

#20 + #21

FINDING OF NO SIGNIFICANT IMPACT
129th RESCUE WING
CALIFORNIA AIR NATIONAL GUARD

Master Plan Short-Range Projects
Moffett Federal Airfield, California

NASA/AMES RESEARCH CENTER
RESEARCH INFORMATION RESOURCES
MS 202-3
MOFFETT FIELD, CA 94035-1000

1.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action

Facilities of the 129th Rescue Wing are currently distributed around seven sites within Moffett Federal Airfield in facilities leased from the National Aeronautics and Space Administration (NASA). Some of the unit's operations are located in space and facilities shared with other tenants.

In many cases, operations are located in facilities not designed for the purpose for which they are being used. This decentralized arrangement and the use of facilities not designed for the unit's use, creates inefficiency in the unit's operation and hinders its ability to support its mission. The proposed action is the implementation of master plan short-range projects to consolidate 129th Rescue Wing operations in support of its current and future mission into facilities which are designed for the unit's use and are arranged in a functional and efficient manner. Several minor existing buildings would be demolished, new buildings would be constructed, and all 129th Rescue Wing operations would be consolidated into one area located in the southwest corner of the installation. New buildings or building additions would be constructed to house the following operations:

- Composite Maintenance Hangar,
- Fuel Cell and Corrosion Control,
- Aircraft Engine Inspection and Maintenance,
- Hazardous Materials Pharmacy,
- Survival Equipment Shop, and
- Pararescue/Fitness.

Other operations would be relocated to existing buildings, the aircraft apron would be expanded, and new parking areas and interconnecting roadways would be added.

Special Operating Procedures (SOPs) have been incorporated into the proposed action to address potential environmental impacts. These procedures would:

- minimize seismic and geotechnical hazards,
- control erosion and sedimentation,
- minimize impacts on natural habitats through the control of soil erosion and nonpoint runoff and the proper disposal of construction and demolition material and debris,

- protect burrowing owl habitat,
- protect archaeological resources and historic structures, and
- control construction air emissions.

Alternatives to the Proposed Action

In addition to the proposed action, four alternatives including a no-action alternative were identified and evaluated. Alternatives 1, 2, and 3 involve variations on the locations of buildings, parking, and streets and reduce the potential for disturbance of areas where burrowing owls have been sighted. Alternative 4, the no-action alternative, would maintain the status quo and avoid all impacts associated with the proposed action. The 129th Rescue Wing would continue operating as it currently does. Facilities would remain in their current configuration and would not be consolidated to a single site. Alternatives 1, 2, and 3 would achieve all of the objectives of the proposed action. The proposed action is preferred primarily because of the potential increase in efficiency of operation of the unit as opposed to concerns regarding environmental effects, and because potential environmental effects, including those associated with burrowing owls, can be addressed. Alternative 4 would not achieve any of the objectives of the proposed action and has, therefore, been rejected.

2.0 ANTICIPATED ENVIRONMENTAL IMPACTS

As discussed above, SOPs have been incorporated into the proposed action to address potential environmental impacts. The environmental assessment (EA) did not identify any significant environmental effects. The following is a brief discussion of the effects related to each issue area addressed in the EA.

Land Use and Zoning. The proposed action would occur entirely within the existing boundaries of the installation and is consistent with existing zoning. No adverse effects related to land use compatibility were identified.

Historic and Cultural Resources. Based on the results of previous surveys, it does not appear that the proposed action will affect any known archaeological sites. Implementation of SOP-5 will ensure that adverse affects on archaeological resources will be avoided. Some buildings at the installation have been previously evaluated for their historical significance by the Navy, resulting in the nomination and listing of a historic architectural district in the National Register of Historic Places (NRHP). Most of the buildings and structures included in the district or otherwise designated as landmark properties would not be directly or indirectly affected by the proposed action. Hangar Nos. 2 and 3 are included in the historic districts and are listed individually in the NRHP. Although 129th Rescue Wing Operations located in Hangar No. 3 would be relocated under the proposed action, there would be no direct or indirect effect on the historic property because this action would not result in abandonment or discontinued maintenance of the hangar. All buildings affected by the proposed action with the exception of Building 655 have either been determined to be ineligible for

listing in the NRHP for their significance during World War II or date to the 1960s and 1970s. Implementation of SOP-6 will ensure that adverse effects on architectural resources will be avoided.

Population and Housing. The proposed action involves relocating existing 129th Rescue Wing personnel within the bounds of Moffett Federal Airfield and would not increase the number of personnel assigned to the unit. Accordingly, the proposed action would not directly affect employment at the installation or the total population in the area.

Earth Resources. The proposed action is not anticipated to have adverse effects on earth resources. No changes in topography or surface relief features would result from the proposed action because the project site is flat. SOP-1 and SOP-2 would ensure that best management practices to control excessive erosion of soils and offsite sedimentation would be used during construction and demolition activities and that the design of new and modified structures would conform with the Uniform Building Code to minimize seismic hazards.

Water Resources. The proposed action would not have adverse effects on surface water or groundwater hydrology. The project site and all new project-related construction would be located outside the 100-year flood plain. SOP-1 and SOP-2 would ensure that best management practices to control excessive erosion of soils and offsite sedimentation would be used during construction and demolition activities.

