3.2 LAND USE

This section describes land uses within Ames Research Center as a whole, and in the surrounding area. It also includes a discussion of existing conditions relative to airfield land uses.

A. Ames Research Center

Ames Research Center consists of the 752-hectare (1,857-acre) NASA-administered portion of the former NAS Moffett Field and the original NASA Ames Campus. Ames Research Center is composed of the original Ames Research Center campus, the airfield, airfield support facilities, barracks, support facilities for current and former military personnel, and open space. The portion of Moffett Field not under NASA control consists of two Department of Defense-administered housing areas. The first of these is the Berry Court Military Housing area, which lies between Dailey Road and the Space Camp compound and contains 111 units of housing on approximately 17 hectares (43 acres). The Orion Park Military Housing area lies just west of Ames Research Center and contains 567 units of housing on approximately 31 hectares (76 acres).

For purposes of this EIS, Ames Research Center has been divided into four major planning areas: the 86-hectare (213-acre) NASA Research Park (NRP), the 95-hectare (234-acre) Ames Campus, the 385-hectare (952-acre) Eastside/Airfield, and the 38-hectare (95-acre) Bay View area. The remaining 144 hectares (357 acres) of NASA-administered land consists of wetlands areas along the northern boundary of Ames Research Center. Figure 3.2-1 shows the land uses within Ames Research Center.

1. NASA Research Park

The NASA Research Park consists of 86 hectares (213 acres) of land on the southwest edge of Ames Research Center. This area includes 29 hectares (72 acres) of the Shenandoah Plaza National Historic District, which is the entire Historic District except for Hangars 2 and 3, which are in the Eastside/Airfield area. The NRP area lies adjacent to the Ames Campus and Eastside/Airfield areas. Current uses include office, R&D, retail, business services, barracks,

vehicle maintenance facilities, airfield operations, and storage. There are also 9 hectares (22 acres) of burrowing owl habitat adjacent to the airfield which are considered non-developable. There are approximately 5.6 hectares (14 acres) of active open space.

2. Ames Campus

The Ames Campus area encompasses 95 hectares (234 acres) in the northwest portion of Ames Research Center. The Ames Campus Area contains 40 major technical facilities and laboratories, and 48 other major supporting and administrative buildings and structures. Current programs of the Ames Campus are directed toward research and development in aeronautics, life and space sciences, and information technology.

3. Eastside/Airfield

The Eastside/Airfield area consists of 385 hectares (952 acres) on the east side of Ames Research Center. The primary land use in the Eastside/Airfield area is the runway, which is currently utilized by the California Air National Guard, ARC aircraft, and aircraft from other federal entities. Hangars 2 and 3, which are part of the Shenandoah Plaza National Historic District, are in this area.

4. Bay View

The Bay View area consists of 38 hectares (95 acres) on the northwest edge of Ames Research Center. The Bay View area is currently undeveloped, and is composed primarily of non-native grassland.

B. Surrounding Land Uses

1. Existing Land Uses

Land uses in the area surrounding Ames Research Center are a mix of industrial, office, residential, agricultural, and park uses. These land uses are illustrated in Figure 3.2-1, and described below:

FIGURE 3.2-1

EXISTING LAND USE

1. NASA R&D
2. Fuel Operations
3. Operations & Maintenance
4. Recreation
5. Public / Educational
6. Administration/Training
7. Open Space and Wetlands
8. Personnel Services
9. Administration/Billeting
10. Commercial
11. Housing
12. Airfield Operations
13. NASA Admin
14. Golf Course
15. Undeveloped Land/ Burrowing Owl Habitat
16. R&D, Office, Light-Industrial
17. Agricultural
18. Residential: Mix of Densities
19. High-Density Residential
20. Ordnance Storage

