first Airport Layout Plan for Site No. 4 has been prepared to show the layout whereby the existing airfield facilities have been abandoned and replaced with new facilities conveniently located to the new runway. This plan is designated as Site #4A.
- Plate No. C-26 – Alternate Airport – Airport Layout Plan – Site #4B – Maintain Existing Facilities – The second airport layout plan for Site #4 has been prepared to show the layout whereby the existing hangars and tie down aprons are maintained. With this plan the access road is revised from that shown for Site #4A. This plan is designated as Site #4B.
- Plate No. C-27 - Airport Airspace Drawing – Same for both Sites #4A and #4B
- Plate No. C-28 – Airport Airspace Photograph - Same for both Sites #4A and #4B
- Plate No. C-29 – Runway Profile – Same for both Sites #4A and #4B
- Plate No. C-30 – Approach Profiles – Same for both Sites #4A and #4B.

Either Site #4A or Site #4B would adequately serve both the airline operations and the general aviation operations. Site #4A is a cleaner and more logical layout, but is somewhat more expensive than Site #4B since it would be necessary to relocate hangars and FBO facilities with the Site #4A plan.

Access to the airport is adequate with both plans but is smoother and easier for the public to navigate with the Site #4A layout.

The Airport Airspace Drawing and Photograph as shown on Plates C-27 and C-28 identify land areas that are indicated as obstructions to the Part 77 surfaces. A summarization of existing obstructions is shown in Table No. C-6.

With this plan the 7:1 transitional surfaces are not penetrated by any obstruction. Doe Ridge and the mountains to the south, west, and northwest are shown as obstructions penetrating the Part 77 horizontal surface and/or conical surfaces.

The approaches from the west are improved over the Sites #1 and #2 layouts, and the approach from the east is also improved.

The Runway Profile provides a full runway length clear sight distance. There are no obstructions in the approach or departure plane.

With this plan approximately 5 miles of Highway 395 must be relocated, but access to the airport is good from relocated Highway 395 and access to the town and the ski areas is also good.

TABLE NO. C-6
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY – SITE NO. 4
MOVE RUNWAY 750 TO 1,550 FT. SOUTH AND EXTEND 2,000 FT. TO THE WEST

Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	None
Part 77 – Horizontal Surface	Doe Ridge, Mountains to South, West, & Northwest
Part 77 – Conical Surface	Mountains to South, West, and Northwest
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	None
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None

TABLE NO. C-6
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY – SITE NO. 4
(CONTINUED)

Remarks - Site 4 Runway Location:

- Relocate Highway 395 to the south
- Move runway south from existing location to keep Doe Ridge out of the 7:1 transitional surfaces
- Revise orientation of runway
- Extend runway 2,000 feet to the west

C-3.3.5 Site No. 5

The airport layout for Site No. 5 is the same as for Site No. 4A except that the runway is moved 2,000 feet to the east and the east portion of the service road is modified. With this plan the intersection of Benton Crossing Road with Highway 395 is moved to the east, and the creek crossing of the runway extended safety area and runway protection zone must be accommodated in a culvert or the stream relocated around the end of the RPZ. Portions of Benton Crossing Road are relocated in this plan. The drawings depicting Site No. 5 are included in this report as follows:

- ✈ Plate No. C-31 – Alternate Airport - Airport Layout Plan – Site #5
- ✈ Plate No. C-32 - Airport Airspace Drawing
- ✈ Plate No. C-33 – Airport Airspace Photograph
- ✈ Plate No. C-34 – Runway Profile
- ✈ Plate No. C-35 – Approach Profiles

A summarization of existing obstructions is shown in Table No. C-7.

TABLE NO. C-7 MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY EXISTING OBSTRUCTION STUDY – SITE NO. 5 MOVE RUNWAY 750 TO 1,550 FT. SOUTH AND EXTEND 2,000 FT. TO THE EAST	
Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	None
Part 77 – Horizontal Surface	Doe Ridge
Part 77 – Conical Surface	Mountains to South, West, and Northwest
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	None
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None
Remarks - Site 5 Runway Location: • Relocate Highway 395 to the south • Move runway south from existing location to keep Doe Ridge out of the 7:1 transitional surfaces • Revise orientation of runway • Extend runway 2,000 feet to the east	

In the study of this plan the new airport facilities are included, but it would be possible to maintain the existing hangars, FBO and aircraft parking apron as they currently exist and as shown for Site No. 4 on Airport Layout Plan Site #4B. A drawing showing this option has not been included.

Site No. 5 requires approximately 22 feet of fill at the east end of the runway.

With this site, as shown on Plates C-32 and C-33, there are no land obstructions to the 7:1 transitional surfaces. Doe Ridge and the mountains to the south penetrate the horizontal surface. The mountains to the south, west, and northwest penetrate the conical surface but to a lesser extent than for Site No. 4.

Approaches to and departures from the west are slightly better than for Site No. 4 since the threshold is moved 2,000 further to the east. Departures to and arrivals from the east are very good.

With this plan approximately 5 miles of Highway 395 must be relocated, but access to the airport is good from relocated Highway 395 and access to the town and the ski areas is also good.

C-3.3.6 Site No. 6

Site No. 6 is an entirely new airport located on a new site. This new site is located approximately 7 miles to the northeast of the existing airport in a fairly open area. The site is located immediately north of the northern end of Benton Crossing Road approximately a mile and a half northwest of Crowley Lake. The drawings depicting Site No. 6 are included in this report as follows:

- Plate No. C-36 – Alternate Airport - Airport Layout Plan – Site #6
- Plate No. C-37 - Airport Airspace Drawing
- Plate No. C-38 – Airport Airspace Photograph
- Plate No. C-39 – Runway Profile
- Plate No. C-40 – Approach Profiles

A summarization of existing obstructions is shown in Table No. C-8.

TABLE NO. C-8
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
EXISTING OBSTRUCTION STUDY
SITE NO. 6 – RELOCATE AIRPORT 7 MILES TO NORTHEAST

Part 77 – Primary Surfaces	None
Part 77 – 7:1 Transitional Surfaces	None
Part 77 – Horizontal Surface	Minor Sections at Northeast Edge
Part 77 – Conical Surface	Minor Sections to the Northeast
AC 150/5300-13 – 40:1 Instrument Departure Surfaces	None
Runway Safety Area (RSA)	None
Runway Object Free Area (OFA)	None
Taxiway Safety Area (TSA)	None
Taxiway Object Free Area (OFA)	None

Remarks - New airport site located 7 miles northeast of existing airport in open area northwest of Crowley Lake. Runway reoriented from the bearing of existing runway.

The basic layout of the airport for this site is the same as that for the other sites. With this plan it is not proposed to relocate any of the aircraft storage hangars. The existing airport could be left open for general aviation purposes. The airport layout provides good service and good access for aircraft and for vehicular traffic. The airport access road would be a stub road in from Benton Crossing Road.

The Airport Airspace drawings show that there are no obstructions to the Part 77 transitional surfaces, approach surfaces, or horizontal surface except for some minor obstructions in the northeast portion of the horizontal surface. There are also some minor obstructions within the conical surface north and northeast of the site.

Approaches from both the east and west and departures to the east and west are good and clear of obstructions.

The soils at this site are volcanic in nature, classified as pumice. These soils are loose and difficult to compact. In order to construct a long life pavement section in this area, it will be necessary to place a minimum of three feet of embankment materials under all pavement sections. These embankment materials must consist of stable soils that can be readily compacted. These soils should consist of rock blasted from the hillsides or decomposed granite taken from local quarries.

This site is an additional 8 or 9 miles travel distance from the town and ski resorts than the other sites. Seven miles of this travel will be on Benton Crossing Road, which is a lower standard road than Highway 395. Access to the town and ski resort is not as good from this site as it is from the other sites.

C-3.4 Preliminary Cost Analysis

Preliminary cost analyses have been conducted for all sites except Site No. 3. A summary of these costs is included in Table No. C-9. The cost summary shows preliminary estimates for the major airfield facilities at each site, including:

- Site Grading and Drainage
- Airfield Facilities
- Terminal Facilities
- Access Road
- Benton Crossing Road
- US Highway 395 Relocation
- Creek Crossing
- Utilities
- Relocate Power and Telephone Lines
- Hangar Relocation

- Doe Ridge Excavation
- Stabilization Embankment

Additional costs for contingencies, environmental studies, engineering design and project management, and administrative costs have been added to provide an indication of the relative cost of developing each site. All costs have been calculated based on 2012 prices.

Significant land acquisition will be required for the development of each of these sites. The land will have to be obtained from the Forest Service and/or LADWP. It was not possible at this time to obtain costs for land acquisition, so in Table No. C-9 the area of land that would be required for the airfield development and the area of land required for the U.S. Highway 395 relocation are indicated. On Sites No. 4 and 5 where the Highway 395 is relocated, it has been assumed that if the Airport acquired the land for the new right of way and deeded it to the Highway Department, the Highway Department would deed the existing highway right of way to the Airport at a no-cost exchange. As a result, the areas indicated for the airfield development do not include the existing Highway 395 right of way.

TABLE NO. C-9
MAMMOTH YOSEMITE AIRPORT – ALTERNATE AIRPORT STUDY
PRELIMINARY DEVELOPMENT COST ESTIMATE (X 1,000)

Site No.	1	2	4A	4B	5	6
Site Grading and Drainage	$ 7,500	$ 19,500	$ 7,500	$ 7,500	$ 19,500	$ 20,000
Airfield Facilities	26,000	26,000	28,000	28,000	28,000	28,000
Terminal Facilities	22,000	22,000	22,000	22,000	22,000	22,000
Access Road	2,000	2,000	3,000	3,000	3,500	2,000
Benton Crossing Road	0	2,000	0	0	2,000	0
US 395 Relocation	0	0	18,000	18,000	18,000	0
Creek Crossing	0	1,000	0	0	1,000	4,000
Utilities	2,000	2,000	2,000	1,800	2,000	8,000
Relocate Power & Telephone Lines	0	0	4,000	4,000	4,000	0
Hangar Relocation	28,000	28,000	28,000	0	28,000	0
Doe Ridge Excavation	45,000	45,000	0	0	0	0
Stabilization Embankment	0	0	0	0	0	24,000
Total Construction	$ 132,500	$ 147,500	$112,500	$ 84,300	$128,000	$108,000
Contingencies - 15%+	20,000	22,000	17,000	13,000	19,000	16,000
Environmental Studies	5,000	5,000	5,000	5,000	5,000	5,000
Design and Construction Management	33,000	37,000	28,000	21,000	32,000	27,000
Administrative Costs	10,000	10,000	10,000	10,000	10,000	10,000
Total Project Cost	$ 200,500	$ 221,500	$172,500	$133,300	$194,000	$166,000
Land Acquisition - Acres	344	386	368	368	436	611

Notes:

1. Airfield Facilities include all construction related to runway, taxiway, and general aviation apron.
2. Terminal Facilities include airline terminal building, apron, parking lots, ARFF building, and maintenance building.
3. Doe Ridge Excavation includes excavation of all sections of Doe Ridge that penetrate the Part 77 7:1 transitional surfaces only.
4. Highway 395 Relocation includes construction costs only of relocating U.S. Highway 395 where required, not including land acquisition costs.
5. Hangar Relocation Costs include cost to relocate all tenant-owned corporate hangars and tee hangars.
6. Land Acquisition – No costs available for land acquisition. Area required for land acquisition at each site is included.
7. Site No. 3 was eliminated from consideration due to obstructions to the west. No cost estimates were prepared.
8. Site No. 1 – If Doe Ridge Excavation is eliminated, it will be necessary to import 1,500,000 cubic yards of embankment material at $12 per cubic yard, for a total cost of $18,000,000.
9. Sites 4 and 5 – Calculations of acres of land to be required for development of Sites 4 and 5 are based on the assumption that when land is acquired for the relocation of Highway 395 and deeded to the State, the State would transfer ownership of the existing Highway 395 right of way to the Airport at no additional cost.

C-4 RECOMMENDATIONS

All six development sites were evaluated using the same airfield layout and, as a result, are equal in that respect.

Site No. 3 should be removed from any consideration due to the close proximity of obstructions to the west. No further evaluation has been made for this site.

From an obstruction and access consideration, Site No. 6 is significantly better than any of the other sites. Sites No. 4 and 5 have less critical obstructions than do Sites No. 1 and 2. Site No. 2 has less obstructions and better approaches from the west than Site No. 1. Site No. 5 has less critical obstructions and better approaches from the west than Site No. 4.

Sites No. 4 and 5 require relocation of five miles of Highway 395, which will affect the cost of the project. Sites No. 1 and 2 require significant excavation of the south portion of Doe Ridge if it is required to clear the Part 77 7:1 transitional surface. Approximately 9 million cubic yards of rock will have to be removed from this area. Sites No. 4 and 5 do not require the removal of any rock from Doe Ridge to clear the 7:1 transitional surfaces from obstructions. If it becomes necessary to remove all obstructions on Doe Ridge above the horizontal surface, then for Sites No. 1, 2, 4, and 5 it will require the removal of an additional 20 million cubic yards of rock from Doe Ridge.

From a cost standpoint Sites No. 1, 2, 4A, 5, and 6 are similar, with the costs of Sites No. 4A, 5, and 6 being somewhat lower than Sites 1 and 2. The cost of Site No. 1 and 2 developments includes $45,000,000 for Doe Ridge excavation, which is not required at the other sites. If the requirement to remove a section of Doe Ridge is waived, then the costs of Sites 1 and 2 become more nearly the same as Sites 4A, 5, and 6.

Sites No. 1, 2, 4, and 5 have good access to Highway 395 and are in reasonably close proximity to the town and to the ski areas. Site No. 6 is 8 to 10 miles further from the town and the ski areas than the other sites and seven miles of this extra travel distance is on secondary roads, making Site No. 6 less accessible to town.

From the standpoint of obstruction clearance and approaches to the thresholds of the runway, Site No. 6 is the preferred site.

Sites No. 4 and 5 have been located in such a manner as to minimize the excavation required to provide obstruction clearance to the transitional surfaces of Part 77 and have good access to Highway 395 and close proximity to the town and the ski areas.

From an overall standpoint the close proximity to the public areas and access of Sites No. 1, 2, 4, and 5 are such as to make these sites preferable over Site No. 6. Of these sites, Sites No. 2 and 5 provide better approaches from the west and departures to the east than Sites No. 1 and 4 and are, therefore, preferred.

Sites No. 4 and 5 provide an entirely new airport runway and facilities. This runway and other facilities could be more easily constructed without disrupting existing airport facilities than could Site No. 1 or 2. If Site No. 1 or 2 were accepted, then the airport would have to be closed down while the new facilities were constructed.

As a result of these considerations, the ranking of the sites is as follows:

1 – #5
2 - #4
3 - #6
4 - #2
5 - #1

All of the sites studied, except for Site No. 3, provide significant improvement to airport operations at the MMH. Should budgetary and other constraints rule out the development shown in Sites 1, 2, 4, 5, and 6, the existing airport can be upgraded to provide airline service and general aviation operations, including the business jets, provided modifications to standards can be obtained from F.A.A. and wherever practical to correct deviations to standards. These modifications to standards would include runway to taxiway spacing; building and fence penetration into the object free area of the runway and taxiway; and penetration of Doe Ridge into the FAR Part 77 7:1 transitional surfaces, horizontal surfaces, and conical surfaces. The existing runway can be widened and shoulders constructed. The existing taxiway can also be widened and shoulders constructed. If F.A.A. will approve the use of aircraft-specific analysis for runway centerline to taxiway centerline spacing, the existing 300-foot runway centerline to taxiway centerline is satisfactory. The development of any of the six alternate sites studied will require extensive land acquisition and detailed environmental studies. These requirements will add significant cost and delays in the development of the airport.

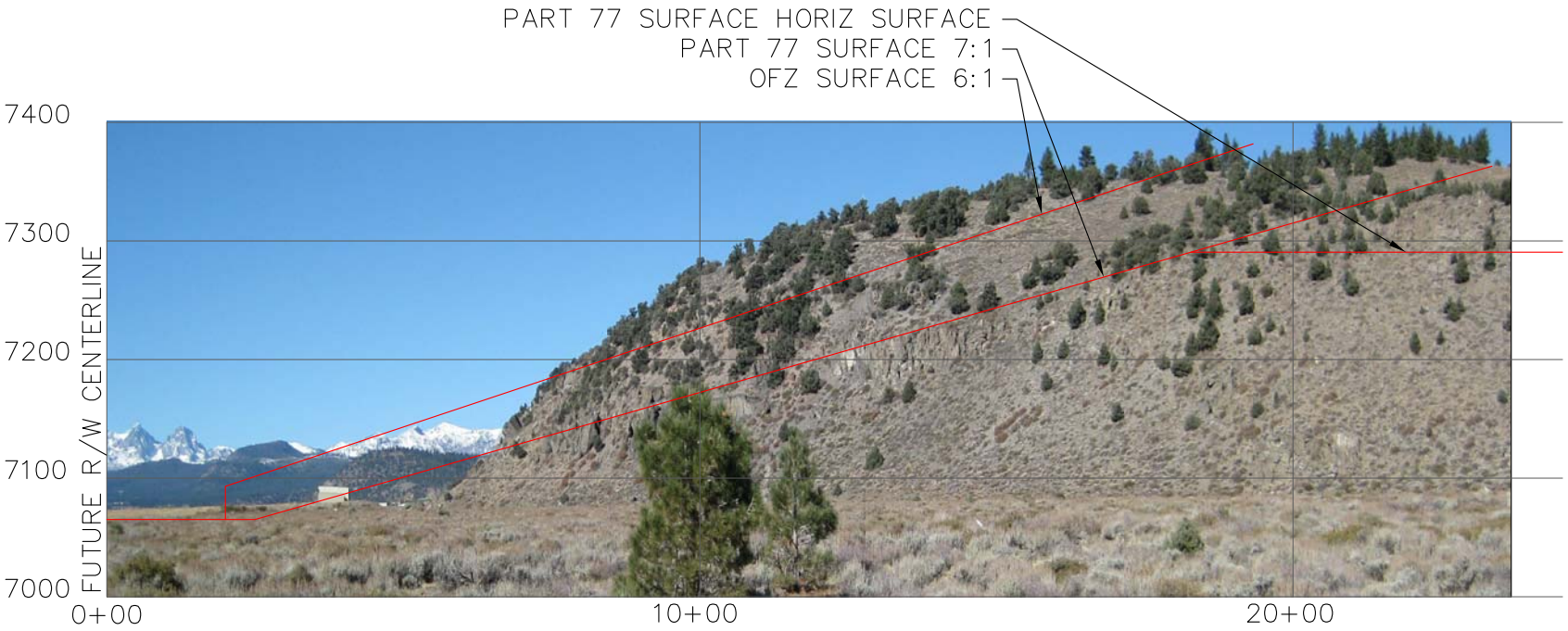
Taking into account all benefits, development costs, land acquisition costs and constraints, and environmental costs and constraints, it is concluded that it is not practical to consider the development of any of the alternate sites considered and to proceed with the development of the existing airport. It is also recommended that the airport actively pursue a program to upgrade the airport whenever practicable to eliminate existing deviations from F.A.A. standards and to request modification to standards from F.A.A. for those conditions that are impractical to improve.

The runway can be extended 2,000 feet to either the east or the west. The east extension is more expensive, but provides better departures to and arrivals from the west and better runway clear sight distance, which would improve operational capabilities of the larger aircraft.

If the existing airport runway and taxiway facilities are left in place, it is recommended that the proposed new terminal facilities be located such that at some future date the airport facilities shown for Site No. 1 or Site No. 2 can be constructed without relocating the new terminal facilities.

The cost of developing any one of the five sites studied makes it impractical at this time to consider any of the alternate sites. Land use and environmental issues related to the development of Sites 1 through 6 will further increase the development costs of any of the alternate sites and significantly delay the much-needed expansion of the airport to accommodate the existing and proposed airline traffic. It is, therefore, recommended that the existing airport be expanded as necessary to accommodate the forecast growth but that the new terminal facilities be located far enough from the current runway centerline such that Sites 1 or 2 could be developed in the future without requiring any modification to the new terminal facilities.

It is further recommended that existing deviations from F.A.A. standards be remedied wherever possible and that F.A.A. approval for modification to standards be obtained for those conditions that cannot be corrected.