Biological Resources. The proposed action would not have a substantial adverse impact on common vegetation and wildlife resources at the project site. No wildlife habitats would be fragmented by the project, and no wildlife movement corridors would be affected. Burrowing owls are known to nest in the grassy or open areas of the project site. The burrowing owl is a federal nongame bird species of management concern and a state species of special concern. Implementation of SOP-4 would avoid and minimize impacts on burrowing owls. No wetlands or sensitive habitats are present at or adjacent to the project site; therefore, no adverse impacts would occur on these resources.

Transportation. No increase in the number of aircraft, aircraft activity, or personnel assigned to the unit would occur with implementation of the proposed action. Except for minor increases in surface traffic during construction and demolition of facilities, no changes in surface or air traffic volume or patterns would take place with implementation of the proposed action.

Air Quality. Construction and demolition activities could result in short-term increases in particulate matter smaller than 10 microns in diameter (PM10) emissions. Implementation of SOP-7 will avoid or minimize this impact. Some buildings to be demolished may contain or are known to contain asbestos-containing materials. Disturbance of these materials could result in the emission of asbestos fibers. Implementation of SOP-8 will avoid or minimize this impact. Some buildings to be demolished may contain small amounts of lead-based paint. Disturbance of material containing lead-based paint during demolition could result in the emission of lead dust. Implementation of SOP-9 would avoid or minimize this impact. Annual pollutant emissions related to operations under the proposed action would be less than or equal to existing combustion source

emissions. No long-term increases in reactive organic gases (ROG), nitrogen oxide (NO_x), or PM10 emissions would occur under operation of the proposed action.

Public Services and Utilities. The proposed action would not result in an increase in the number of personnel in the unit. Accordingly, use of electricity and water and the generation of wastewater would not increase substantially, and there would be no increased demand for fire and police protection services. The potential increase in natural gas demand would be well within the capacity of the local supplier.

Hazardous Materials and Waste. Two of the 19 hazardous material cleanup sites identified in the Navy's Installation Restoration Program are located in the area where 129th Rescue Wing operations would be consolidated under the proposed action. One site has been previously remediated and locations of new facilities have been selected to avoid these sites. Relocation of new facilities would not involve a substantial increase in the use or generation of hazardous materials. Implementation of the NASA Spill Prevention Plan and other hazardous materials plans in place at the installation would ensure that no adverse effects related to hazardous materials would occur.

Noise. Under the proposed action no new aircraft would be assigned to the 129th Rescue Wing and aircraft activity would not increase. No increase in vehicle surface traffic would occur either. Accordingly, no aircraft or surface traffic noise increases would occur.

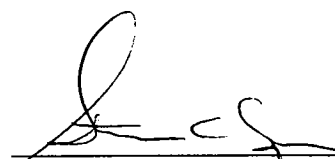
Visual Resources. The overall impact of the new buildings on the visual quality in the area is considered low because these new structures would conform to the character of the surrounding air field; views would continue to be dominated by Hangar Nos. 1, 2, and 3; and views of the area from golf courses and U.S. Highway 101 are not considered highly sensitive.

3.0 FINDING OF NO SIGNIFICANT IMPACT

Based on a detailed analysis of environmental issues in the attached EA, the proposed action does not constitute a major federal action significantly affecting the quality of the human environment. The current analysis completes the requirements pursuant to the National Environmental Policy Act and its regulations promulgated by the Council on Environmental Quality. Therefore, an environmental impact statement is not required.

Any comments concerning this Finding of No Significant Impact should be directed to:

Robert Ogle, Environmental Manager
129th Rescue Wing (M/S 7, 129RQW/EM)
P.O. Box 103
Moffett Federal Airfield, CA 94035-5006


STEVEN C. SPEER, Colonel, CA ANG
Commander

5 May 97
Date

Final
Master Plan Short-Range Projects
Environmental Assessment
California Air National Guard
129th Rescue Wing
Moffett Federal Airfield, California

Prepared for:

129th Rescue Wing
Moffett Federal Airfield, CA 94035
Contact: Robert Ogle
415/603-9060

March 1997

This document should be cited as:

California Air National Guard, 129th Rescue Wing. 1997. Master plan short-range projects environmental assessment - California Air National Guard, 129th Rescue Wing, Moffett Federal Airfield, California. Final. March. Moffett Federal Airfield, CA. Prepared by Jones & Stokes Associates, Inc. (JSA 95-026), Sacramento, CA.

Table of Contents

	Page
1.0 INTRODUCTION	1-1
1.1 LOCATION OF THE PROPOSED ACTION	1-1
1.2 BACKGROUND	1-1
1.3 PURPOSE OF AND NEED FOR THE PROPOSED ACTION	1-2
1.4 ENVIRONMENTAL COMPLIANCE	1-3
2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2-1
2.1 PROPOSED ACTION	2-1
2.1.1 Present Development Plans	2-1
2.1.2 Short-Range Plan	2-4
2.2 ALTERNATIVES TO THE PROPOSED ACTION	2-6
2.2.1 Alternative 1	2-6
2.2.2 Alternative 2	2-7
2.2.3 Alternative 3	2-7
2.2.4 Alternative 4	2-8
2.3 SPECIAL OPERATING PROCEDURES	2-8
3.0 AFFECTED ENVIRONMENT	3-1
3.1 LAND USE AND ZONING	3-1
3.2 HISTORICAL AND CULTURAL RESOURCES	3-2
3.2.1 Archaeological Resources	3-2
3.2.2 Architectural Resources	3-3
3.3 POPULATION AND HOUSING	3-3
3.4 EARTH RESOURCES	3-4
3.4.1 Topography	3-4
3.4.2 Geology and Seismicity	3-4
3.4.3 Soils	3-5
3.5 WATER RESOURCES	3-5
3.5.1 Surface Water Hydrology	3-5
3.5.2 Groundwater Hydrology	3-6
3.6 BIOLOGICAL RESOURCES	3-6
3.6.1 Vegetation and Wildlife	3-6
3.6.2 Threatened, Endangered, and Candidate Species and Species of Concern	3-6
3.6.3 Wetlands and Sensitive Habitats	3-8
3.7 TRANSPORTATION AND CIRCULATION	3-8