N

0 76m 152m 305m

0 250ft 500ft 1000ft

NASA AMES RESEARCH CENTER

NASA AMES DEVELOPMENT PLAN FINAL EIS

- Stevens Creek and the recreational trail that runs along the levee beside it lie immediately west of Ames Research Center. The central portion of the Creek is bordered by a strip of agricultural land that is used as a Christmas tree farm.
- Further to the northwest are a mixture of office and light industrial buildings, with some supporting commercial, retail and entertainment services on the north side of Shoreline Boulevard.
- Directly west of Ames Research Center is a large mobile home park with approximately 358 units.
- South of Ames Research Center and Highway 101 are a wide variety of uses, including general light industrial, office, commercial, and residential. Residential uses are a mixture of high-density multi-family units and detached single family homes.
- Southwest of Ames Research Center, just below the Highway 85 and Highway 101 interchange, is a regional park. Across Highway 85 to the west of the park is low-density residential and general industrial land.
- Southeast of Ames Research Center is the Sunnyvale Municipal Golf Course, which is dedicated as park land. 14 hectares (35 acres) of the Sunnyvale Municipal Golf Course belongs to Ames Research Center. Further south of the golf course, there is a mix of industrial and medium-density residential land uses.
- The area immediately to the east of Ames Research Center is characterized by industrial and office uses. Beyond it, uses include low- and medium-density residential and general business.
- Midpeninsula Regional Open Space District's Stevens Creek Nature Study Area is adjacent to the northwest corner of Ames Research Center. It consists of pickleweed salt marsh and open water (stormwater retention pond) habitat.
- Open space and recreational land uses surrounding Ames Research Center include the Bay Trail, the Stevens Creek Regional Trail, the Shoreline

Amphitheater, various neighborhood parks, a golf course, and several private recreational areas.[1]

2. Planned Cumulative Land Uses

This section describes new uses planned in the area surrounding Ames Research Center under cumulative conditions.

a. Mountain View

There are a number of planned developments within the City of Mountain View that will be in close proximity to Ames Research Center. A new development with approximately 46,000 square meters (500,000 square feet) of office and R&D space is under construction within the North Bayshore Land Use Study Area directly west of Ames Research Center. The existing sanitary landfill just west of this new development will eventually become a recreational site. The remainder of the North Bayshore Land Use Study Area consists primarily of parking for the Shoreline Amphitheatre. Currently, the City of Mountain View has no plans to develop these lots.

There are a number of other planned office and R&D developments that will be located in close proximity to Ames Research Center in the area north of Highway 101 between North Shoreline Boulevard and Ames Research Center. Current plans include over 93,000 square meters (1 million square feet) of office and R&D space. Across Highway 101 to the south in the Middlefield/Ellis/Whisman office and light industrial area, an additional 56,000 square meters (600,000 square feet) of new office and R&D space is planned, including a small amount of retail space.[2]

---

[1] Information derived from the City of Mountain View Land Use Map, the City of Sunnyvale Land Use Map, and the NASA Ames Aerodynamics Testing Program Final Environmental Impact Statement, p.40-47, October 1998.

[2] Brad Eckhardt, Senior Planner with the City of Mountain View Planning Department, 11-1-99.

b. Sunnyvale

The City of Sunnyvale is planning a number of R&D, office and R&D, and industrial developments that will be located east of Ames Research Center, and south of Highway 101 next to the Sunnyvale Municipal Golf Course. To the east, just over 37,000 square meters (400,000 square feet) of office, R&D, and industrial development is currently being planned within and adjacent to Lockheed Martin. To the south of Ames Research Center, another 37,000 square meters (400,000 square feet) of new office and R&D space is also in the planning stages.

c. Midpeninsula Regional Open Space District

Midpeninsula Regional Open Space District (MROSD) plans to restore the currently diked Stevens Creek Nature Study Area to tidal flow.

C. Airfield Compatibility

Moffett Federal Airfield is owned by NASA and is currently used by NASA and CANG, with some limited use by other Department of Defense agencies. Since taking over the Airfield from the Navy, NASA has primarily used the facility for Rotorcraft and transient research aircraft.