MAMMOTH YOSEMITE AIRPORT – SITE No. 1
EXISTING DOE RIDGE CROSS SECTION
WEST VIEW

HORIZONTAL SCALE 1'=300'
VERTICAL SCALE 1"=150'

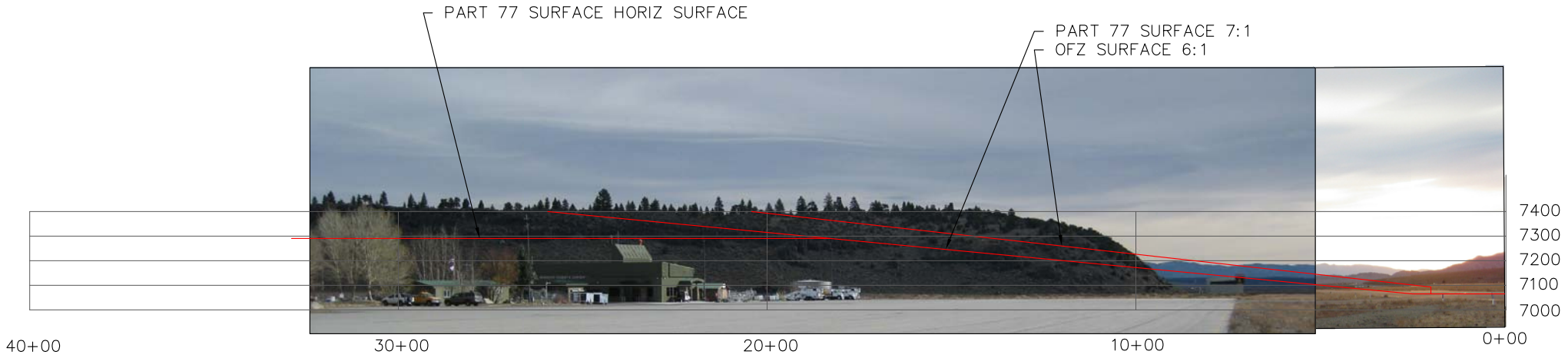
PLATE No. C-1


PLATE No. C-2
MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - WEST VIEW SITE No. 1
OFZ SURFACE 6:1 ONLY


PLATE No. C-3
MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - WEST VIEW SITE No. 1
PART 77 SURFACE - 7:1 ONLY

PLATE No. C-4

MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - WEST VIEW SITE No. 1
PART 77 SURFACE - 7:1
with HORIZONTAL SURFACE



MAMMOTH YOSEMITE AIRPORT – SITE No. 1
EXISTING DOE RIDGE CROSS SECTION
EAST VIEW

HORIZONTAL SCALE 1'=400'
VERTICAL SCALE 1"=600'

PLATE No. C-5

PLATE No. C-6

MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - EAST VIEW SITE No. 1
OFZ SURFACE 6:1 ONLY

PLATE No. C-7

MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - EAST VIEW SITE No. 1
PART 77 SURFACE - 7:1 ONLY

PLATE No. C-8

MAMMOTH YOSEMITE AIRPORT
DOE RIDGE - EAST VIEW SITE No. 1
PART 77 SURFACE 7:1
with HORIZONTAL SURFACE

AREA OF EXCAVATION

0 300 600 900

GRAPHIC SCALE IN FEET

SCALE: 1"=300'

APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 6044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

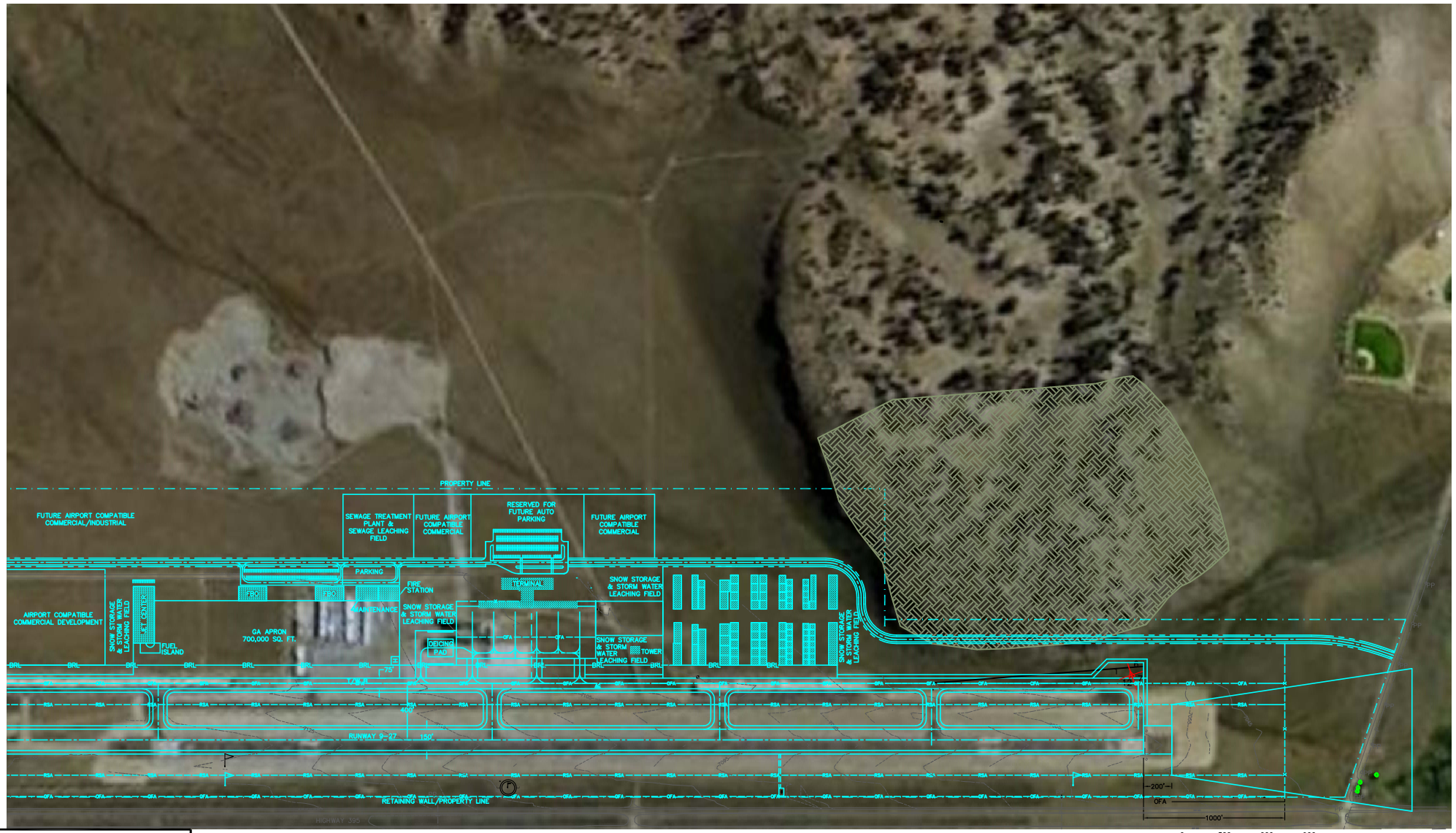
MAMMOTH LAKES, CALIFORNIA

DOE RIDGE - EXCAVATION AREA - SITE No. 1
OFZ SURFACE - 6:1 ONLY

NO.	REVISIONS	BY	APP	DATE

NOV. 22, 2010

PLATE No. C-9



AREA OF EXCAVATION

0 300 600 900

GRAPHIC SCALE IN FEET

SCALE: 1"=300'

APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – _____

Reinard W. Brandley
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C.E. 8044
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

DOE RIDGE - EXCAVATION AREA - SITE No. 1
PART 77 SURFACE - 7:1 ONLY

NO.	REVISIONS	BY	APP	DATE

NOV. 22, 2010

PLATE No. C-10

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DATE

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AIRPORT MANAGER – _____

Reinard W. Brandley
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COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

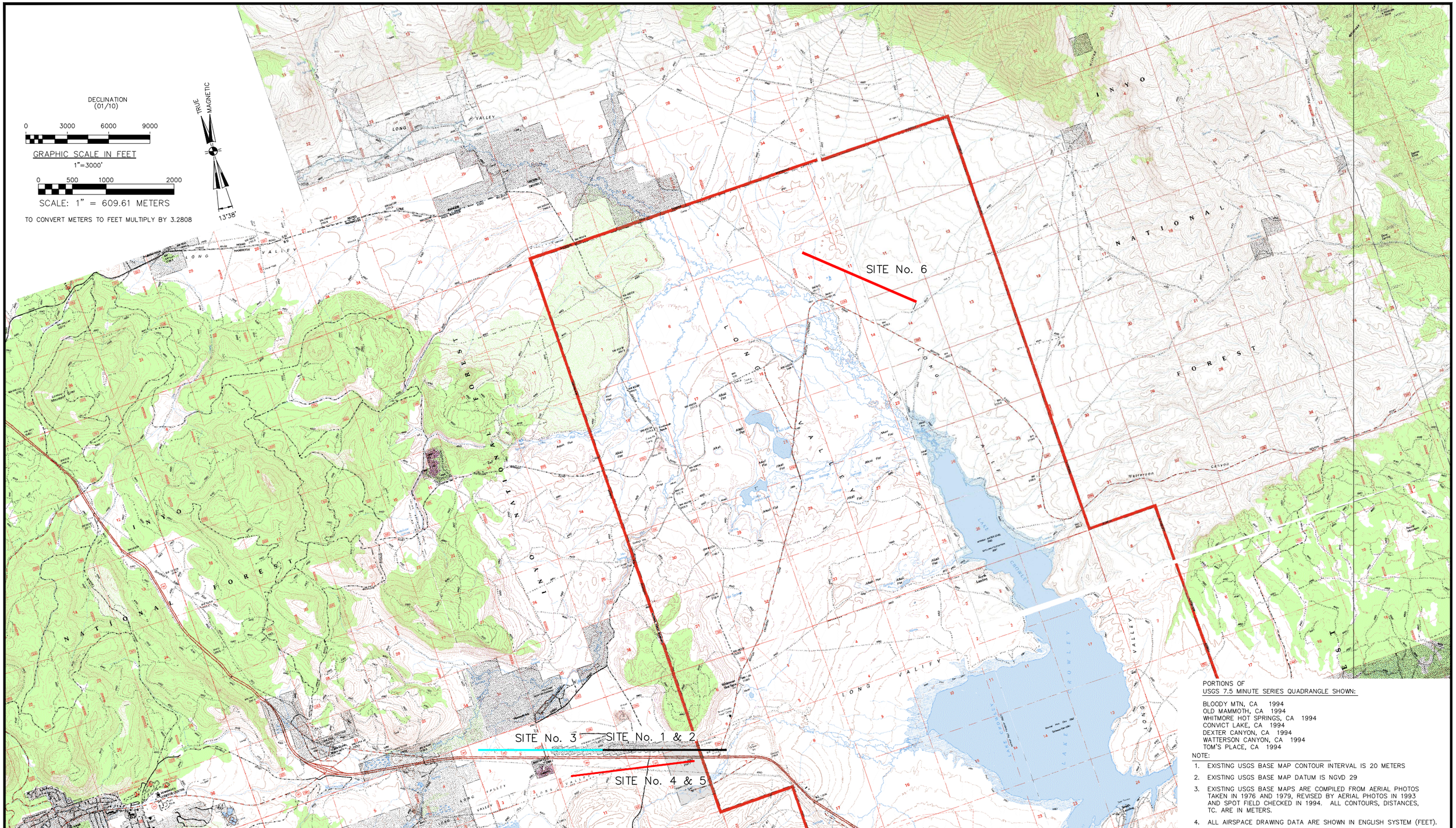
MAMMOTH LAKES, CALIFORNIA

DOE RIDGE - EXCAVATION AREA - SITE No. 1
PART 77 SURFACE - 7:1 WITH HORIZONTAL SURFACE

NO.	REVISIONS	BY	APR	DATE

NOV. 22, 2010

PLATE No. C-11



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

AIRPORT SITE LOCATION PLAN

NO.	REVISIONS	BY	APR	DATE

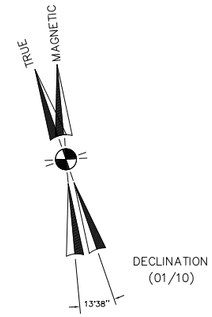
REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-12

LENGEND

- EXISTING GROUND CONTOUR
- EXISTING ROADS
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- NEW AIRPORT OBJECT FREE AREA
- NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING



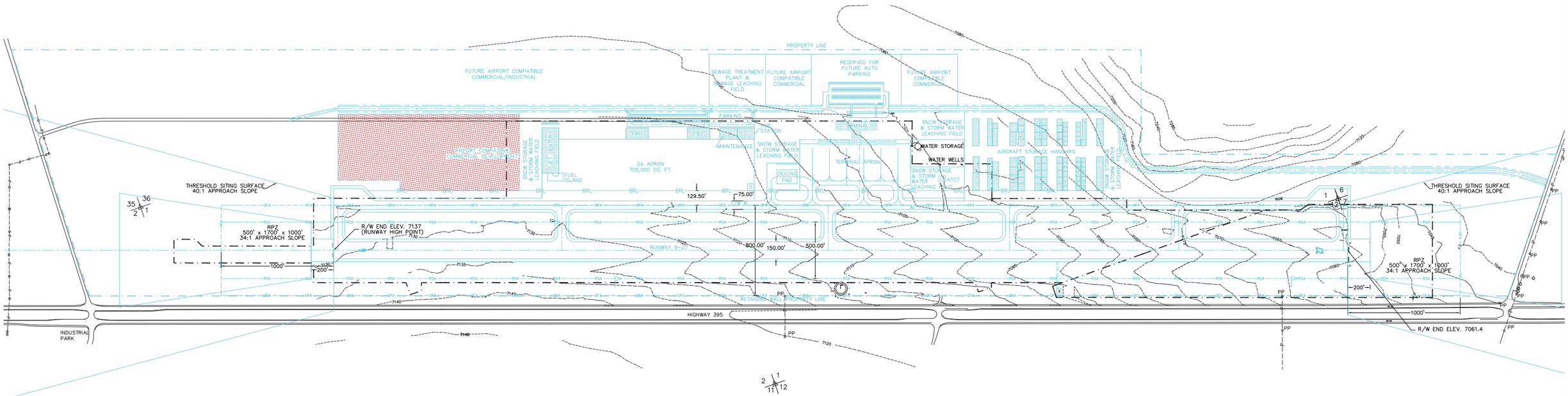
0 400 800 1200

GRAPHIC SCALE IN FEET

SCALE: 1" = 400'

NOTE:

ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.



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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

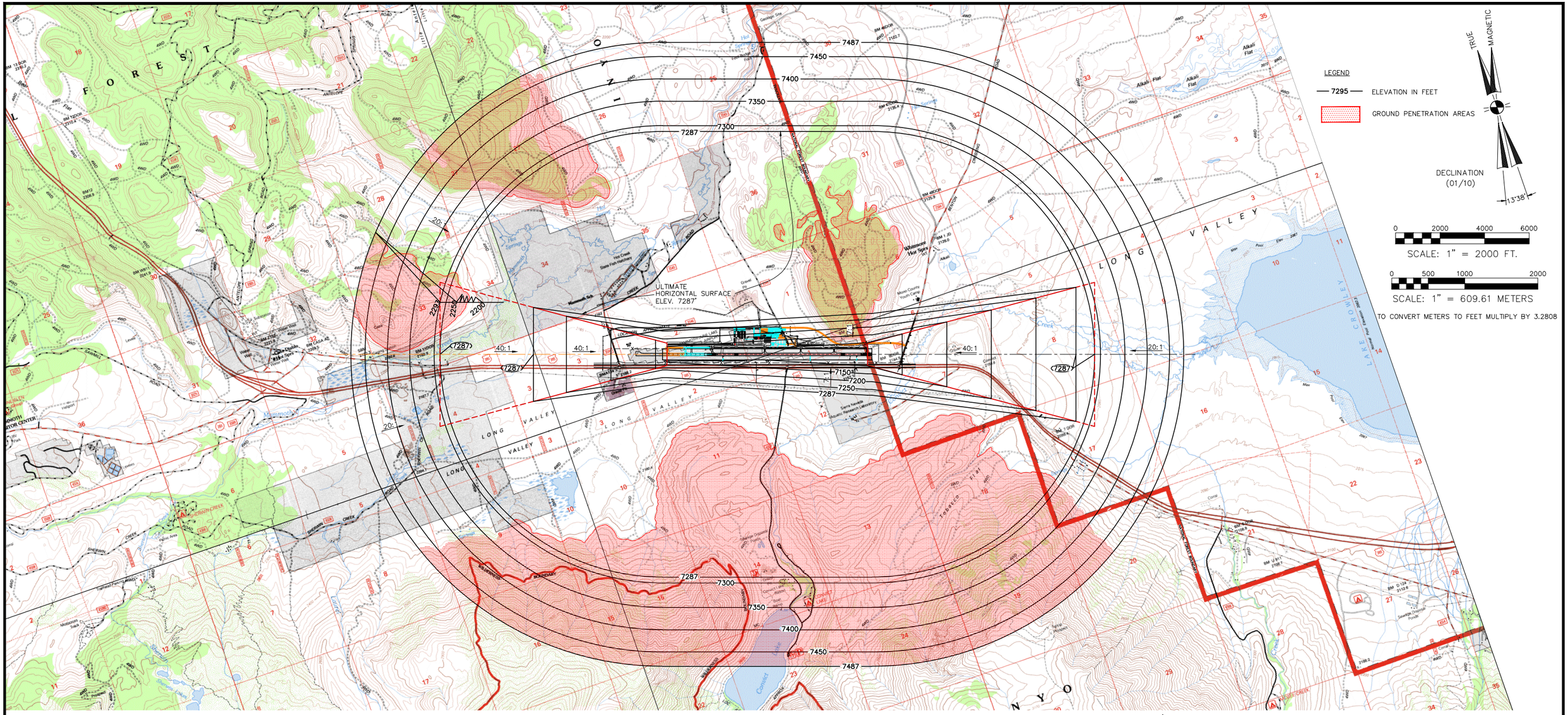
ALTERNATE AIRPORT
AIRPORT LAYOUT PLAN - SITE No. 1

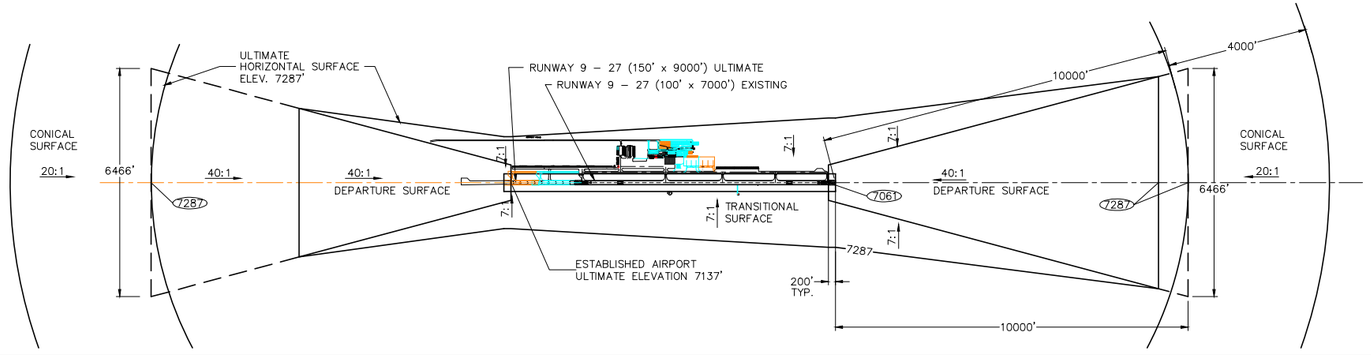
NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-13





PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

APPROVED DATE
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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