3.8	AIR QUALITY	3-9
3.8.1	Climate and Meteorological Conditions	3-9
3.8.2	Air Quality Standards, Pollutant Health Effects, and Monitoring Data ..	3-9
3.8.3	Local Emissions	3-11
3.8.4	Attainment Status and Air Quality Planning	3-11
3.9	NOISE	3-11
3.10	PUBLIC SERVICES AND UTILITIES	3-12
3.10.1	Gas and Electricity	3-12
3.10.2	Water	3-12
3.10.3	Wastewater	3-13
3.10.4	Public Services	3-13
3.11	HAZARDOUS MATERIALS AND WASTES	3-13
3.11.1	Petroleum, Oil, and Lubricants	3-13
3.11.2	Spill Prevention and Response	3-14
3.11.3	Installation Restoration Program	3-14
3.12	VISUAL RESOURCES	3-15
4.0	ENVIRONMENTAL CONSEQUENCES	4-1
4.1	LAND USE AND ZONING	4-1
4.2	HISTORICAL AND CULTURAL RESOURCES	4-1
4.2.1	Archaeological Resources	4-1
4.2.2	Architectural Resources	4-1
4.3	POPULATION AND HOUSING	4-2
4.4	EARTH RESOURCES	4-2
4.5	WATER RESOURCES	4-3
4.5.1	Surface Water	4-3
4.5.2	Groundwater	4-3
4.6	BIOLOGICAL RESOURCES	4-4
4.6.1	Vegetation and Wildlife	4-4
4.6.2	Threatened, Endangered, and Candidate Species and Species of Concern	4-4
4.6.3	Wetlands and Sensitive Habitats	4-4
4.7	TRANSPORTATION AND CIRCULATION	4-4
4.8	AIR QUALITY	4-4
4.8.1	Methodology	4-4
4.8.2	Impact Evaluation	4-6
4.9	NOISE	4-7
4.10	PUBLIC SERVICES AND UTILITIES	4-7
4.11	HAZARDOUS MATERIALS AND WASTES	4-8
4.12	VISUAL RESOURCES	4-8
4.13	ENVIRONMENTAL JUSTICE	4-9
4.14	ALTERNATIVES TO THE PROPOSED ACTION	4-9
4.14.1	Alternatives 1, 2, and 3	4-9
4.14.2	Alternative 4	4-9

5.0 CITATIONS	5-1
5.1 PRINTED REFERENCES	5-1
5.2 PERSONAL COMMUNICATIONS	5-2
6.0 LIST OF ACRONYMS	6-1
Appendix A. IICEP Letters	A-1
Appendix B. List of Preparers	B-1

List of Tables and Figures

Table	Follows page
3-1 Current Population of 129th Rescue Wing	3-4
3-2 Summary of 1993 Stationary-Source Emissions from 129th Rescue Wing Facilities at Moffett Federal Airfield	3-12

Figure	Follows page
1-1 Regional Location	1-2
1-2 Local Vicinity	1-2
1-3 Existing 129th Rescue Wing Land Parcels	1-2
1-4 Existing 129th Rescue Wing Operations Area	1-2
2-1 Proposed Action	2-2
2-2 Alternative 1	2-6
2-3 Alternative 2	2-8
2-4 Alternative 3	2-8
3-1 Land Uses outside Moffett Federal Airfield Boundaries	3-2
3-2 Land Uses within Moffett Federal Airfield Boundaries	3-2
3-3 100-Year Floodplain at Moffett Federal Airfield	3-6
3-4 Burrowing Owl Habitat and Sightings	3-8
3-5 Internal Roadway System at Moffett Federal Airfield	3-8
3-6 1992/1993 Noise Exposure Conditions	3-12
3-7 Locations of Hazardous Materials on the Project Site	3-14

1.0 INTRODUCTION

This document is an environmental assessment (EA) prepared in accordance with the National Environmental Policy Act (NEPA) for short-range projects identified in the 129th Rescue Wing Draft Master Plan. This section presents an overview of the environmental review process, the purpose of and need for the proposed action, the site location, and the regulatory context.

The purpose of this EA is to determine the potential environmental impacts of the proposed action. The EA will lead to one of three possible courses of action: If the impacts of the proposed action are judged to not be significant, a Finding of No Significant Impact (FONSI) will be issued, and the 129th Rescue Wing may then proceed with the proposed action. If impacts of the proposed action are deemed to be significant, an environmental impact statement must be prepared before the proposed action is implemented. The third option is that the proposed action will not be pursued.