Ames Research Center has applied Federal Aviation Administration (FAA) civilian standards to determine adjacent land uses and airport operating clearances for Moffett Field. The controlling documentation regarding such clearances and design criteria are based on FAA Regulations Part 77. The following regulations govern other aspects of airfield operations:

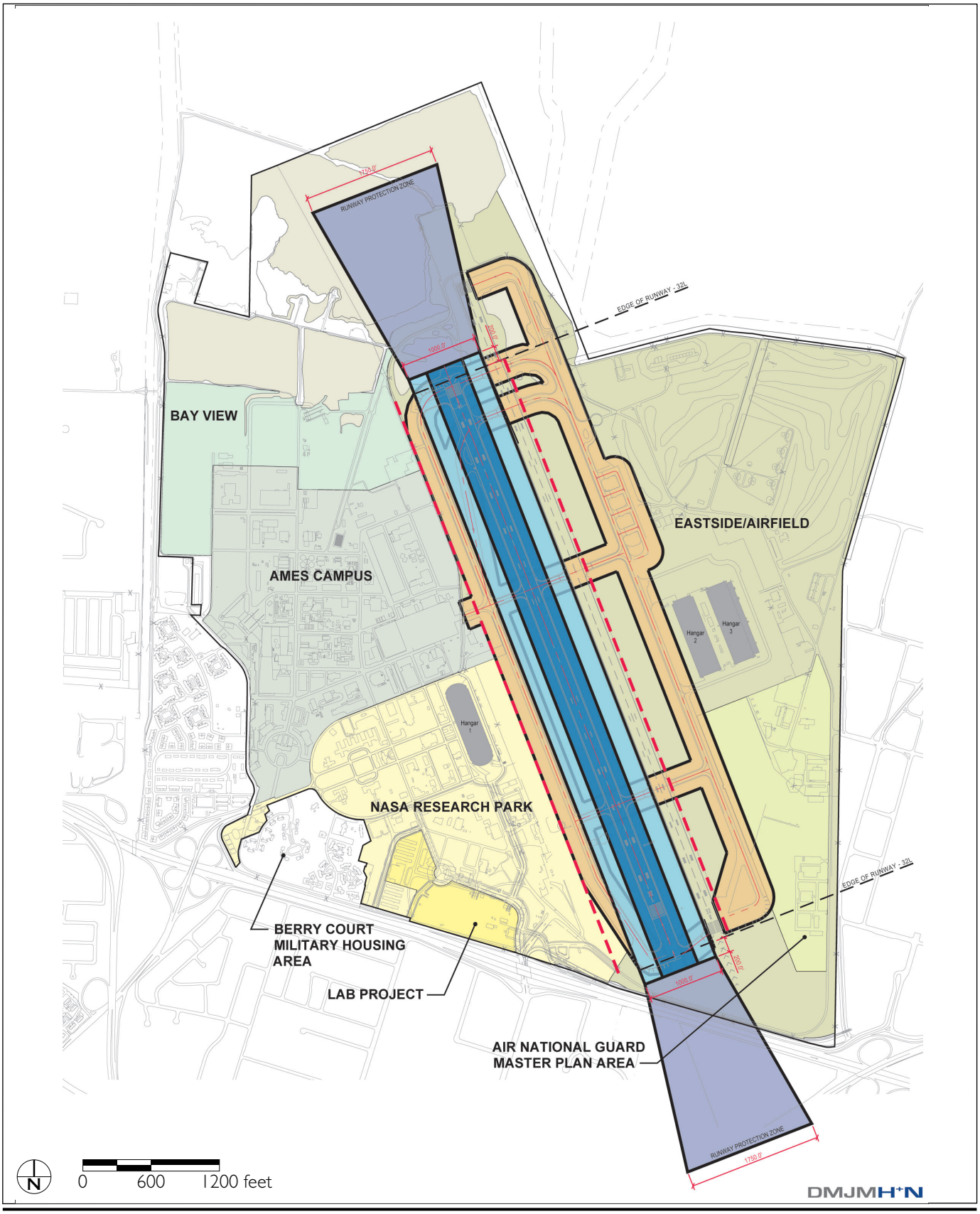
- Part 99, which covers security control of air traffic
- Part 150, which governs airport noise compatibility planning and contains both Noise Exposure Maps and a Noise Compatibility Program to reduce and prevent noise exposure impacts.