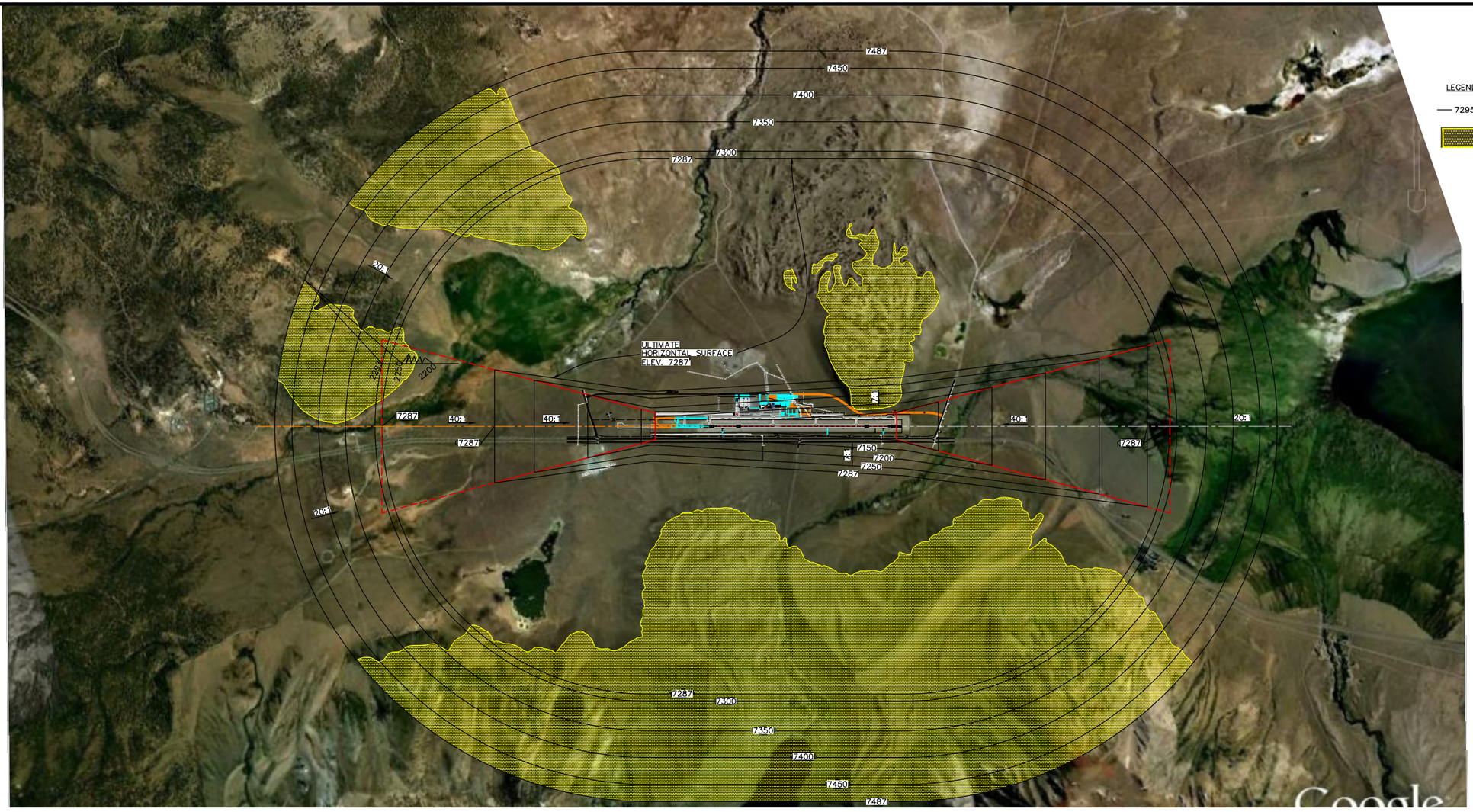
AIRPORT AIRSPACE DRAWING - SITE No. 1

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C–14



LEGEND

7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

TRUE MAGNETIC

DECLINATION (01/10)

13°38'

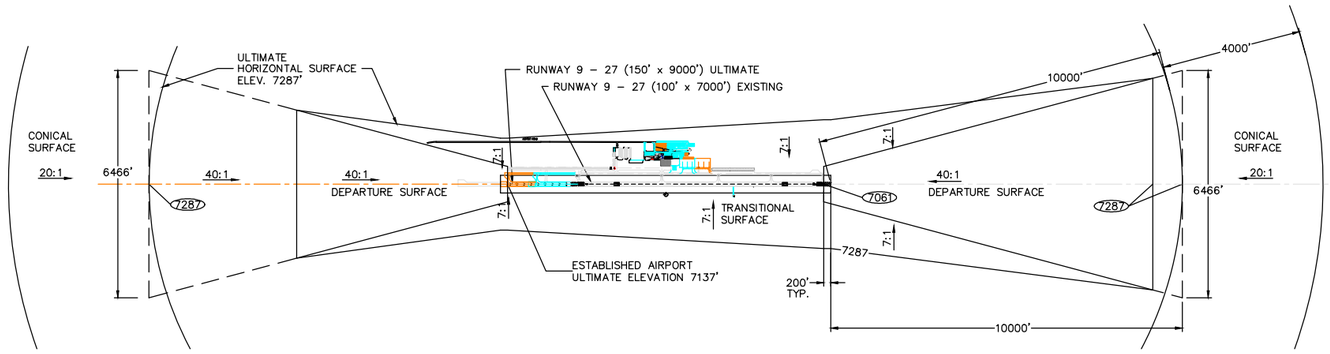
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

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NOTE:

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5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

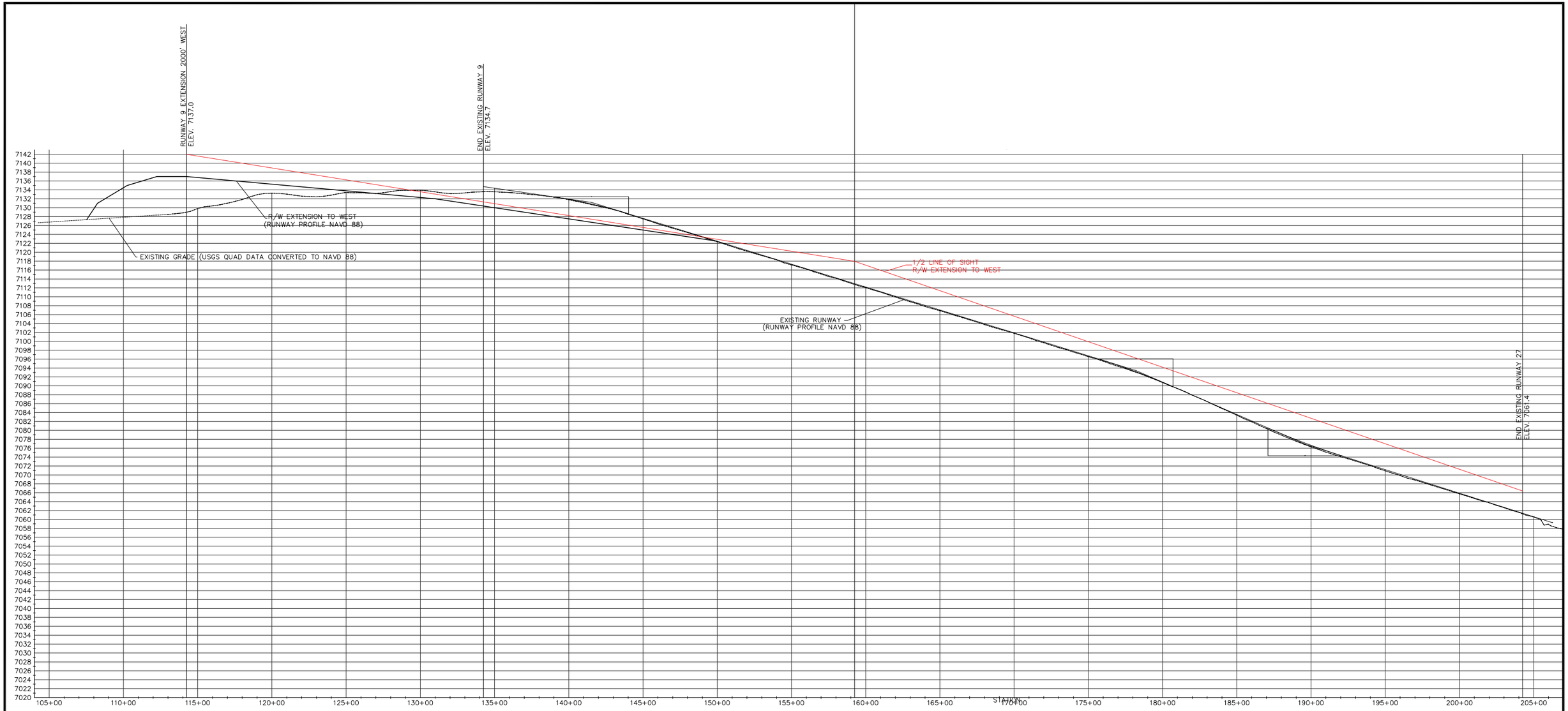
MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE PHOTOGRAPH - SITE No. 1

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 15, 2010

PLATE No. C-15



NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM 2007 TOPO SURVEY AND USGS MAPS. USGS QUAD MAP DATA CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808
2. AIRPORT PROFILE DATA AND 2007 TOPO SURVEY DATUM IS NGVD 88
3. EXISTING USGS BASE MAP DATUM IS NGVD 29
4. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
5. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

SCALE: HORIZ. 1" = 300'
VERT. 1" = 10'

DATE

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

RUNWAY PROFILE - SITE No. 1

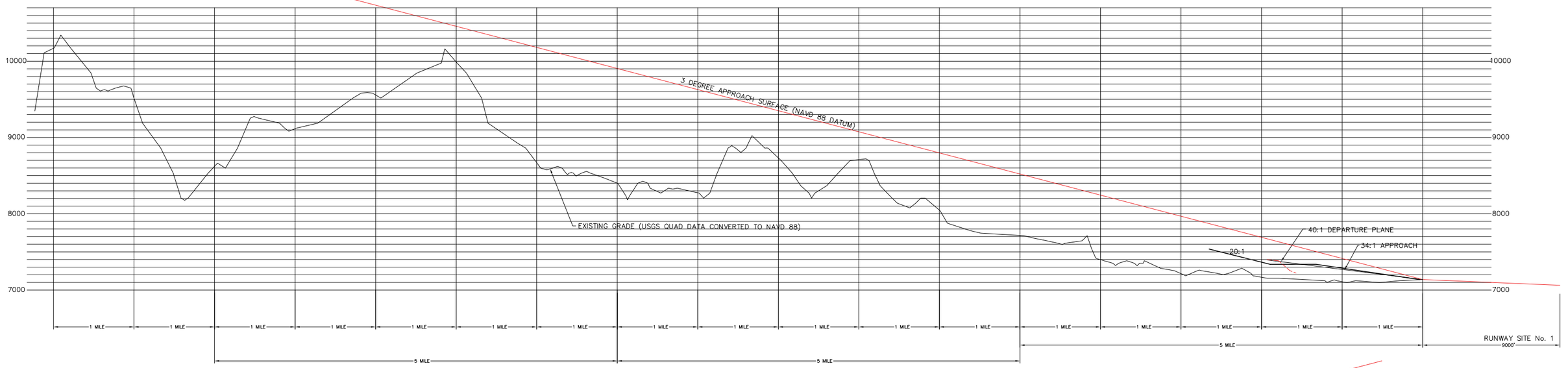
NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

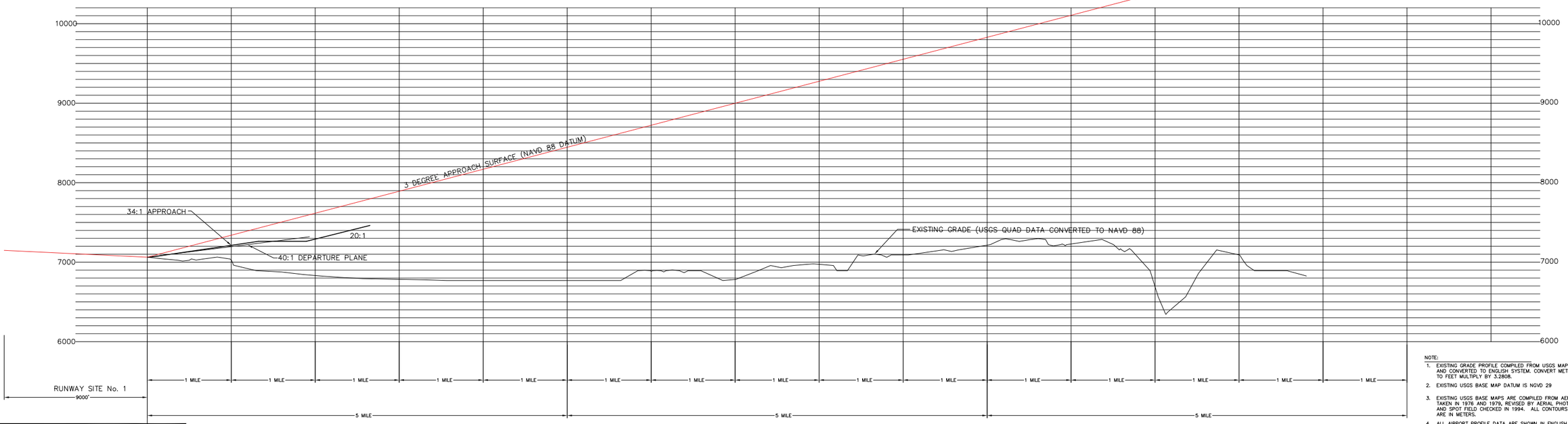
PLATE No. C–16

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'



RUNWAY 9 APPROACH – SITE No. 1

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'



RUNWAY 27 APPROACH – SITE No. 1

NOTE:
1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS AND CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808.
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
4. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

APPROVED
FAA
DATE

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APPROVED
AIRPORT MANAGER – WILLIAM B. MANNING
DATE

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

APPROACH PROFILE - SITE No. 1

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 15, 2010

PLATE No. C–17

LENGEND

- EXISTING GROUND CONTOUR
- EXISTING ROADS
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- NEW AIRPORT OBJECT FREE AREA
- NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING

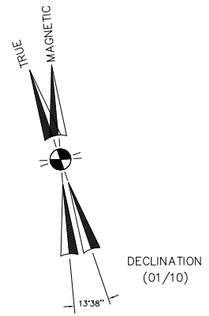
NOTE:

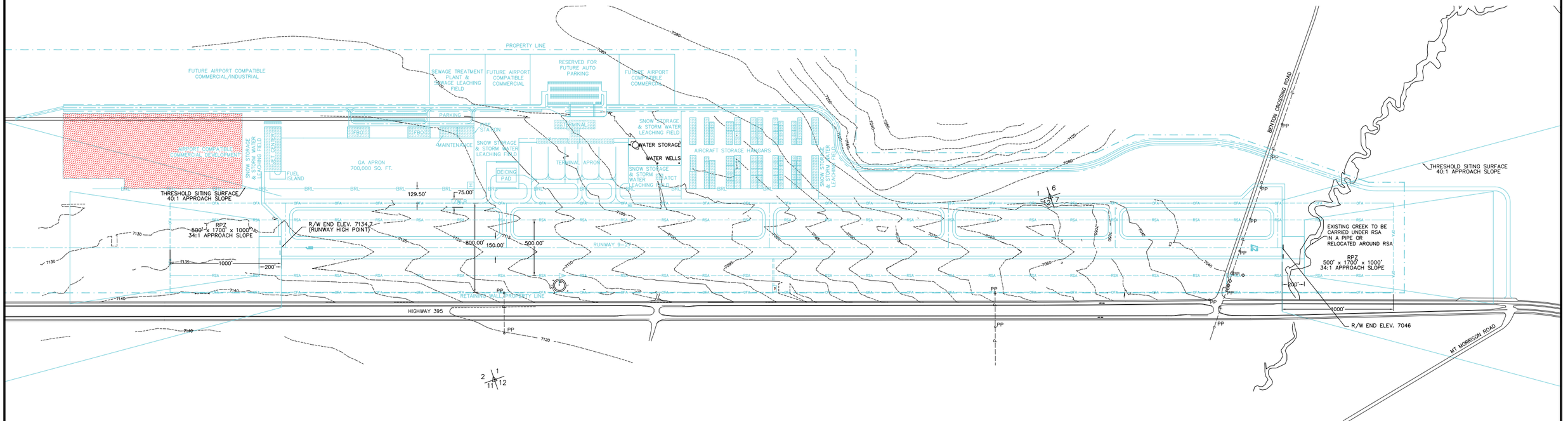
ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.

0 400 800 1200

GRAPHIC SCALE IN FEET

SCALE: 1" = 400'





APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

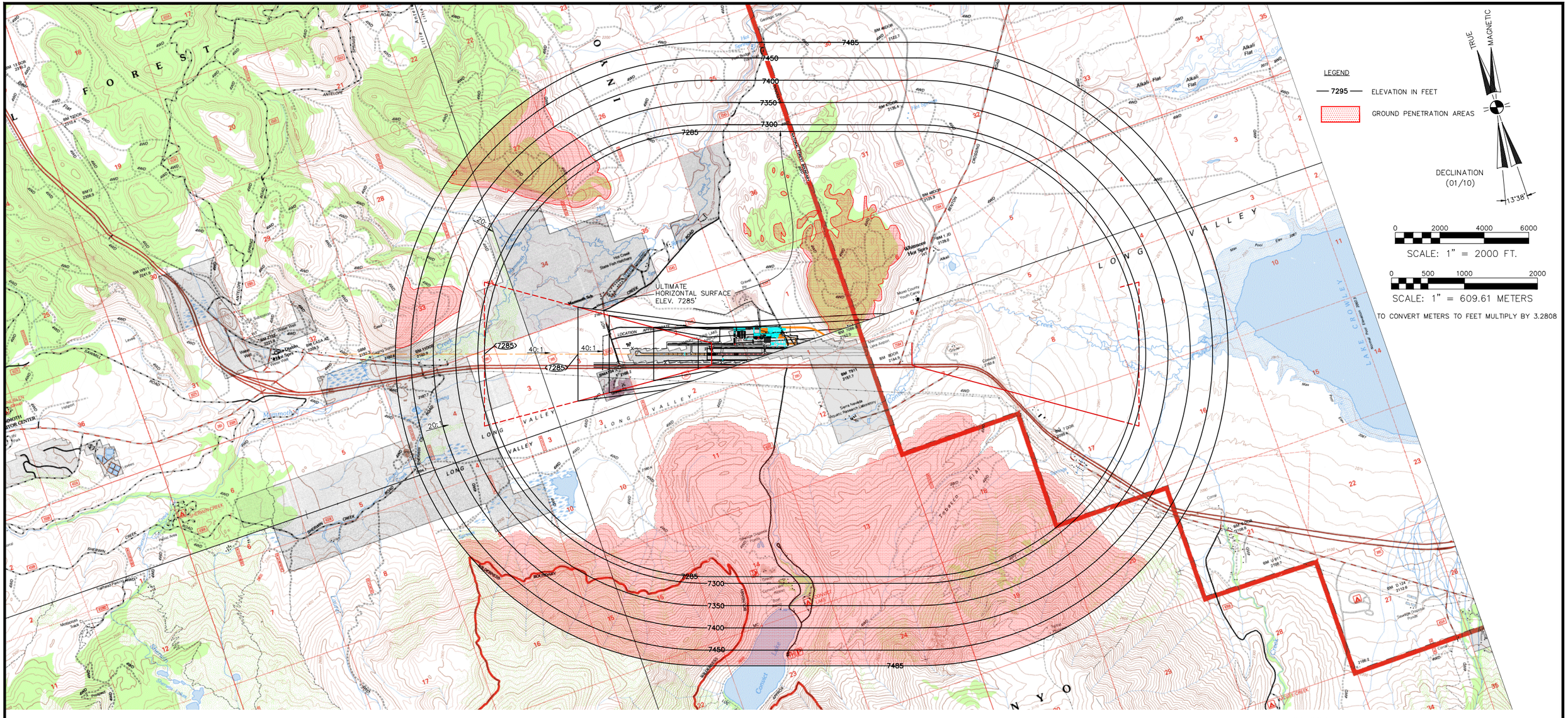
ALTERNATE AIRPORT AIRPORT LAYOUT PLAN - SITE No. 2