This EA addresses the potential environmental consequences of short-range projects associated with the consolidation of 129th Rescue Wing facilities into one area at Moffett Federal Airfield. This consolidation would include demolishing existing buildings, constructing new buildings, expanding the aircraft apron, and expanding parking and other paved areas. This EA has been prepared in compliance with NEPA, Council on Environmental Quality (CEQ) regulations, and Air Force Instruction 32-7061.

1.1 LOCATION OF THE PROPOSED ACTION

Moffett Federal Airfield is located at the southern end of the San Francisco Bay, 32 miles south of San Francisco and 10 miles north of San Jose (Figures 1-1 and 1-2). The 2,343-acre facility is located in Santa Clara County and shares boundaries with the City of Sunnyvale to the east and the City of Mountain View to the west and south. The 129th Rescue Wing currently occupies seven parcels of land at the facility, with most operations occurring on five parcels (approximately 120 total acres) on the east side of the facility. Two parcels on the west side comprise approximately 6 acres. Figure 1-3 shows the current locations of 129th Rescue Wing facilities. Under the proposed action, activities would be consolidated in the 95-acre Operations area (Figure 1-3) located along the southern half of the eastern boundary of Moffett Federal Airfield. Current uses in the Operations area are depicted in Figure 1-4.

1.2 BACKGROUND

The installation was commissioned as the Naval Air Station (NAS), Sunnyvale, California, in 1933 to serve as the home base for the Navy dirigible U.S.S. Macon. In 1935, the station was transferred to the Army Air Corps and used as a training base. The National Advisory Committee for Aeronautics (NACA) established the Ames Aeronautical Laboratory on 62 acres of the property in 1939. In 1942, the base was returned to the Navy and renamed NAS Moffett Field. When the National Aeronautics and Space Administration (NASA) was created in 1958, the Ames facility became the NASA Ames Research Center. In 1980, the 129th Aerospace Rescue and Recovery Group (predecessor to the 129th Rescue Wing) located its operations at NAS Moffett Field. In 1991, the Base Closure and Realignment Commission recommended that the Navy cease active-duty

operations at NAS Moffett Field. NASA Ames Research Center accepted responsibility for operating the installation as a shared federal facility, renamed Moffett Federal Airfield, in 1994. The California Air National Guard (CA ANG) has been a tenant at the facility since 1980 and is identified as a resident agency as defined by NASA.

The 129th Rescue Wing is an Air National Guard unit under the U.S. Air Force Air Combat Command. Its primary mission is search and rescue. During peacetime, it provides support to the U.S. Air Force Rescue Coordination Center and the Governor's office for state emergencies, including earthquakes, chemical spills, fires, floods, and civil disturbances. The unit also provides support to the U.S. Customs Agency in the seizure of illegal drugs, animals, and plant products during cargo inspections. During war, the unit deploys personnel to conduct combat rescue operations.

1.3 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

129th Rescue Wing facilities are currently distributed at six sites within Moffett Federal Airfield (Figure 1-3). Some of the unit's operations are located in space and facilities shared with other tenants. Some of these shared areas are Hangar No. 3 and the aircraft apron. In many cases, operations are located in facilities not designed for the purpose for which they are being used. This decentralized arrangement and use of facilities not designed for their current use create inefficiency in the unit's operation and hinder its ability to accomplish its mission.

The purpose of the proposed action is to consolidate 129th Rescue Wing operations into facilities that are designed for their intended use and arranged to be functional and efficient. This consolidation is being done to support the 129th Rescue Wing's current mission without limiting the ability to accommodate potential future changes in the mission. Specific objectives are to:

- create a sense of identity for the 129th Rescue Wing by locating facilities and conducting activities in a centralized, consolidated area;
- improve efficiency by eliminating shared spaces with other tenants;
- improve safety by vacating facilities that are not in compliance with current codes or not designed for their current use;
- retain existing roads and infrastructure wherever possible;
- use the best buildings taken over from the Navy wherever possible;
- develop an improved internal circulation system; and
- group land uses and associated facilities to maximize efficiency.