In addition, Moffett Federal Airfield generally operates in accordance with FAR Part 139, which describes the procedures, standards, equipment, facilities, and personnel the airfield would need to maintain to be certified under Part 139. However, Moffett Federal Airfield is not currently certified under FAR Part 139, nor is it required to be.

FAR Part 77 sets out a number of minimum operating clearances, based on the runway centerline and the wingspan of the largest aircraft expected to use the airfield, which establish runway protection zones, runway safety zones, and taxiway Object Free Areas. These areas, shown in Figures 3.2-2 and 3.2-3, delineate areas on the ground which must be kept clear of structures or any other obstruction.

In addition, Part 77 addresses maximum building heights adjacent to the runways. Specifically, no obstruction may penetrate the "Transitional Surface," which is determined by calculating a slope of 7:1 extending from the edge of the "Primary Surface," which is an imaginary surface extending 152 meters (500 feet) on either side of the centerline of the runway. For example, building heights at the western edge of NRP Parcels 7 and 8 may not exceed 22 meters (73 feet), according to the transitional surface slope. At the eastern edge of the parcels, building heights may not exceed 120 feet. Furthermore, no buildings may be constructed within the "Building Restriction Line," which is located 234 meters (769 feet) from the centerline of the runway, and the taxiway Object Free Area prohibits the placement of buildings within 59 meters (193 feet) of the taxiway centerline. The Transitional Surface, Primary Surface, and Building Restriction Line are all shown in Figure 3.2-4.

Moffett Federal Airfield currently operates in accordance with these requirements, with the exception of Hangars 1, 2, and 3. However, because these hangars were constructed before Part 77 regulations were adopted, and because of their status as historic resources, there are no plans to alter the hangars in order to comply with Part 77.