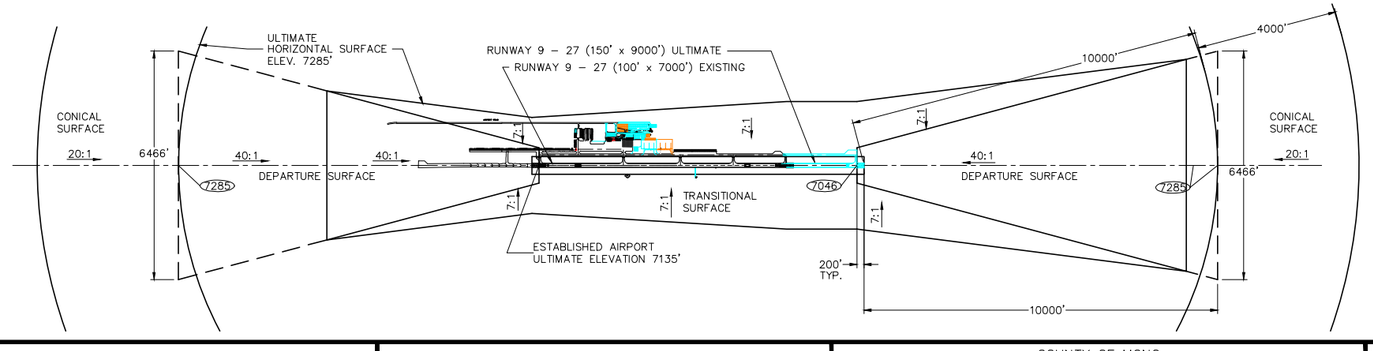
NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-18





PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

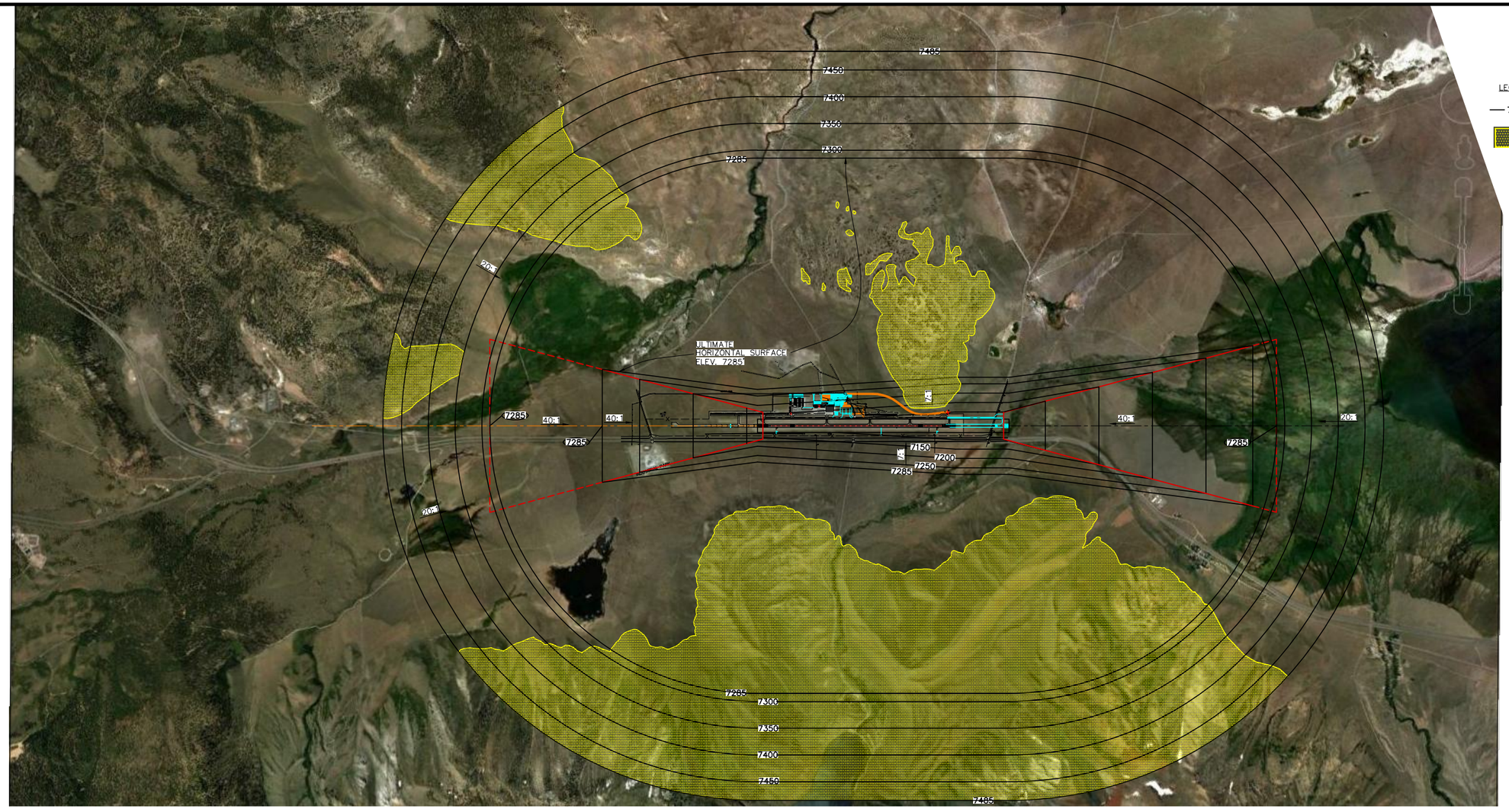
AIRPORT AIRSPACE DRAWING - SITE No. 2

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C–19



LEGEND

— 7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

TRUE

MAGNETIC

DECLINATION
(01/10)

13°38'E

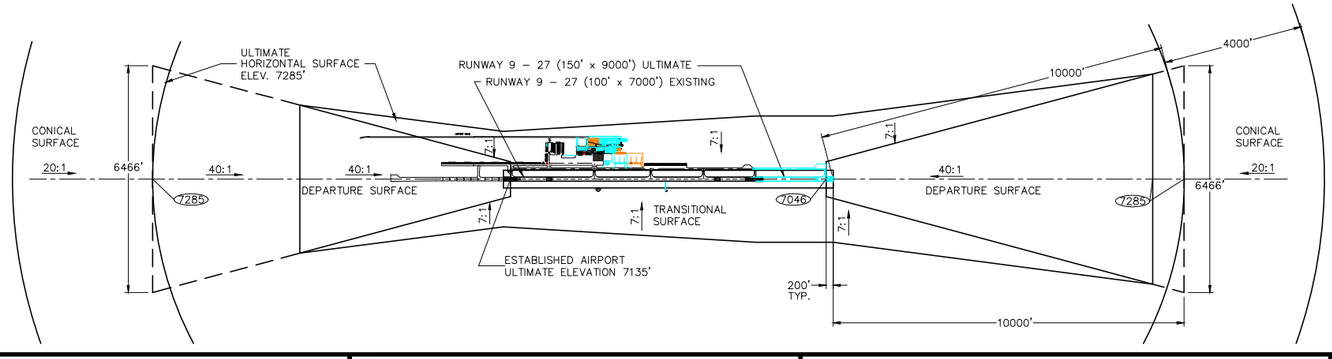
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

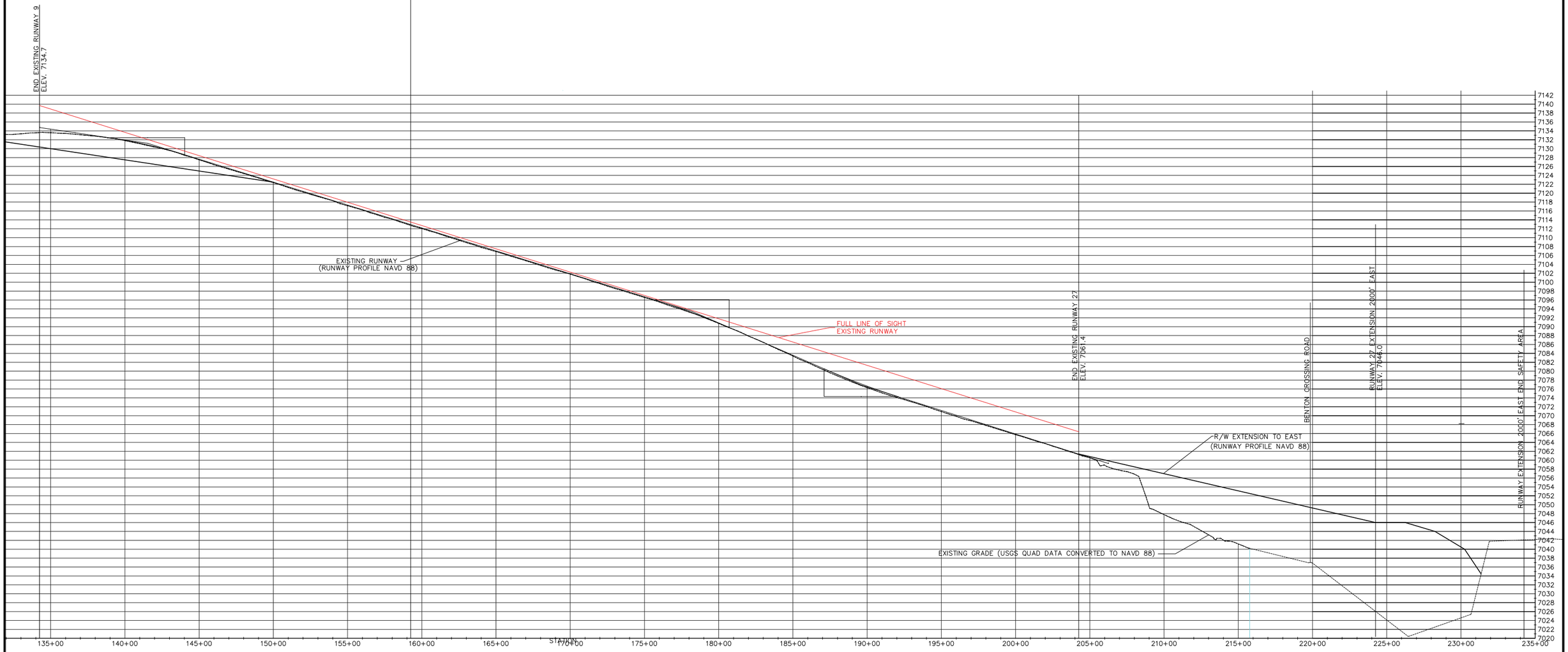
MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE PHOTOGRAPH - SITE No. 2

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 15, 2010

PLATE No. C–20



NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM 2007 TOPO SURVEY AND USGS MAPS. USGS QUAD MAP DATA CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808
2. AIRPORT PROFILE DATA AND 2007 TOPO SURVEY DATUM IS NGVD 88
3. EXISTING USGS BASE MAP DATUM IS NGVD 29
4. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
5. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

SCALE: HORIZ. 1" = 300'
VERT. 1" = 10'

DATE

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

RUNWAY PROFILE - SITE No. 2

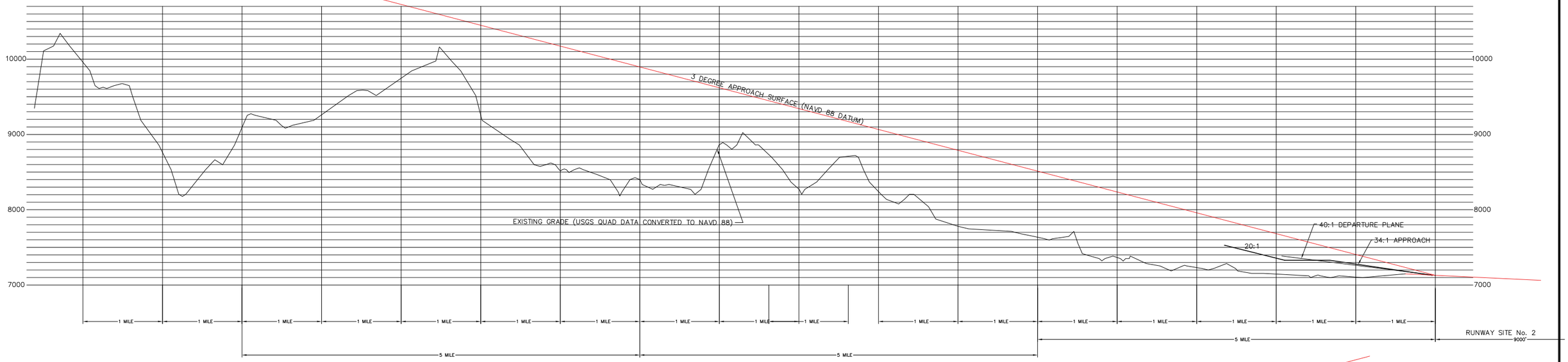
NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

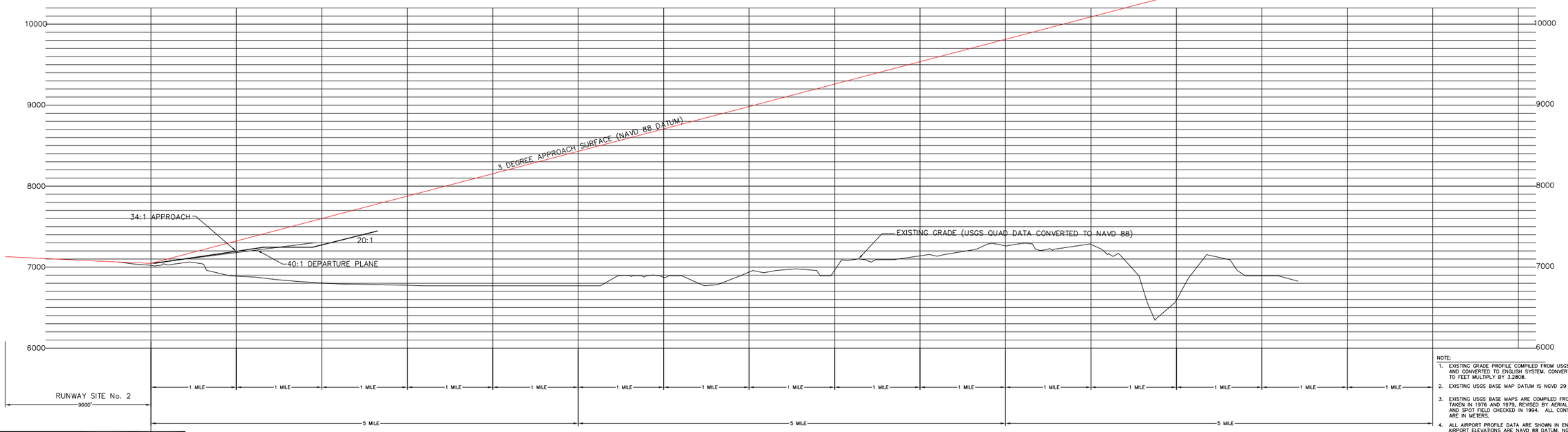
PLATE No. C–21

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'



RUNWAY 9 APPROACH – SITE No. 2

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'



NOTE:
1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS AND CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808.
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
4. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

RUNWAY 27 APPROACH – SITE No. 2

APPROVED _____ DATE
FAA

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APPROVED _____ DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

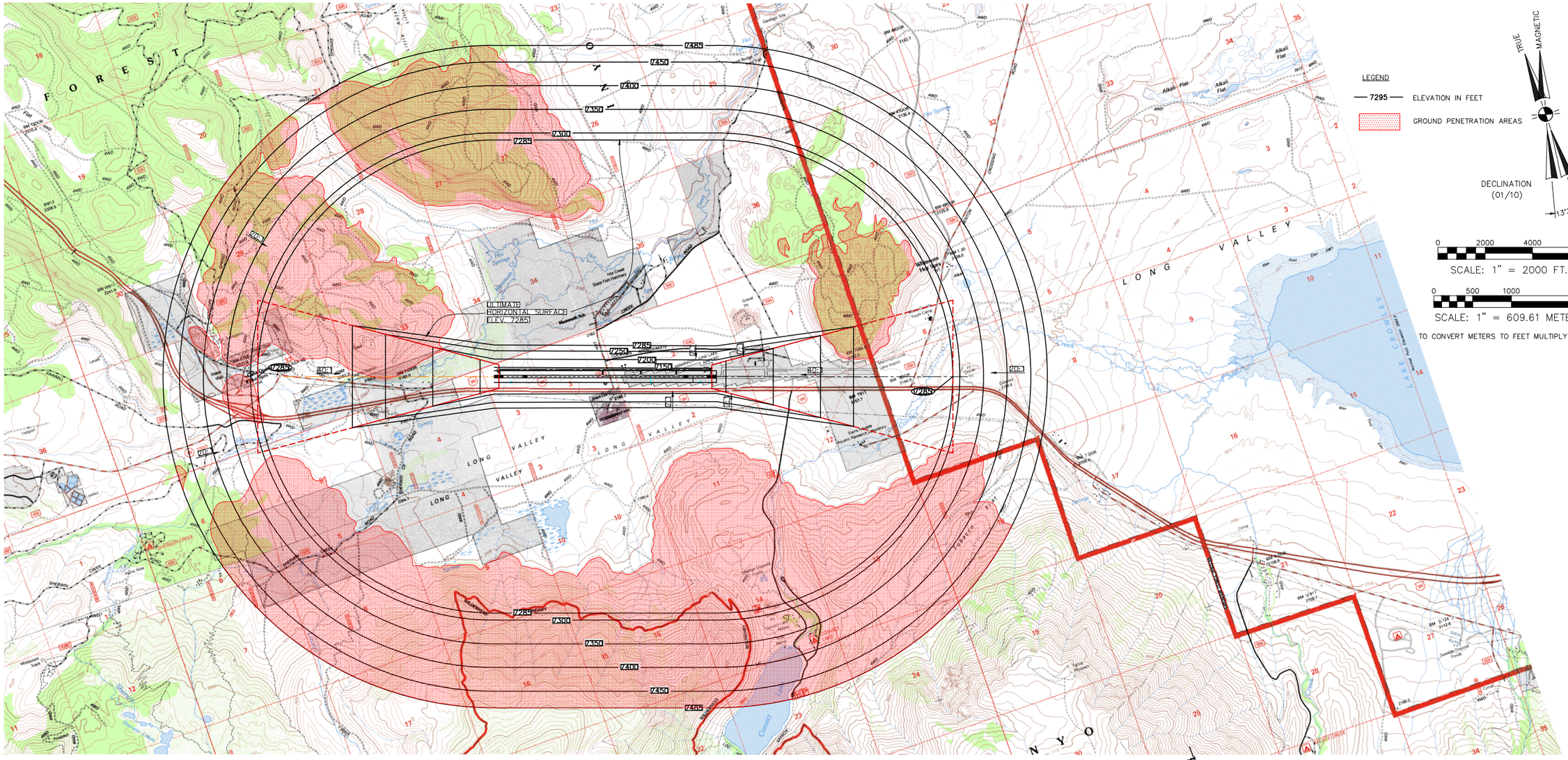
APPROACH PROFILE - SITE No. 2

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-22



LEGEND

— 7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

TRUE MAGNETIC

DECLINATION (01/10)

13°38'

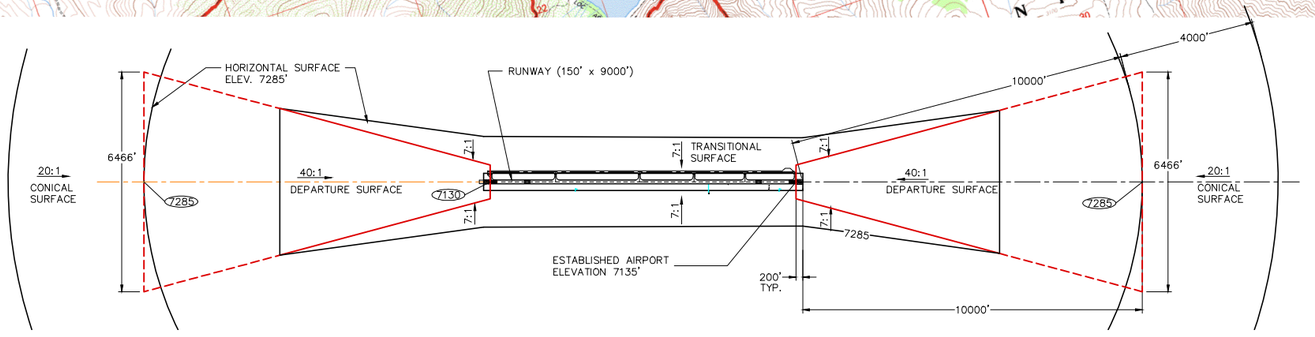
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