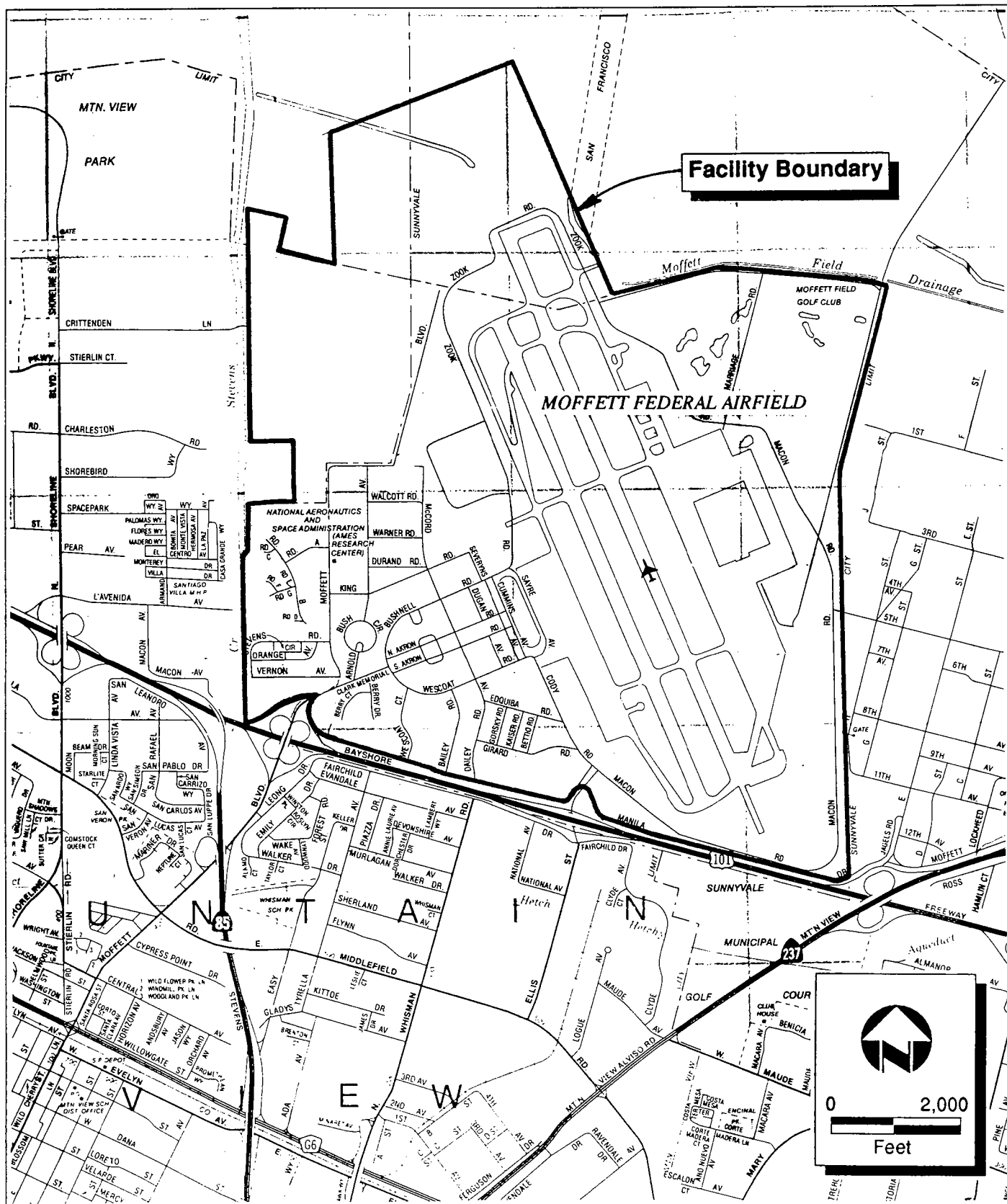
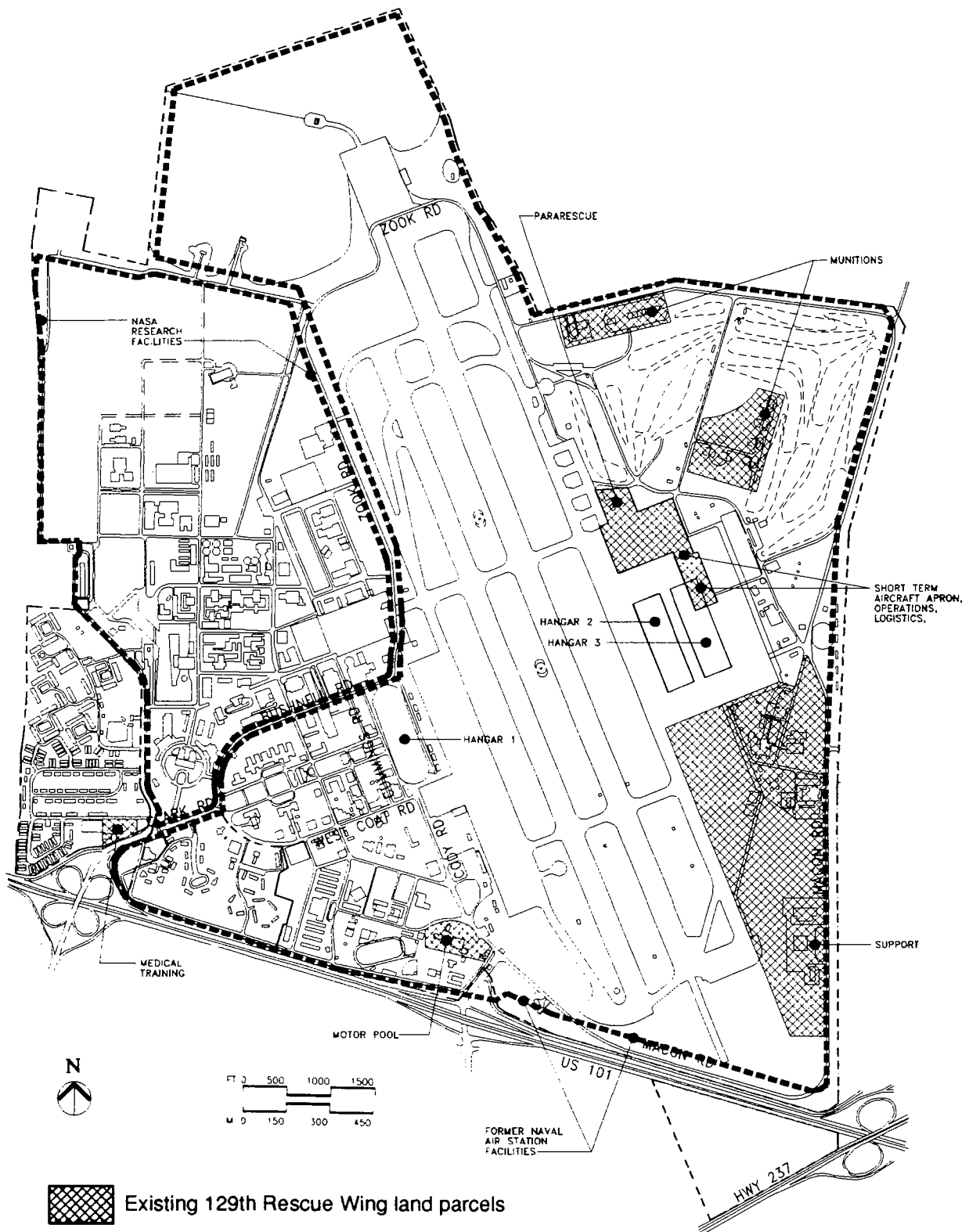