Runway Protection Zone

The Primary Surface

Runway Safety Zone

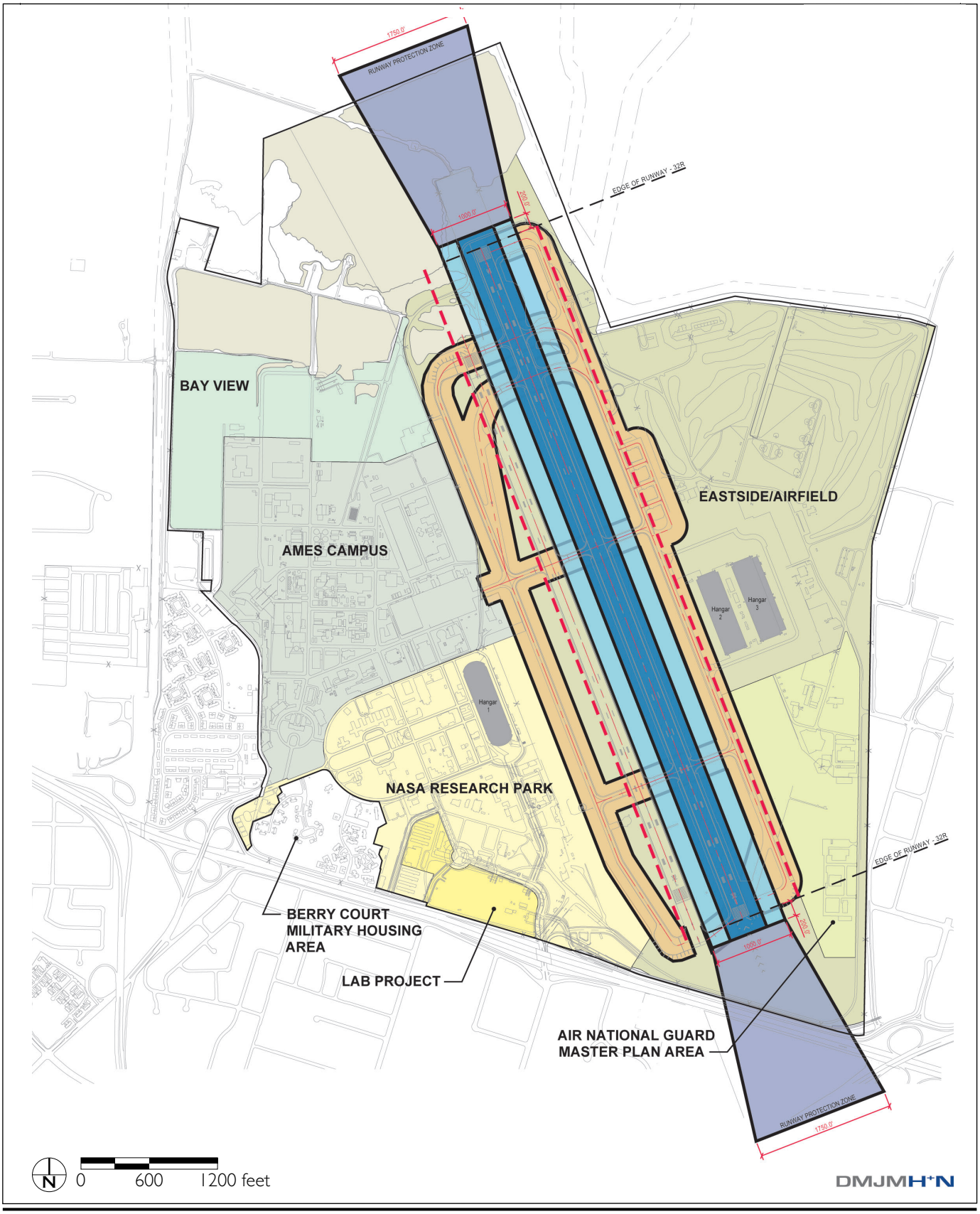
Taxiway Object Free Area

Building Restriction Line

FIGURE 3.2-2

MINIMUM OPERATING CLEARANCES
RUNWAY 32 LEFT

NASA AMES RESEARCH CENTER
FINAL ENVIRONMENTAL IMPACT STATEMENT



Runway Protection Zone

The Primary Surface

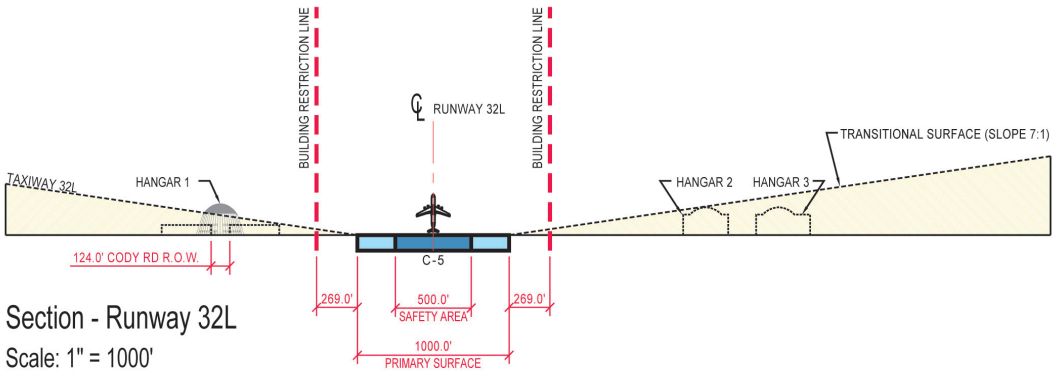
Runway Safety Zone