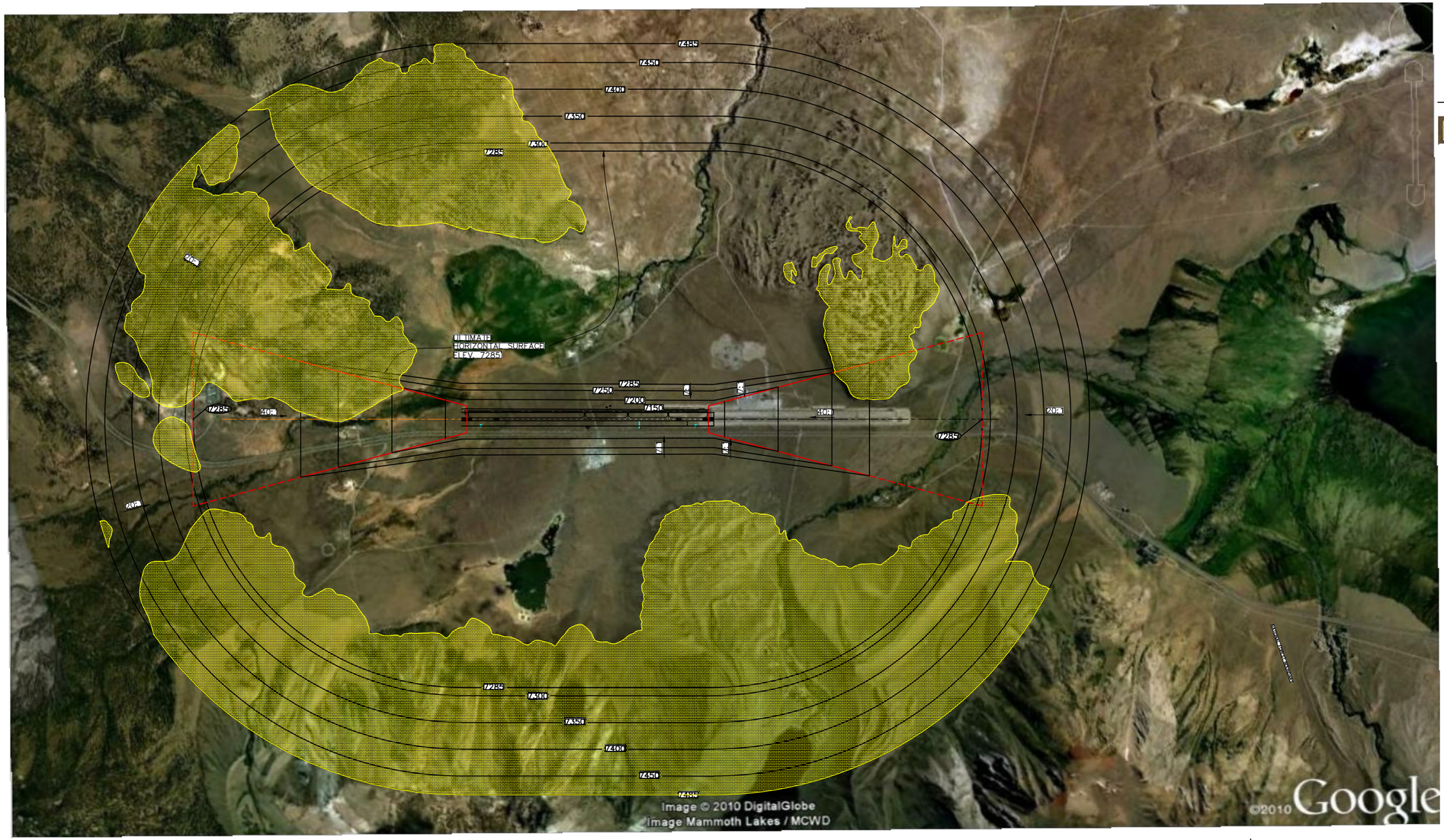
MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE DRAWING - SITE No. 3

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 15, 2010

PLATE No. C–23



LEGEND

7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

TRUE MAGNETIC

DECLINATION (01/10)

13°38'E

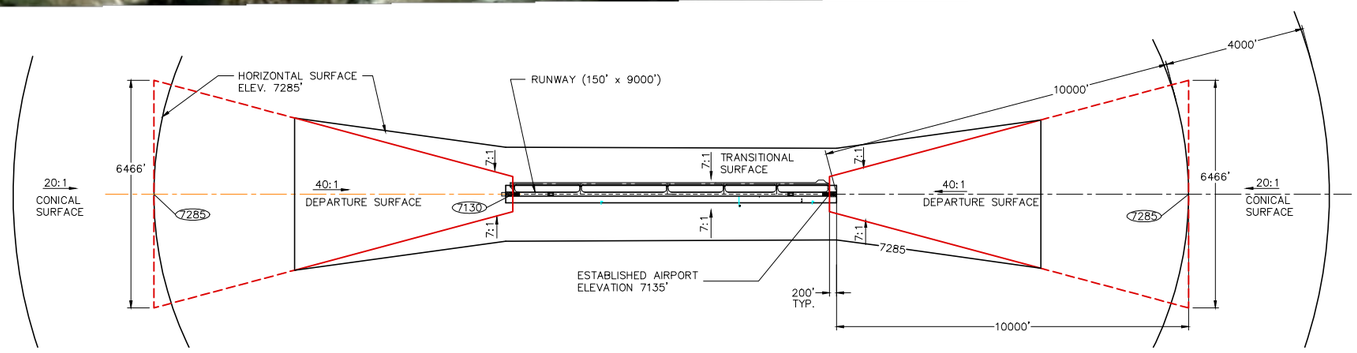
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE PHOTO - SITE No. 3

NO.	REVISIONS	BY	APR	DATE

DATE DEC. 15, 2010

PLATE No. C-24

LENGEND

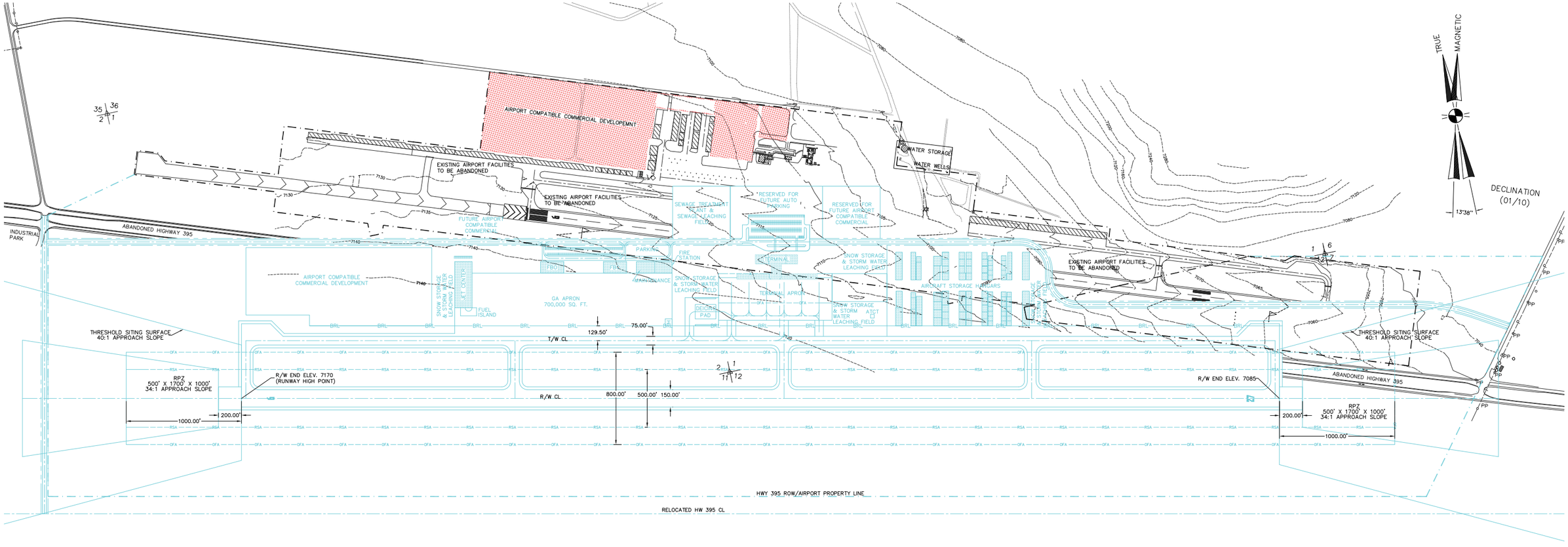
- EXISTING GROUND CONTOUR
- EXISTING AIRPORT FACILITIES
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- NEW AIRPORT OBJECT FREE AREA
- NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING

NOTE:

ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.

0 400 800 1200

GRAPHIC SCALE IN FEET



APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

TOWN OF MAMMOTH LAKES
MONO COUNTY CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

ALTERNATE AIRPORT - AIRPORT LAYOUT PLAN
SITE No. 4a - RELOCATE EXISTING FACILITIES

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-25

LENGEND

- EXISTING GROUND CONTOUR
- EXISTING AIRPORT FACILITIES
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- NEW AIRPORT OBJECT FREE AREA
- NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING RESTRICTION LINE
- NEW AIRPORT BUILDING

TRUE MAGNETIC

DECLINATION (01/10)

13°38'

0 300 600 900

GRAPHIC SCALE IN FEET

SCALE: 1" = 300'

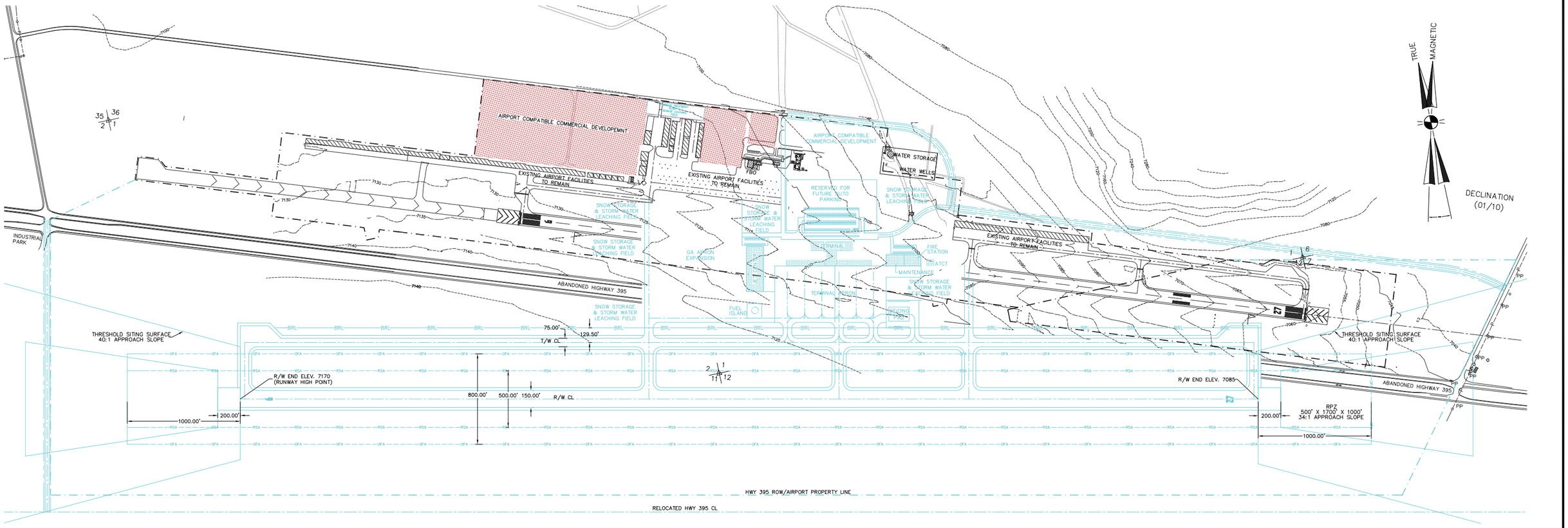
0 400 800 1200

GRAPHIC SCALE IN FEET

SCALE: 1" = 400'

NOTE:

ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.



APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
MONO COUNTY CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

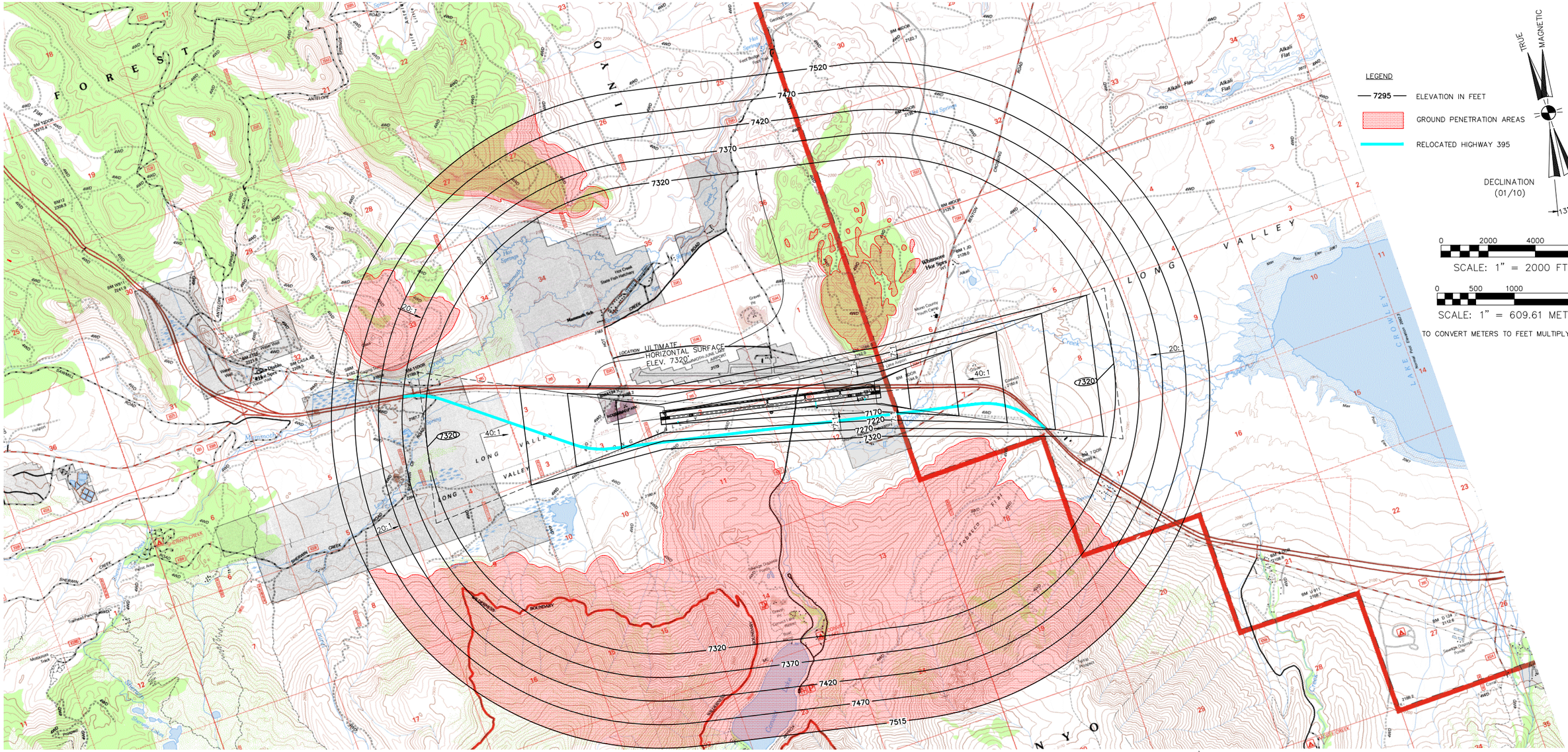
ALTERNATE AIRPORT - AIRPORT LAYOUT PLAN
SITE No. 4b - MAINTAIN EXISTING FACILITIES

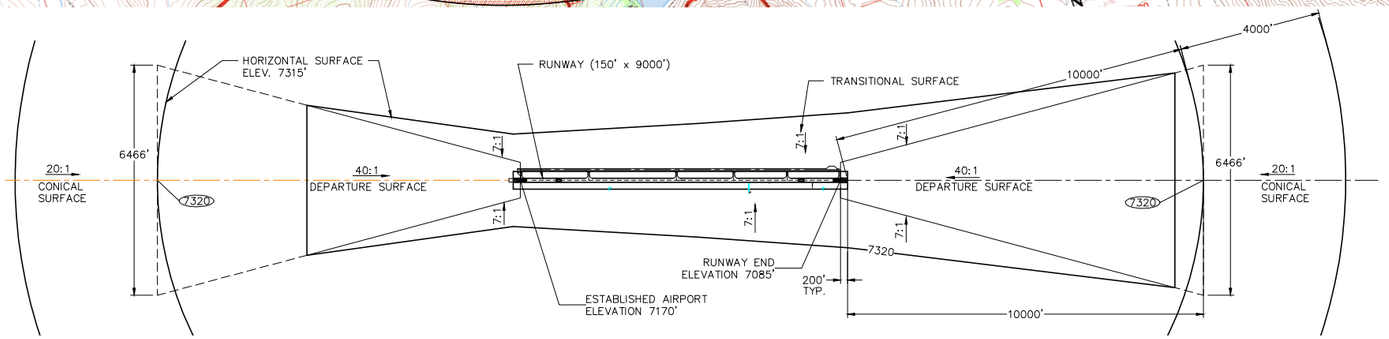
NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C–26





PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

AIRPORT AIRSPACE DRAWING - SITE No. 4

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

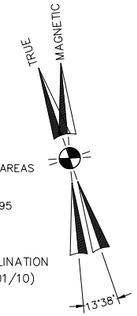
PLATE No. C-27

LEGEND

7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

RELOCATED HIGHWAY 395



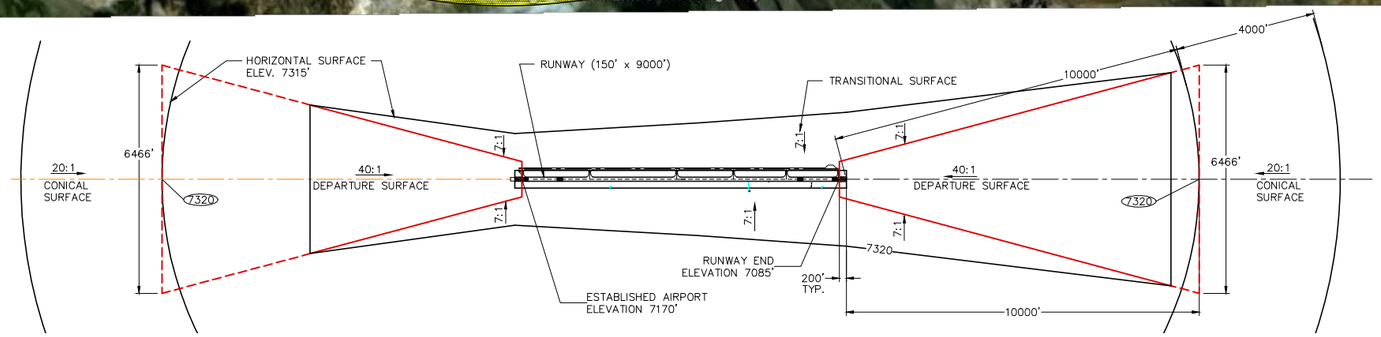
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY