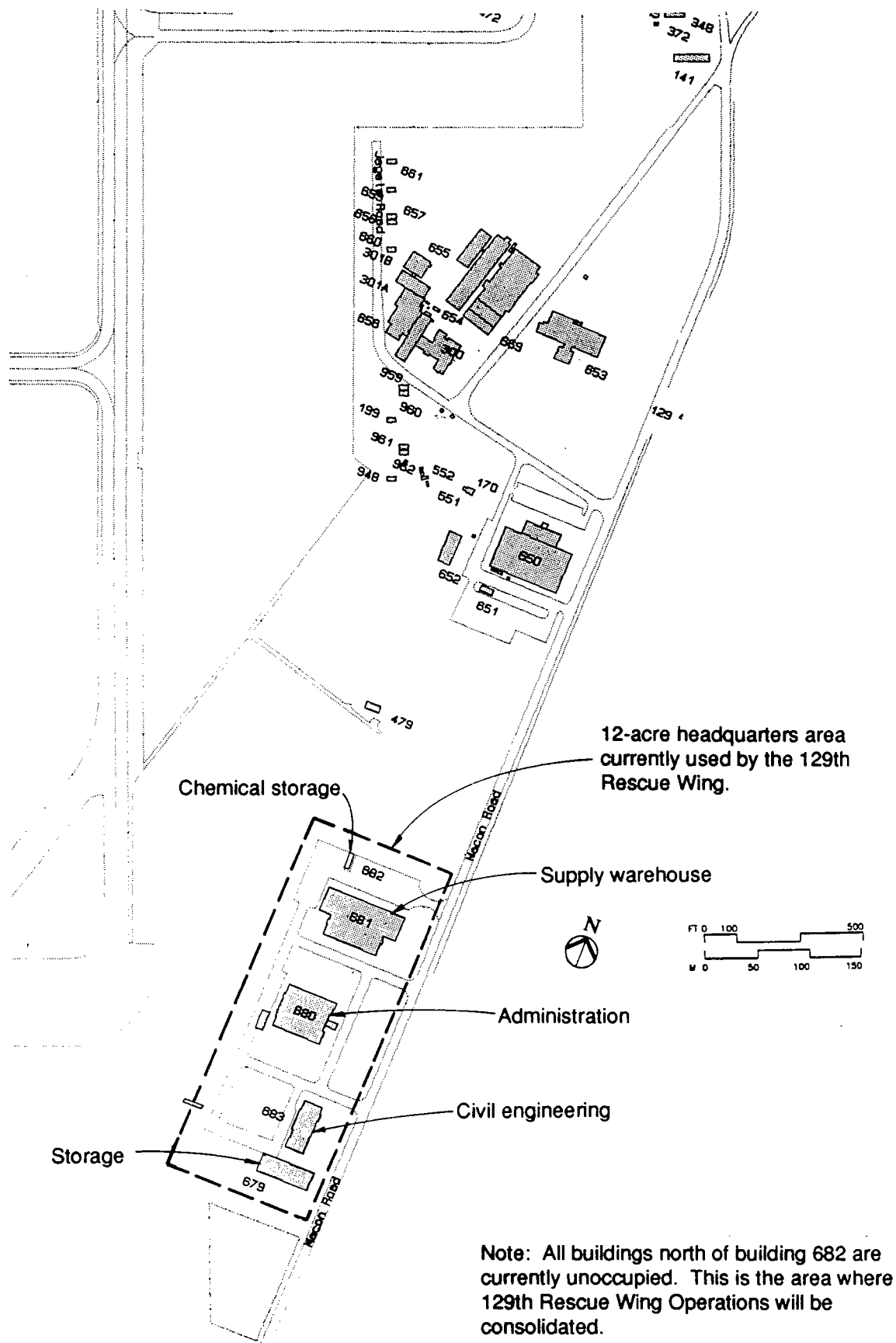