Taxiway Object Free Area

Building Restriction Line

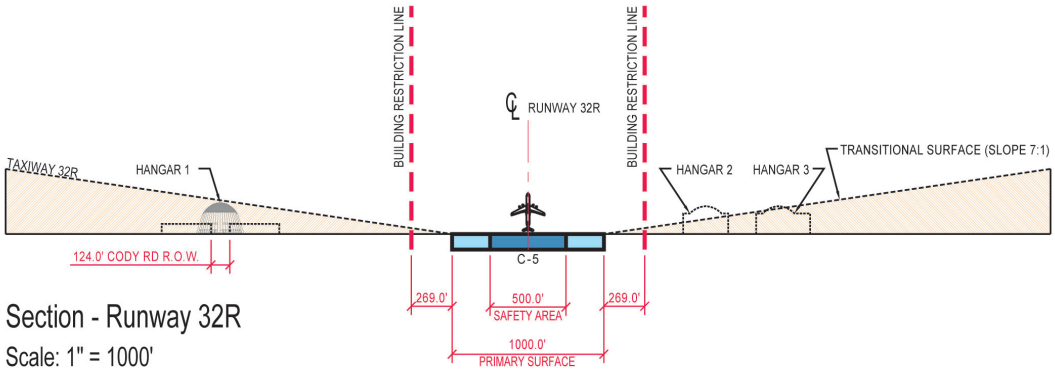
FIGURE 3.2-3

MINIMUM OPERATING CLEARANCES
RUNWAY 32 RIGHT



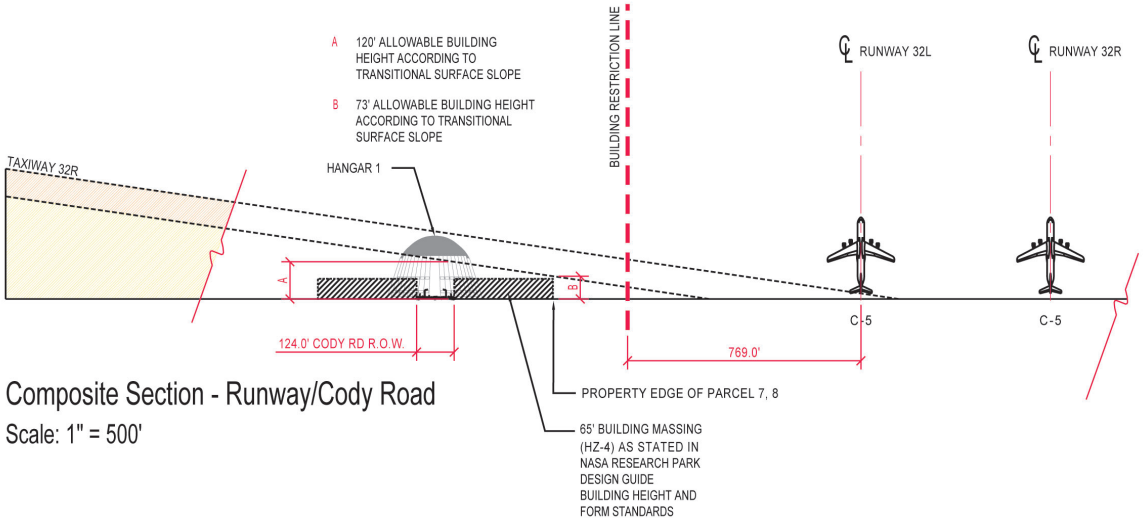
Section - Runway 32L

Scale: 1" = 1000'



Section - Runway 32R

Scale: 1" = 1000'



Composite Section - Runway/Cody Road

Scale: 1" = 500'

DMJMH+N

FIGURE 3.2-4

RUNWAY OBSTRUCTION SECTIONS