APPROVED DATE
FAA

FAA DISCLAIMER

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

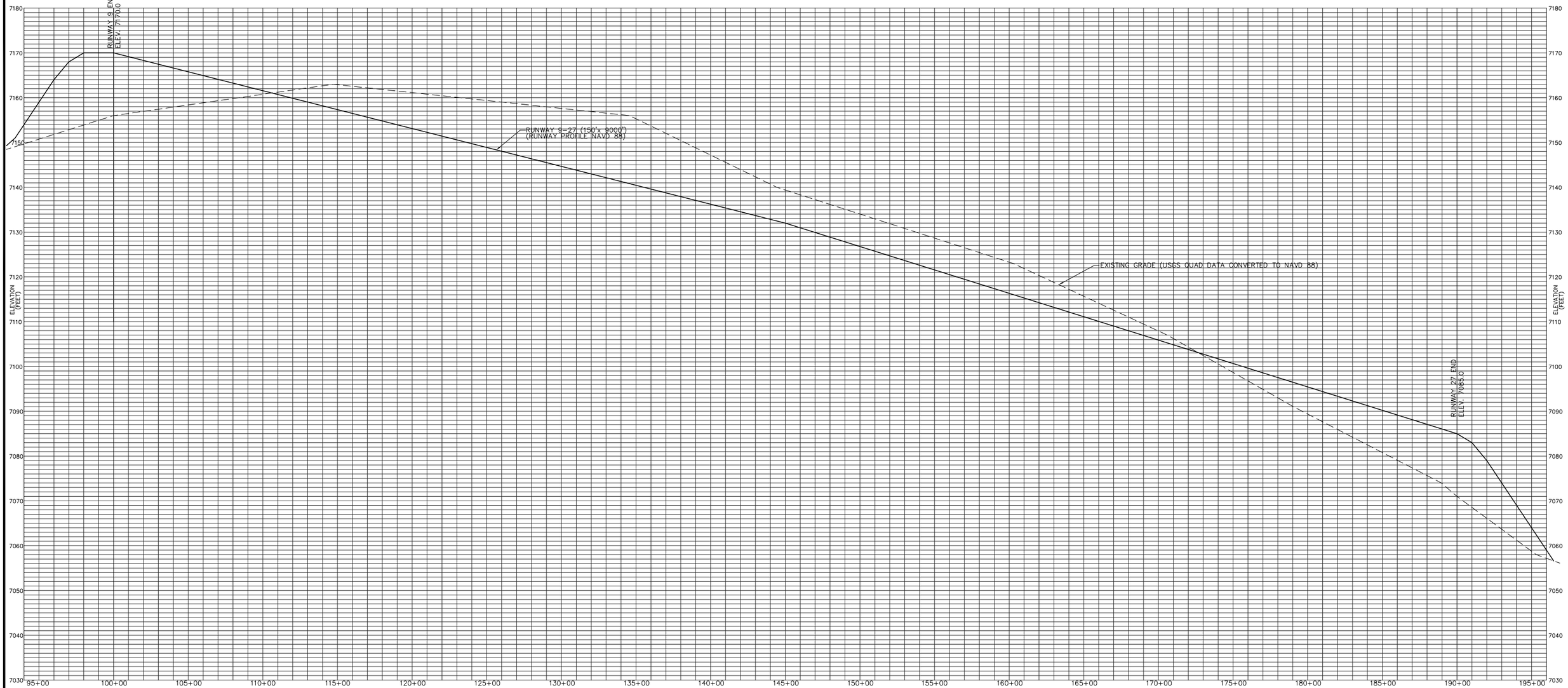
AIRPORT AIRSPACE PHOTO - SITE No. 4

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C–28



SCALE: HORIZ. 1" = 300'
VERT. 1" = 10'

NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS. USGS QUAD MAP DATA CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808. BY 3.2808
2. ALL AIRPORT PROFILE DATA IS SHOWN IN NAVD 88 DATUM.
3. EXISTING USGS BASE MAP DATUM IS NGVD 29
4. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
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DATE

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

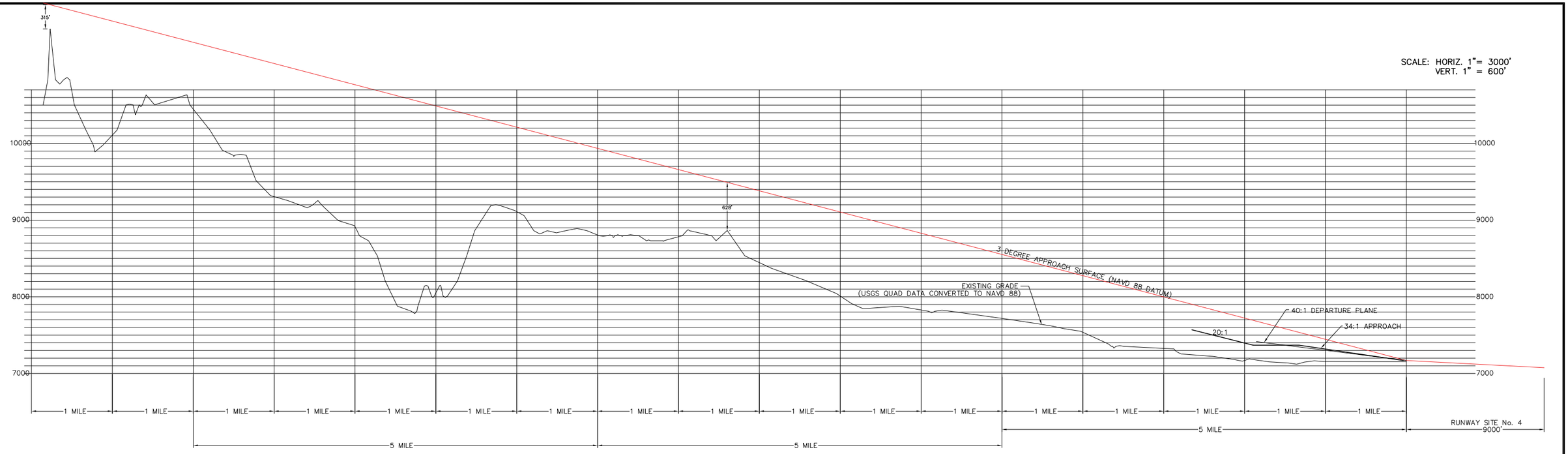
RUNWAY PROFILE - SITE No. 4

NO.	REVISIONS	BY	APR	DATE

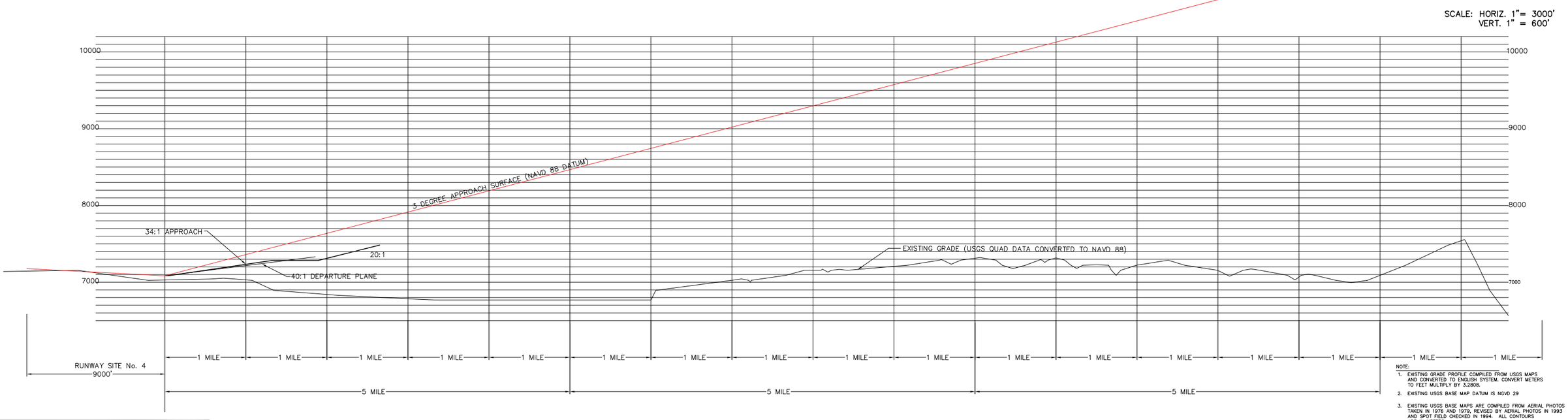
REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-29



RUNWAY 9 APPROACH – SITE No. 4



RUNWAY 27 APPROACH – SITE No. 4

NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS AND CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808.
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
4. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

APPROACH PROFILE - SITE No. 4

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-30

LENGEND

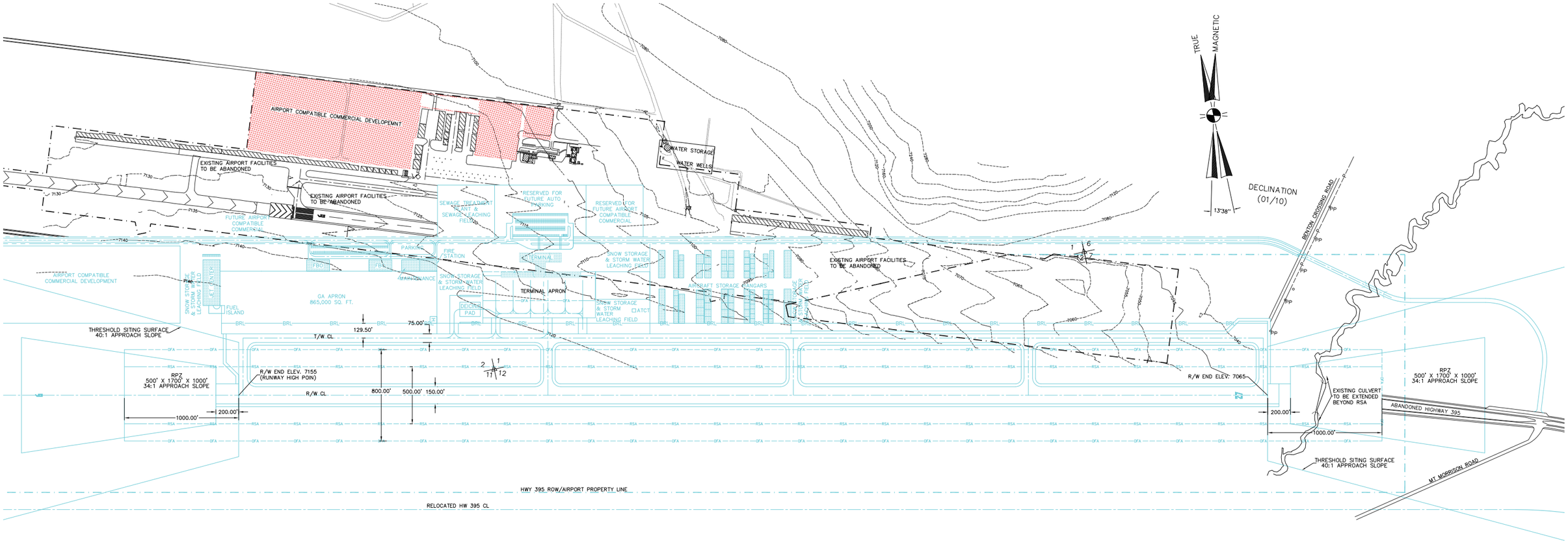
- EXISTING GROUND CONTOUR
- EXISTING AIRPORT FACILITIES
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- NEW AIRPORT OBJECT FREE AREA
- NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING

0 400 800 1200

GRAPHIC SCALE IN FEET

NOTE:

ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.



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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
MONO COUNTY CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

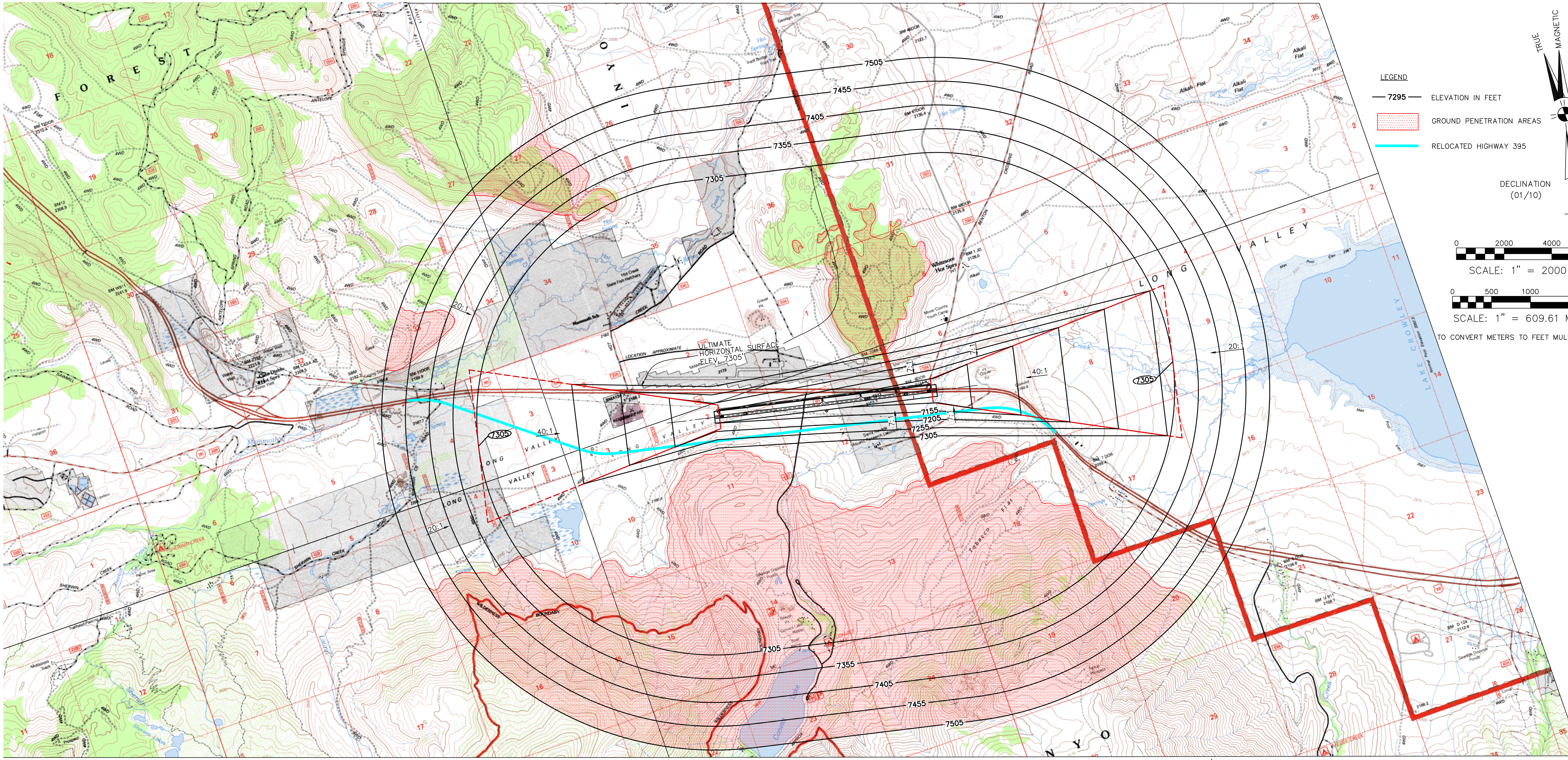
ALTERNATE AIRPORT
AIRPORT LAYOUT PLAN - SITE No. 5

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C–31



LEGEND

— 7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

RELOCATED HIGHWAY 395

TRUE / MAGNETIC

DECLINATION (01/10) 13°38'

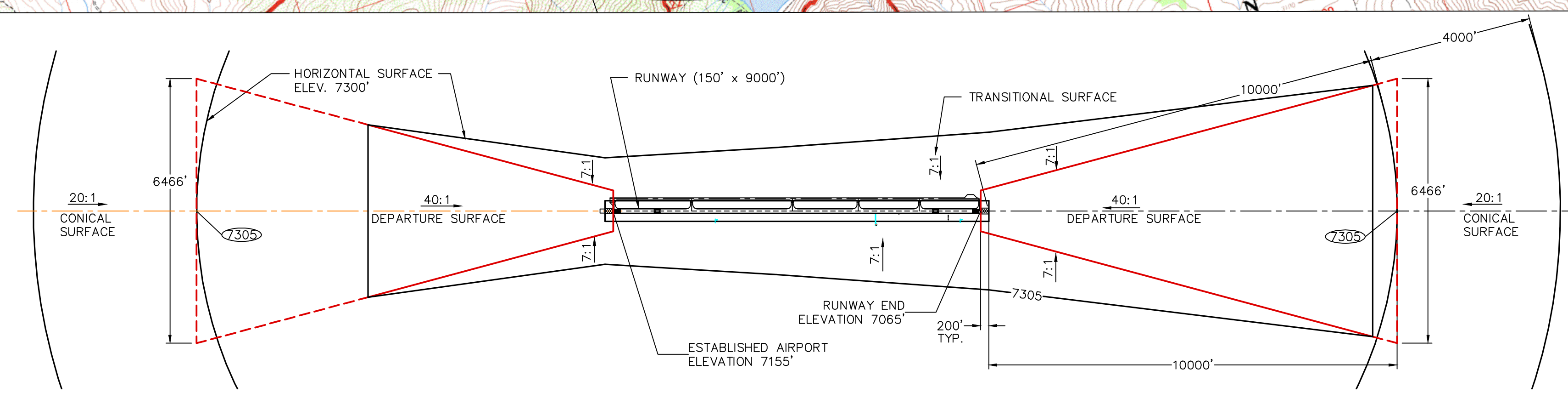
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

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OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994

NOTE:

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APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

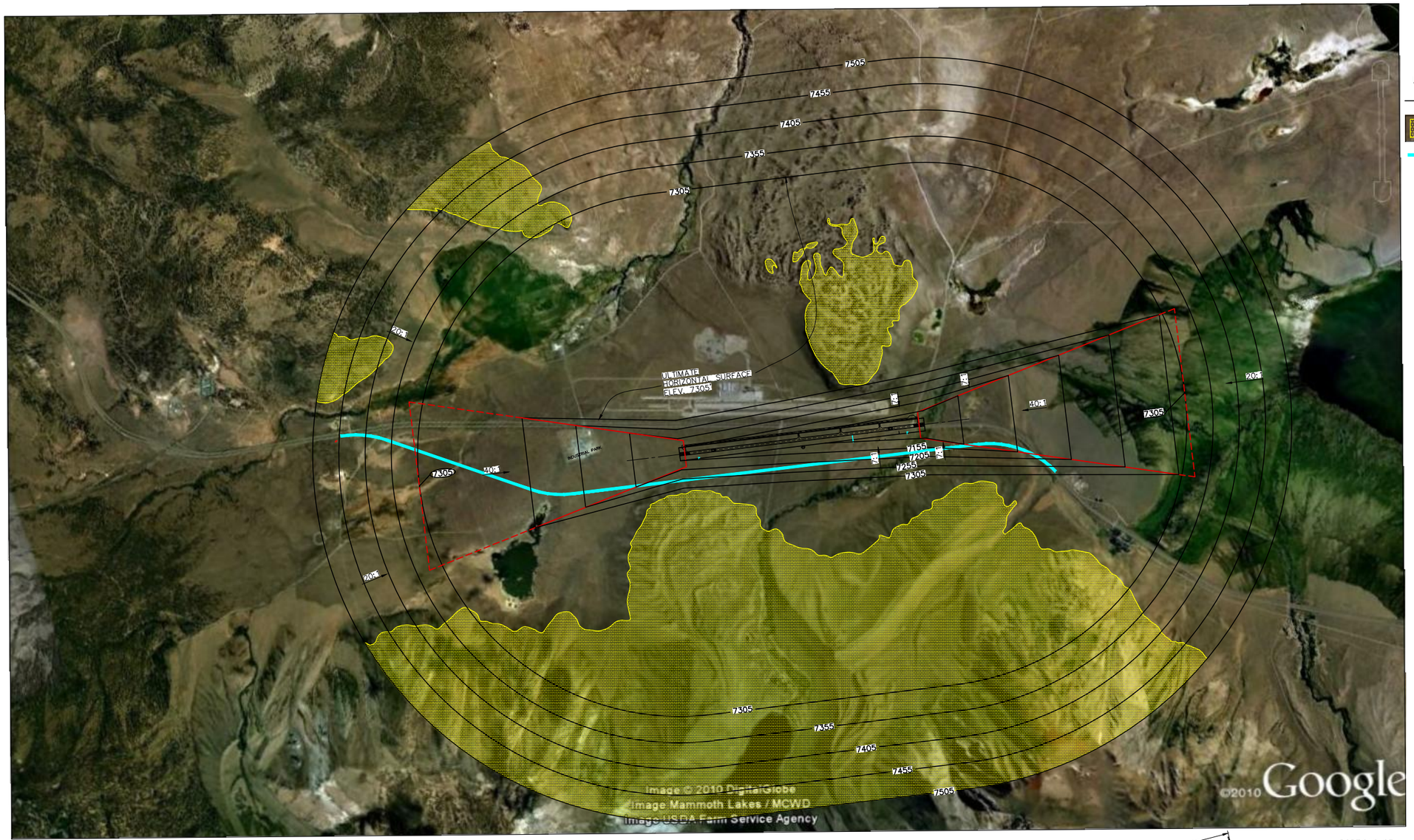
AIRPORT AIRSPACE DRAWING - SITE No. 5

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER REINARD W. BRANDLEY No. C 8044 Exp. 9-30-2012 CIVIL STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-32

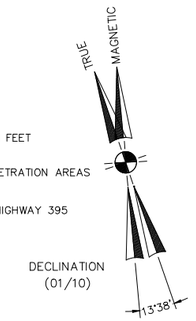


LEGEND

7295 — ELEVATION IN FEET

GROUND PENETRATION AREAS

RELOCATED HIGHWAY 395



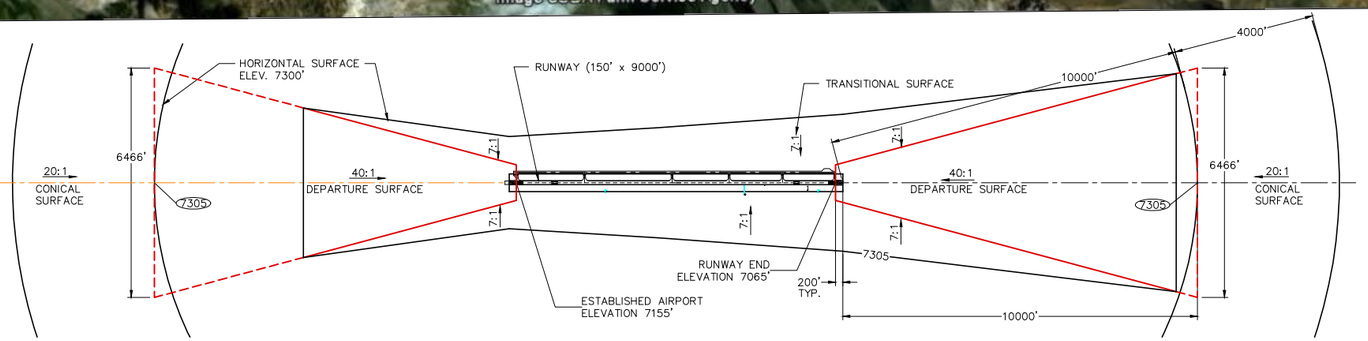
0 2000 4000 6000

SCALE: 1" = 2000 FT.