Figure 1-2
Local Vicinity



Source: DMJM 1995.

Figure 1-3
Existing 129th Rescue Wing Land Parcels



Source: DMJM 1995.

Figure 1-4
Existing 129th Rescue Wing Operations Area

1.4 ENVIRONMENTAL COMPLIANCE

This EA has been prepared in compliance with NEPA, CEQ regulations, and Air Force Instruction 32-7061. The following permits or approvals will likely be required for the 129th Rescue Wing to implement the proposed action:

- demolition and building permits from NASA,
- sewer connection approvals from NASA,
- a Permit to Construct from the Bay Area Air Quality Management District,
- a permit to conduct asbestos demolition and renovation from the Bay Area Air Quality Management District,
- a Notice of Proposed Construction or Alteration to be submitted to the Federal Aviation Administration of the U.S. Department of Transportation,
- a General Construction Activity Storm Water Permit from the California Regional Water Quality Control Board, and
- closure permits to remove underground storage tanks and installation permits for new facilities used to store or handle hazardous materials from the Santa Clara County Hazardous Materials Compliance Division.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section presents a description of the proposed action and alternatives. The proposed action is described in sufficient detail to identify potential environmental consequences of demolishing existing facilities, constructing new facilities, and operating the consolidated activities.

2.1 PROPOSED ACTION

The 129th Rescue Wing Draft Master Plan provides an inventory and analysis of existing facilities in terms of the unit's current mission, programmed mission, and probable future mission. The master plan recognizes that recent modernization and expansion of the 129th Rescue Wing have necessitated comprehensive planning that extends at least 20-25 years in the future. The plan also identifies short-range growth and provides flexibility to ensure that what is built today can be adapted to meet future long-range needs.

The master plan discusses present development plans and several options for short-range and long-range development. The proposed action is limited to projects that would occur under present development plans and the selected short-range plan in the master plan (Figure 2-1). The projects that are anticipated to be part of the long-term plan are not yet at the stage of development where it is necessary or appropriate to consider their possible impacts in this document.

The 129th Rescue Wing has six HH-60G helicopters and four HC-130P aircraft stationed at Moffett Federal Airfield. The weekday staff needed to support these aircraft is 283 people. The current Unit Training Assembly (UTA) weekend staff is 829. Under the proposed action, the mission of the unit, the number of aircraft stationed at the facility, and the number of personnel in the unit would not change.

2.1.1 Present Development Plans

The keys to current development plans are acquisition of vacated Navy facilities and construction of a new aircraft maintenance hangar. These projects have the cumulative effect of consolidating operations at a single site (the southeastern corner of the installation) and improving safety and efficiency by vacating Hangar No. 3, where aircraft maintenance and operations are now performed. The following is a summary of 10 planned projects identified in the master plan plus two projects that are not identified in the master plan.

The completion of Project Nos. 1-4 would have the combined benefit of allowing the 129th Rescue Wing to completely vacate Hangar No. 3. Project Nos. 5-7 would allow further consolidation. The additional current projects listed here primarily involve relocation of operations from one building to another and renovation of existing buildings. Projects 3, 8, 10, 11, and 12, however, involve demolition of existing facilities or new construction and will therefore be the focus of the EA.

Project No. 1

Composite Squadron Operations would be relocated from Hangar No. 3 to Buildings 654 and 656. These buildings would be fully renovated before this move. Pilots, navigators, and flight engineers would occupy Building 654; all other operations functions would be moved to Building 656, including administration, intelligence, life support, and load master.

Project No. 2

The Aircraft Engine Inspection and Maintenance Shop would be relocated from Hangar No. 3 to the south end of Building 669. This shop would be moved into Building 666 after it is constructed. Four thousand square feet (sf) in Building 669 would be provided for the 561st Air Force Band. Portions of Building 669 would be fully renovated before this move.

Project No. 3

A new aircraft maintenance hangar, the Composite Maintenance Hangar, would be constructed to provide space for two HC-130P aircraft or one HC-130P and one HH-60G helicopter. Other functions currently located in Hangar No. 3 that would be moved to the new hangar are administrative space, general-purpose shops, Dash 21 equipment, and Non-Destructive Inspection. A total of 62,000 sf of space would be constructed, with 35,000 sf in the main hangar area and the remaining space for maintenance, shop, and storage areas. An underground reservoir would be installed to capture fire-fighting foam and prevent it from entering the storm drainage system in the event that it is used to put out a fire. Landscaping would be added as appropriate.

Project No. 4

The balance of aircraft maintenance functions in Hangar No. 3 would be relocated to Building 650. The Aircraft Maintenance Facility to be moved into Building 650 would include the General Purpose Shop, Aircraft Organizational Maintenance Shop, Weapons and Release Systems Shop, Avionics Shop, and Electronic Counter Measures Pod Shop.

Project No. 5

This project, identified in the master plan, has been eliminated.

Project No. 6

The Defense Fuel Supply Center has relocated the liquid oxygen (LOX) facility, which was west of Building 650, to the north, off Macon Road. The old site is now available for the construction of the new hangar discussed above as part of Project No. 3.

Project No. 7

Aircraft parking would be relocated from the present apron north of Hangar No. 3 to an existing apron next to the relocated Composite Squadron Operations, Composite Maintenance Hangar, and relocated Aircraft Maintenance Facility. The new apron area is in excellent condition, and the only adaptive work required would be new striping and tie-downs to accommodate the current 129th Rescue Wing aircraft. The apron would be expanded to the south.