0 500 1000 2000

SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

BLOODY MTN, CA 1994
OLD MAMMOTH, CA 1994
WHITMORE HOT SPRINGS, CA 1994
CONVICT LAKE, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
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NOTE:

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3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
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APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – WILLIAM B. MANNING

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

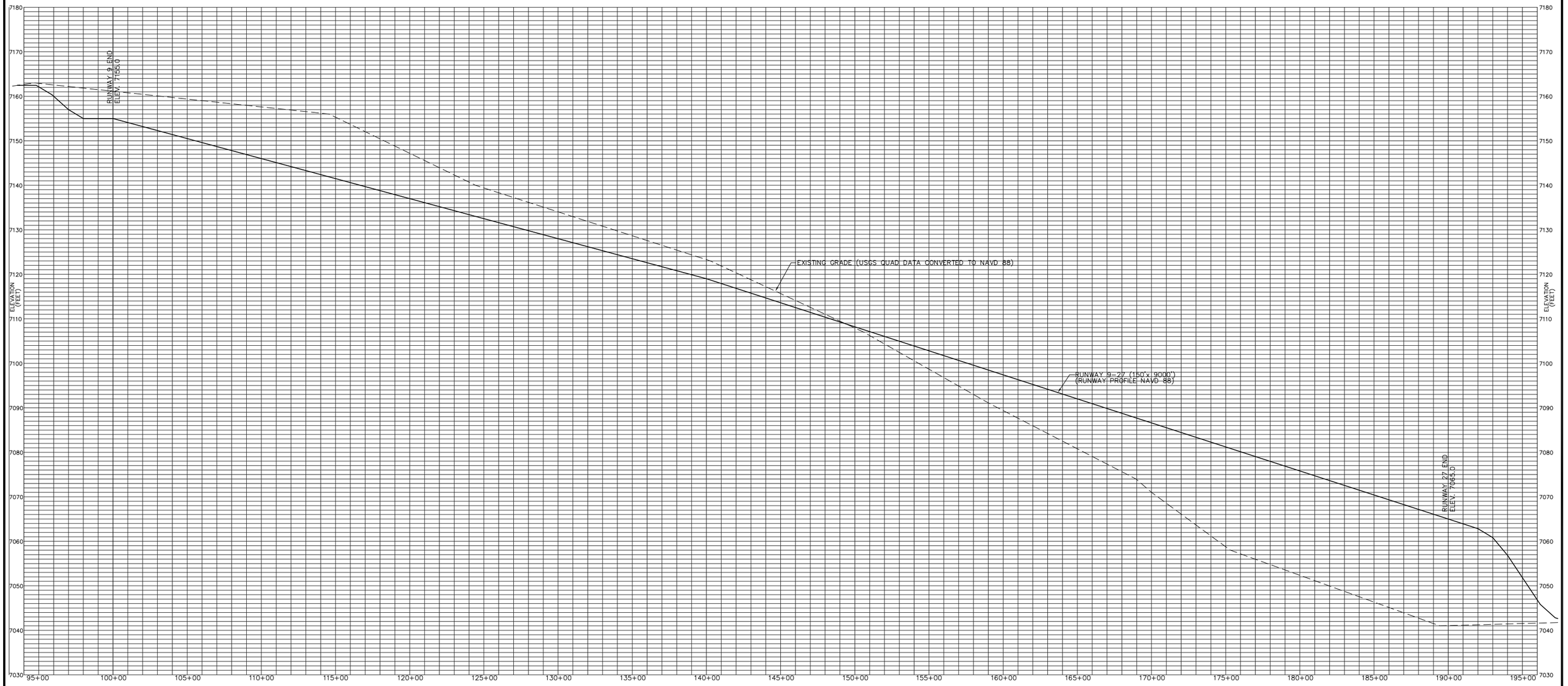
AIRPORT AIRSPACE PHOTO - SITE No. 5

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-33



SCALE: HORIZ. 1" = 300'
VERT. 1" = 10'

NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS. USGS QUAD MAP DATA CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808. BY 3.2808
2. ALL AIRPORT PROFILE DATA IS SHOWN IN NAVD 88 DATUM.
3. EXISTING USGS BASE MAP DATUM IS NGVD 29
4. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
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_____
DATE

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_____
APPROVED DATE
AIRPORT MANAGER – _____

_____
C.E. 8044

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER

6125 King Road, Suite 201 * Loomis, California 95650 * (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

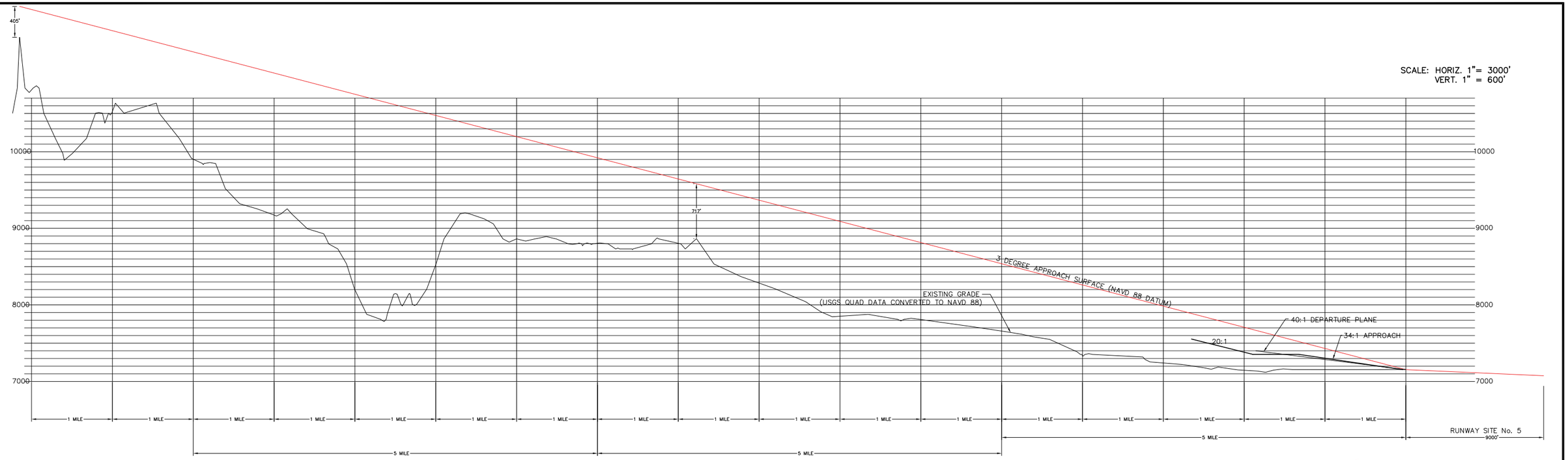
RUNWAY PROFILE - SITE No. 5

NO.	REVISIONS	BY	APR	DATE

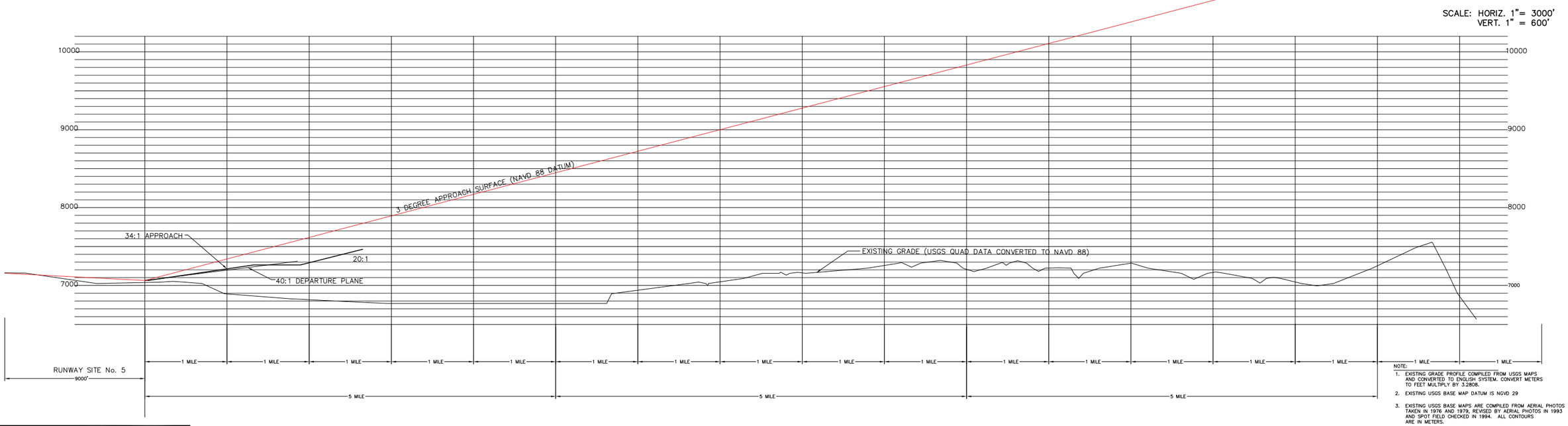
REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-34



RUNWAY 9 APPROACH – SITE No. 5



RUNWAY 27 APPROACH – SITE No. 5

NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS AND CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808.
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APPROVED
FAA
DATE

FAA DISCLAIMER

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APPROVED
AIRPORT MANAGER – WILLIAM B. MANNING
DATE

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

COUNTY OF MONO
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

APPROACH PROFILE - SITE No. 5

NO.	REVISIONS	BY	APP.	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-35

NOTE:

ALL AIRPORT DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET).
AIRPORT ELEVATIONS ARE NAVD 88 DATUM.

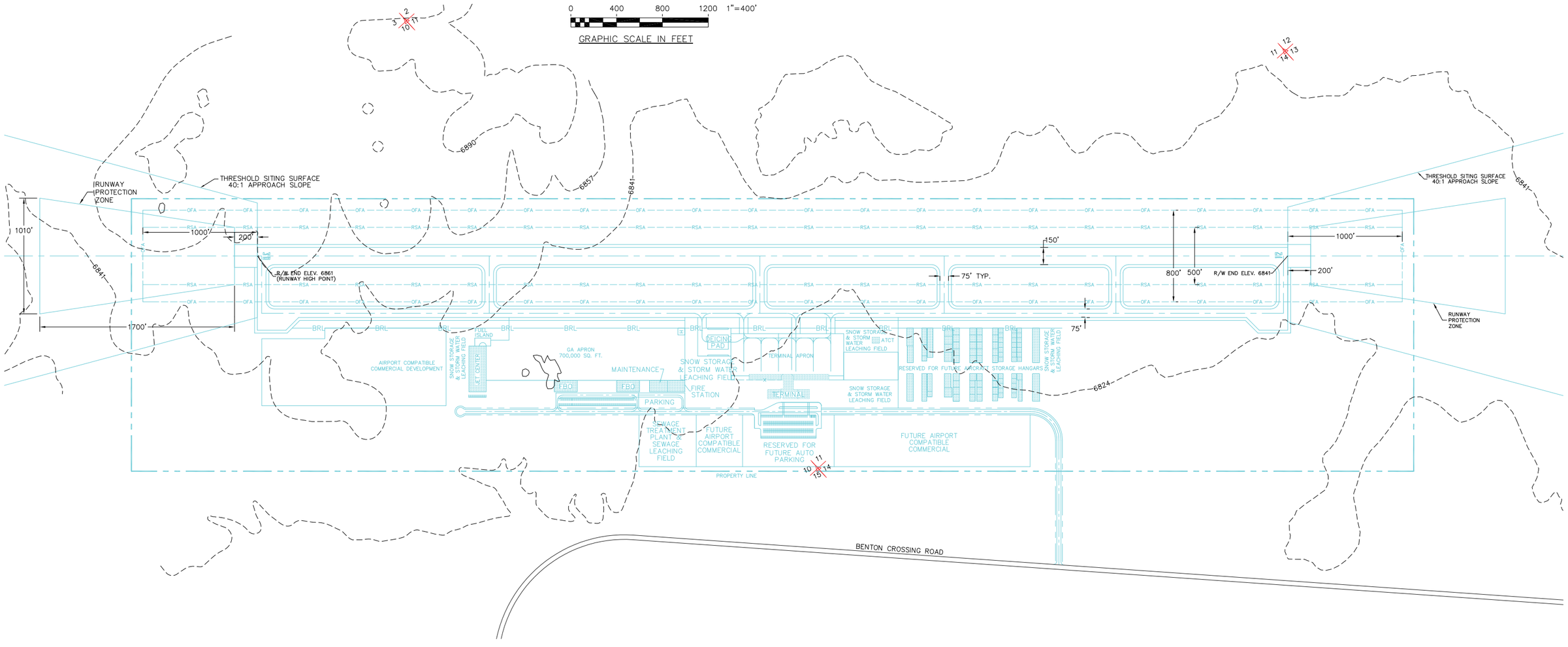
GRID NORTH

LENGEND

- EXISTING GROUND CONTOUR
- EXISTING ROADS
- EXISTING AIRPORT PROPERTY LINE
- NEW AIRPORT FACILITIES
- NEW AIRPORT PROPERTY LINE
- OFA — NEW AIRPORT OBJECT FREE AREA
- RSA — NEW AIRPORT RUNWAY SAFETY AREA
- NEW AIRPORT BUILDING

0 400 800 1200 1"=400'

GRAPHIC SCALE IN FEET



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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
MONO COUNTY CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MAMMOTH LAKES, CALIFORNIA

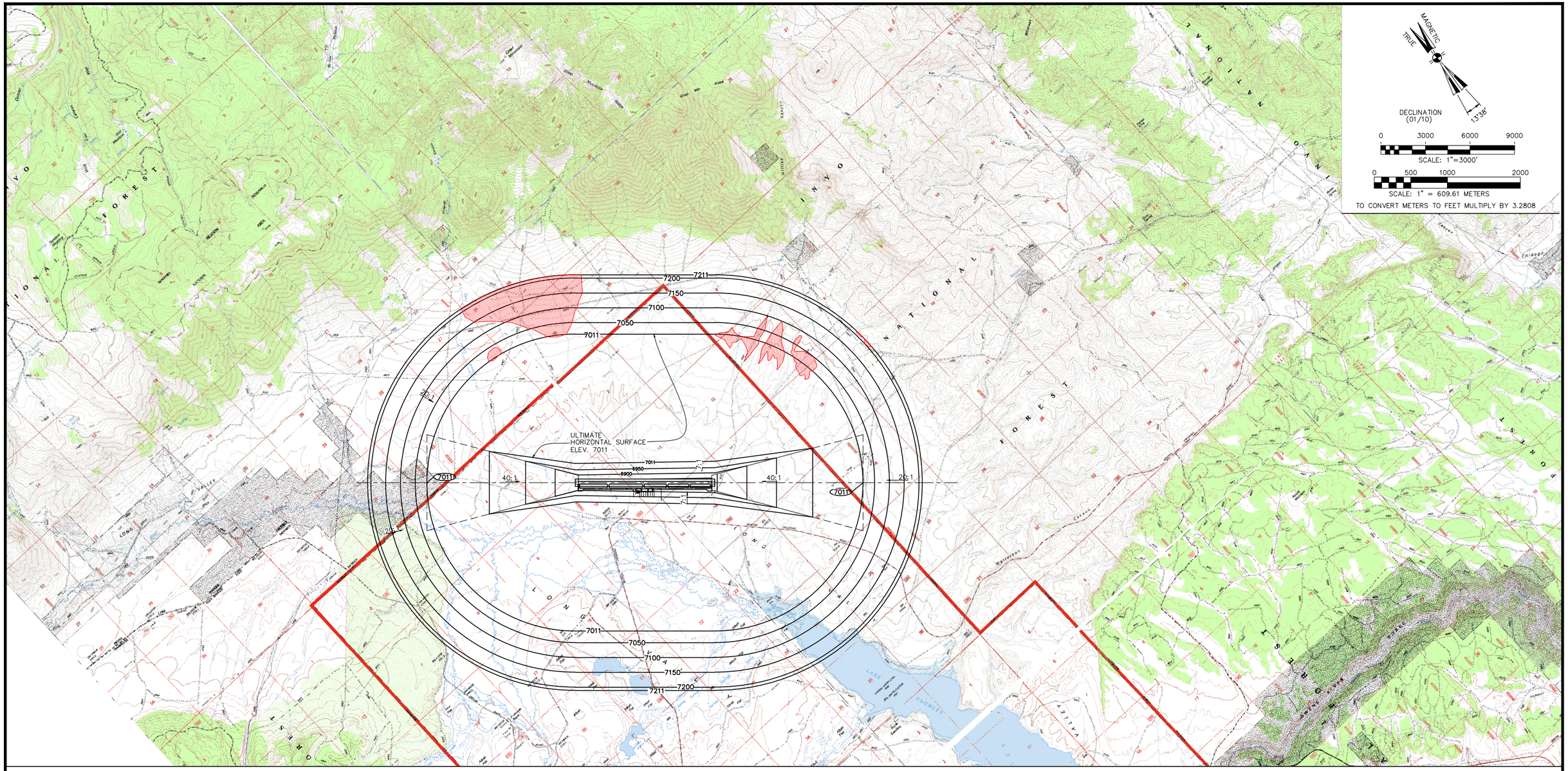
ALTERNATE AIRPORT
AIRPORT LAYOUT PLAN - SITE No. 6

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

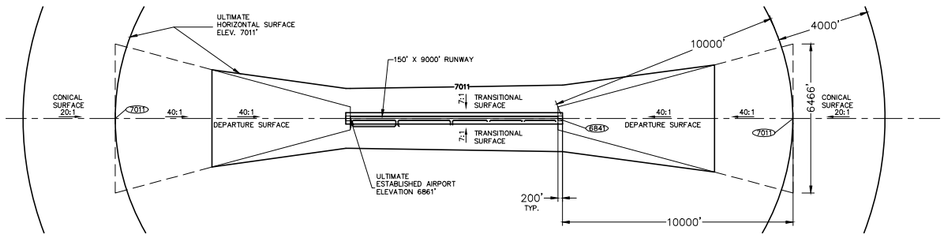
PLATE No. C–36



LEGEND

7295 ELEVATION IN FEET

GROUND PENETRATION AREAS



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

WHITMORE HOT SPRINGS, CA 1994
GLASS MOUNTAIN, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994
BANNER RIDGE, CA 1994
CASA DIABLO MOUNTAIN, CA 1994

NOTE:

1. EXISTING USGS BASE MAP CONTOUR INTERVAL IS 20 METERS
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS, DISTANCES, TC. ARE IN METERS.
4. ALL AIRSPACE DRAWING DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.
5. NATIONAL FOREST BOUNDARY SHOWN ON USGS BASE MAP AS EXISTED ON 1994. LAND TRADES HAVE MODIFIED AIRPORT PROPERTY AS SHOWN ON AIRPORT PROPERTY MAP

APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – _____

C.E. 8044
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

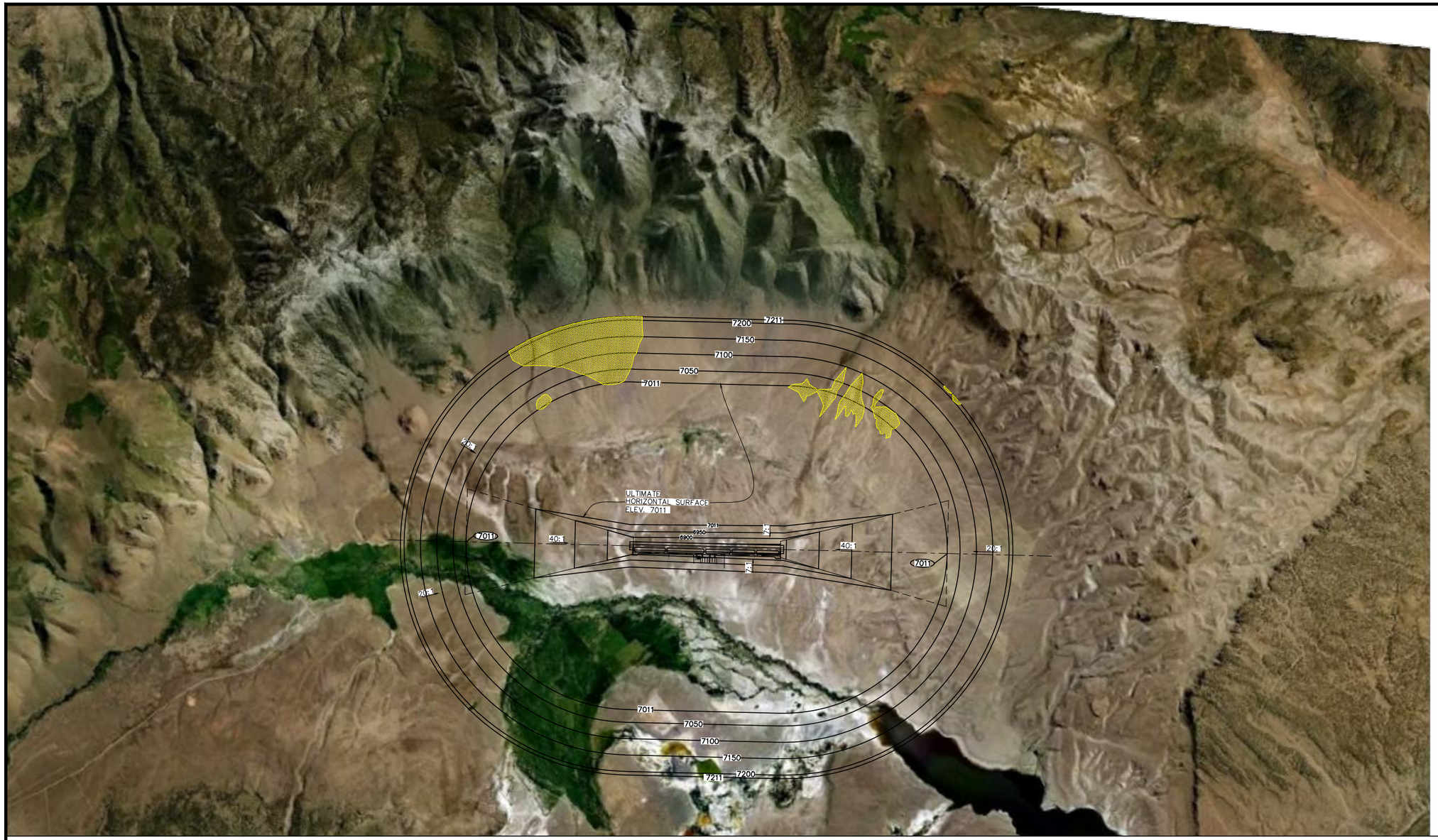
AIRPORT AIRSPACE DRAWING - SITE No. 6

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-37



MAGNETIC
TRUE
DECLINATION
(01/10)
13°38'

0 3000 6000 9000
SCALE: 1"=3000'

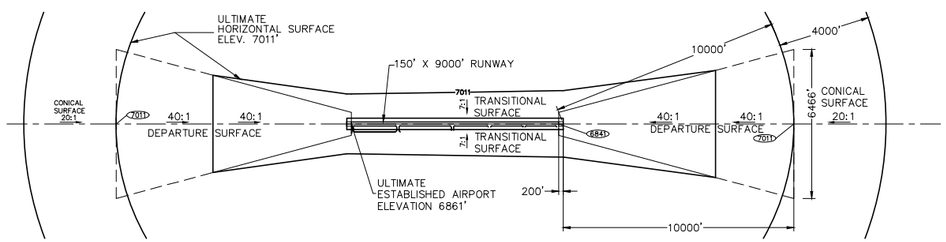
0 500 1000 2000
SCALE: 1" = 609.61 METERS

TO CONVERT METERS TO FEET MULTIPLY BY 3.2808

LEGEND

7295 ELEVATION IN FEET

GROUND PENETRATION AREAS



PORTIONS OF
USGS 7.5 MINUTE SERIES QUADRANGLE SHOWN:

WHITMORE HOT SPRINGS, CA 1994
GLASS MOUNTAIN, CA 1994
DEXTER CANYON, CA 1994
WATTERSON CANYON, CA 1994
TOM'S PLACE, CA 1994
BANNER RIDGE, CA 1994
CASA DIABLO MOUNTAIN, CA 1994

NOTE:

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APPROVED DATE
FAA

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APPROVED DATE
AIRPORT MANAGER – _____

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
C.E. 8044
6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

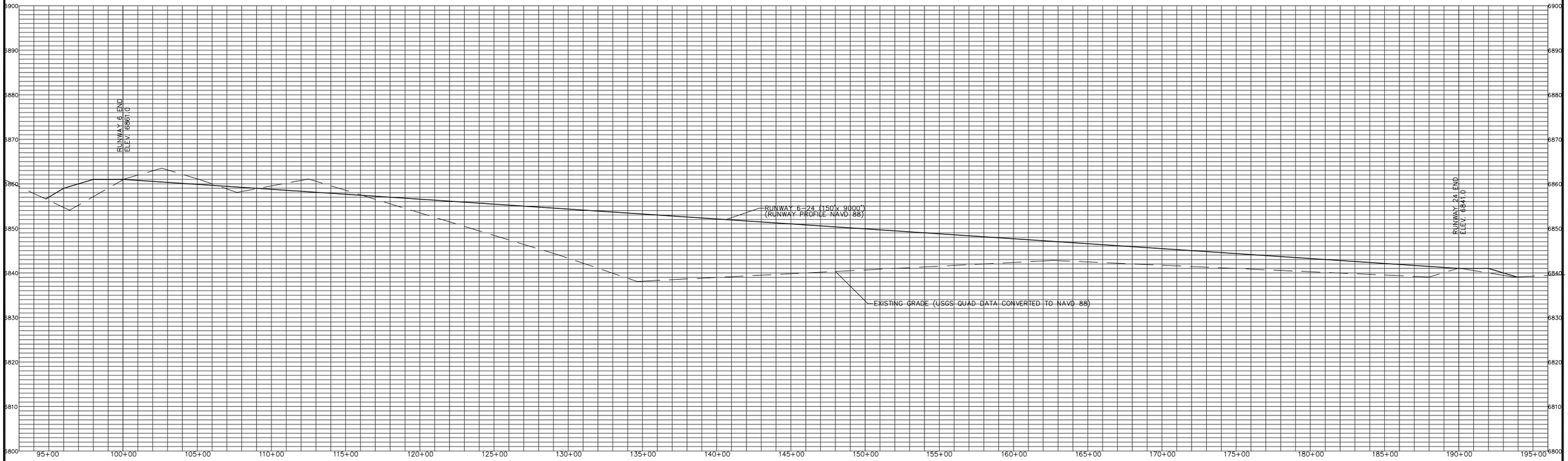
AIRPORT AIRSPACE PHOTOGRAPH - SITE No. 6

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-38



NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM 2007 TOPO SURVEY AND USGS MAPS. USGS QUAD MAP DATA CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808
2. AIRPORT PROFILE DATA AND 2007 TOPO SURVEY DATUM IS NAVD 88
3. EXISTING USGS BASE MAP DATUM IS NGVD 29
4. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
5. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

SCALE: HORIZ. 1" = 300'
VERT. 1" = 10'

_____ DATE

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TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

RUNWAY PROFILE - SITE No. 6

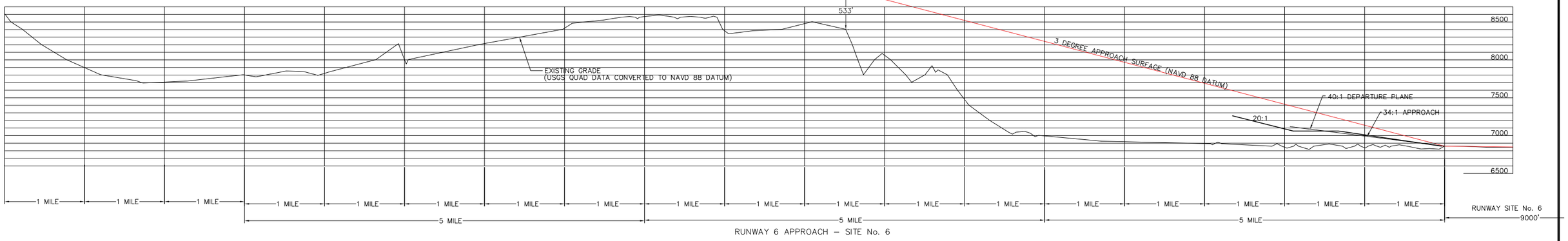
NO.	REVISIONS	BY	APP	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-39

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'

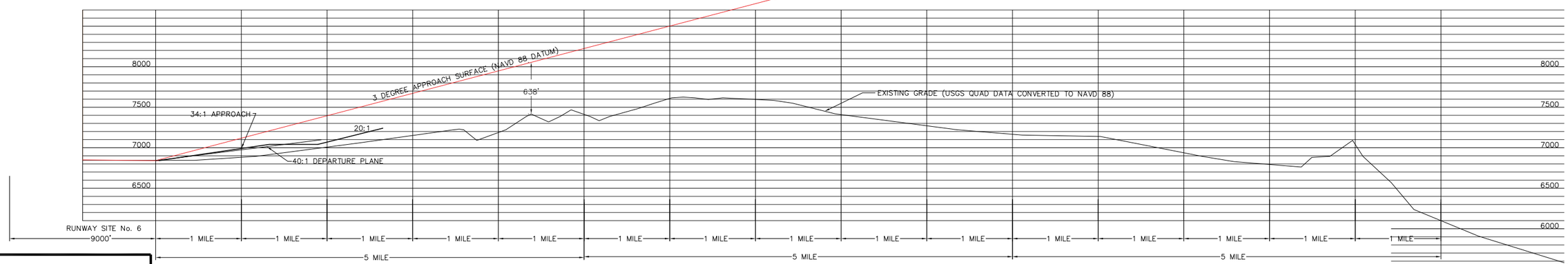


RUNWAY 6 APPROACH – SITE No. 6

NOTE:

1. EXISTING GRADE PROFILE COMPILED FROM USGS MAPS AND CONVERTED TO ENGLISH SYSTEM. CONVERT METERS TO FEET MULTIPLY BY 3.2808.
2. EXISTING USGS BASE MAP DATUM IS NGVD 29
3. EXISTING USGS BASE MAPS ARE COMPILED FROM AERIAL PHOTOS TAKEN IN 1976 AND 1979, REVISED BY AERIAL PHOTOS IN 1993 AND SPOT FIELD CHECKED IN 1994. ALL CONTOURS ARE IN METERS.
4. ALL AIRPORT PROFILE DATA ARE SHOWN IN ENGLISH SYSTEM (FEET). AIRPORT ELEVATIONS ARE NAVD 88 DATUM. NGVD 29 DATUM TO NAVD 88 DATUM IS +4.08 FT.

SCALE: HORIZ. 1"= 3000'
VERT. 1" = 600'



RUNWAY 24 APPROACH – SITE No. 6

APPROVED DATE
FAA

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6125 King Road, Suite 201 • Loomis, California 95650 • (916) 652-4725

TOWN OF MAMMOTH LAKES
STATE OF CALIFORNIA

MAMMOTH YOSEMITE AIRPORT

MONO COUNTY, CALIFORNIA

APPROACH PROFILE - SITE No. 6

NO.	REVISIONS	BY	APR	DATE

REGISTERED PROFESSIONAL ENGINEER
REINARD W. BRANDLEY
No. C 8044
Exp. 9-30-2012
CIVIL
STATE OF CALIFORNIA

DATE DEC. 15, 2010

PLATE No. C-40

Appendix D
Airport Capital Improvement Program (ACIP)

TABLE NO. D-1

MAMMOTH YOSEMITE AIRPORT
MAMMOTH LAKES, MONO COUNTY, CALIFORNIA

AIRPORT CAPITAL IMPROVEMENT PROGRAM - 2013 thru 2026

SUMMARY OF PROJECT COSTS
(Based on 2013 Unit Prices)

Project/ Priority No.	Shown on ALP	Project Type	Construction Date	Description	Construction Cost	Engineering & Administration	Total Project Cost	F.A.A. Participation	Sponsor Participation
1	Yes	D	2013	Remark Runway, Taxiway and Apron	150,000	33,000	183,000	164,700	18,300
2	**Yes**	**D**	**2013**	**Engineering Design - Projects No. 6, 10, and 13**	**-**	**12,000**	**12,000**	**10,800**	**1,200**
Total 2013					***$ 150,000***	***$ 45,000***	***$ 195,000***	***$ 175,500***	***$ 19,500***
3	Yes	D	2014	Airport Land Use Compatibility Plan (ALUC)			State Funded		
4	**Yes**	**E**	**2014**	**Environmental Assessment - Projects 12, 14-17, and 21**	**$ -**	**$ 450,000**	**$ 450,000**	**$ 405,000**	**$ 45,000**
5	**Yes**	**D**	**2014**	**Engineering Design - Projects 7, 8, and 9**	**-**	**42,000**	**42,000**	**37,800**	**4,200**
6	Yes	D	2014	Joint Seal Apron and Taxilane	69,000	16,000	85,000	76,500	8,500
7	Yes	D	2014	Obstruction Light Row - North Side	210,000	46,000	256,000	230,400	25,600
8	Yes	D	2014	Relocate Wind Socks and Segmented Circle	88,000	19,000	107,000	96,300	10,700
9	Yes	D	2014	Install Obstruction Lights on Street Light Pole and Power Pole at Benton Crossing Road	30,000	12,000	42,000	37,800	4,200
10	Yes	D	2014	Reconstruct General Aviation Aircraft Parking Apron - Phase 1	1,360,000	300,000	1,660,000	1,494,000	166,000
Total 2014					***$ 1,757,000***	***$ 885,000***	***$ 2,642,000***	***$ 2,377,800***	***$ 264,200***
11	**Yes**	**D**	**2015**	**Architectural/Engineering Design - Projects 12 thru 18**	**$ -**	**$ 2,260,000**	**$ 2,260,000**	**$ 2,034,000**	**$ 226,000**
12	Yes	D	2015	Grade Runway Object Free Area From Runway Safety Area Edge to Highway 395 ROW Fence Line	2,688,000	590,000	3,278,000	2,950,200	327,800
13	Yes	D	2015	Reconstruct General Aviation Aircraft Parking Apron - Phase 2	1,786,000	390,000	2,176,000	1,958,400	217,600
Total 2015					***$ 4,474,000***	***$ 3,240,000***	***$ 7,714,000***	***$ 6,942,600***	***$ 771,400***
14	Yes	D	2016-17	Airline Terminal	$ 15,532,000	$ 1,800,000	$ 17,332,000	$ 15,598,800	$ 1,733,200
Total 2016-17					***$ 15,532,000***	***$ 1,800,000***	***$ 17,332,000***	***$ 15,598,800***	***$ 1,733,200***
15	Yes	D	2017	Airline Terminal Apron, Deicing Pad, and Terminal Apron Taxiways	$ 5,113,000	$ 920,000	$ 6,033,000	$ 5,429,700	$ 603,300
16	Yes	D	2017	Access Road	1,064,000	200,000	1,264,000	1,137,600	126,400
17	Yes	D	2017	Automobile Parking Lot	1,376,000	250,000	1,626,000	1,463,400	162,600
18	Yes	D	2017	Terminal Area Utilities	1,530,000	275,000	1,805,000	1,624,500	180,500
19	Yes	D	2017	Second ARFF Vehicle	1,000,000	-	1,000,000	900,000	100,000
20	**Yes**	**D**	**2017**	**Engineering Design - Projects 21, 23, 25, 26, and 27**	**-**	**375,000**	**375,000**	**337,500**	**37,500**
Total 2017					***$ 10,083,000***	***$ 2,020,000***	***$ 12,103,000***	***$ 10,892,700***	***$ 1,210,300***
21	Yes	D	2018	Construct Security Fence and Cameras	$ 770,000	$ 160,000	$ 930,000	$ 837,000	$ 93,000
22	**Yes**	**E**	**2018**	**Environmental Assessment - LADWP & U.S. Forest Service Land Acquisition and/or Use Permits - Project No. 24**	**-**	**50,000**	**50,000**	**45,000**	**5,000**
23	Yes	D	2018	Construct New General Aviation Apron (179,000 sq. ft.)	1,405,000	310,000	1,715,000	1,543,500	171,500
Total 2018					***$ 2,175,000***	***$ 520,000***	***$ 2,695,000***	***$ 2,425,500***	***$ 269,500***
24	Yes	D	2019	LADWP & U.S. Forest Service Land Acquisition and/or Use Permits	$ 100,000	$ 20,000	$ 120,000	$ 108,000	$ 12,000
25	Yes	D	2020	Widen Runway Shoulders to 20'	1,300,000	116,000	1,416,000	1,274,400	141,600
26	Yes	D	2020	Widen Taxiways from 50' to 75' to Meet Taxiway Edge Safety Margin for Q400 & 25' Wide Shoulders	2,955,000	450,000	3,405,000	3,064,500	340,500
27	Yes	D	2020	Widen Aircraft Holding Aprons	315,000	60,000	375,000	337,500	37,500
28	**Yes**	**D**	**2020**	**Architectural/Engineering Design - Projects No. 29 and 30**	**-**	**180,000**	**180,000**	**162,000**	**18,000**
29	Yes	D	2021	ARFF Building and Administration Building - 8,800 sq. ft.	1,838,000	402,000	2,240,000	2,016,000	224,000
30	Yes	D	2021	Maintenance Building Apron & Access Road	1,840,000	350,000	2,190,000	1,971,000	219,000
31	**Yes**	**E**	**2021**	**Environmental Assessment - Projects No. 33 and 34**	**-**	**120,000**	**120,000**	**108,000**	**12,000**
32	**Yes**	**D**	**2022**	**Engineering Design - Projects No. 33 and 34**	**-**	**600,000**	**600,000**	**540,000**	**60,000**
33	Yes	D	2023	Reconstruct West Hangar Taxilanes*	485,500	165,000	650,500	585,450	65,050
34	Yes	D	2023	Runway 9-27 Extension - 100' x 1,200'	3,556,000	830,000	4,386,000	3,947,400	438,600
35	--	D	2025	Pavement Maintenance/Management Program Update	-	70,000	70,000	63,000	7,000
36	Yes	D	2025	Abandon Green Church	100,000	10,000	110,000	99,000	11,000
37	**Yes**	**D**	**2025**	**Architectural/Engineering Design - Project No. 38**	**-**	**900,000**	**900,000**	**810,000**	**90,000**
38	Yes	D	2026	Terminal Building Addition	7,562,000	700,000	8,262,000	7,435,800	826,200
Total 2019 thru 2026					***$ 20,051,500***	***$ 4,973,000***	***$ 25,024,500***	***$ 22,522,050***	***$ 2,502,450***
				TOTAL PROJECT COSTS	$ 54,222,500	$ 13,483,000	$ 67,705,500	$ 60,934,950	$ 6,770,550

*Only 25 feet of the tee hangar taxilanes are eligible for Federal participation.