Project No. 8

As part of the facility consolidation, two buildings adjacent to Buildings 654 and 656 (Buildings 300 and 301B) would be demolished. Figure 1-4 shows the location of Buildings 300 and 301B. Building 300 is a wood-frame building constructed in 1941 that is in substandard condition. Building 301B is a temporary, modular metal building that has reached the end of its useful life. Renovation is not cost effective because of extensive code deficiencies and overall decay. Removing these buildings would also provide sites for future facilities.

Project No. 9

Security Police and Personnel Mission Support Services, currently located in Building 680, would be relocated to Building 653. This move would allow the remaining activities in Building 680, including conference areas and Audio Visual Services, to expand to their authorized size.

Project No. 10

The following miscellaneous actions are under way:

- a. Buildings 657 and 658 (400 sf each) will be used for storage.
- b. Miscellaneous fencing and abandoned sheds onsite, such as those adjacent to the former LOX facility (Building 170), will be removed. Figure 1-4 shows the location of Building 170.
- c. Vacant parking lots and abandoned roadways will be cleared of debris and weeds will be removed. Also, buildings with landscaping (Buildings 653 and 650) will have trees and shrubs trimmed and lawns restored.

Project No. 11

Existing roof diesel-fired heating and ventilating equipment used at Buildings 680, 681, and 683 and the associated underground diesel fuel storage tanks would be removed. The removal of the underground tank will require a closure permit from the Santa Clara County Hazardous Materials Compliance Division. New natural gas-fired heating, ventilating, and air conditioning units and associated utility supply lines would be installed. The existing infra-red propane system in Building 679 would be modified as necessary to accommodate natural gas. A natural gas supply line from

the 12-acre headquarters area would be connected to each building. Figure 1-4 shows the location of the 12-acre headquarters area.

Project No. 12

A 2,000-sf Hazardous Materials Pharmacy (HMP) will be constructed directly north of Building 682. The purpose of this facility will be to provide a single point of control and management of the distribution and use of all hazardous materials brought on the base by the 129th Rescue Wing. The primary functions of the HMP will include receiving, segregation, control, distribution, reuse/recycling, and temporary storage of hazardous materials. Hazardous storage and handling functions currently located in several existing 129th Rescue Wing facilities will be consolidated to this single facility. The HMP will comply with federal, state, and local environmental and safety regulations.

2.1.2 Short-Range Plan

2.1.2.1 Short-Range Demolitions

Short-range demolition projects would be performed in two general areas. In the first area, Composite Squadron Operations, the following buildings shown in Figure 1-4 would be demolished:

- Building 300 and surplus Building 301B and
- Building 655 (currently used for storage) north of Building 654.

None of the facilities to be demolished under the proposed action is eligible for listing under the National Historic Preservation Act.

2.1.2.2 Short-Range Facilities

Short-range facility projects involve streets and circulation, aircraft aprons, buildings and facilities, and parking and paved areas.

Streets and Circulation. Streets and circulation would be improved by the following short-range projects:

- Street Z would be extended to the 12-acre headquarters area from the south end of the operations area near Building 666. New curbs, gutters, sidewalks, bicycle paths, and landscaping would be installed along the existing portion of Street Z.
- The existing one-way circulation pattern for the two streets connecting the 12-acre headquarters area to Macon Road would be changed. Both east/west streets (one directly north of Building 683 and one directly south of Building 681) would become two-way streets.

- A new east/west street would be constructed between the Composite Maintenance Hangar and the Fuel Cell and Corrosion Control facility to provide access to the aircraft parking apron from Street Z.
- A short east/west street extension would be constructed from Street X to the aircraft parking apron adjacent to Building 656 (Composite Squadron Operations).
- North/south Street Y would be changed from a one-way (northbound only) street to a two-way street.
- A two-way access drive would be constructed from Street Y to Parking Lot B north of Building 654.
- Curbs, gutters, and sidewalks would be added to the north side of Street X to match existing improvements on the south side of this street.

Aircraft Aprons. The aircraft apron would be expanded south to provide access to the new Fuel Cell and Corrosion Control facility. The apron expansion would occupy approximately 950 square yards.

Buildings and Facilities. New facilities and proposed building modifications are discussed below.

Aircraft Maintenance

- An 8,000-sf Aircraft Engine Inspection and Maintenance Shop (Building 666) and associated storage area would be constructed south of Building 650.
- A 15,000-sf Fuel Cell and Corrosion Control facility (Building 664) would be constructed south of the Composite Maintenance Hangar.
- Approximately 1,300 sf would be added to the south side of Building 650 to expand the Survival Equipment Shop to its authorized 6,900 sf.

Aircraft Operations

- A 6,500-sf addition, the Pararescue/Fitness Building, would be constructed connecting Buildings 654 and 656 for pararescue operations and a physical fitness center. The addition to facilities in Buildings 654 and 656 would combine to form Composite Squadron Operations.

Parking and Paved Areas. Projects for vehicular parking and paved yard would include:

- a new parking lot south of Building 654,
- expanded parking lots south of Building 653, and

- a parking lot and paved yard for the Aircraft Engine Inspection and Maintenance Shop (Building 666).

2.2 ALTERNATIVES TO THE PROPOSED ACTION

This section presents four alternatives to the proposed action that will be considered in the EA, including three project alternatives and a no-project alternative. The three project alternatives are similar to the proposed project in that they would:

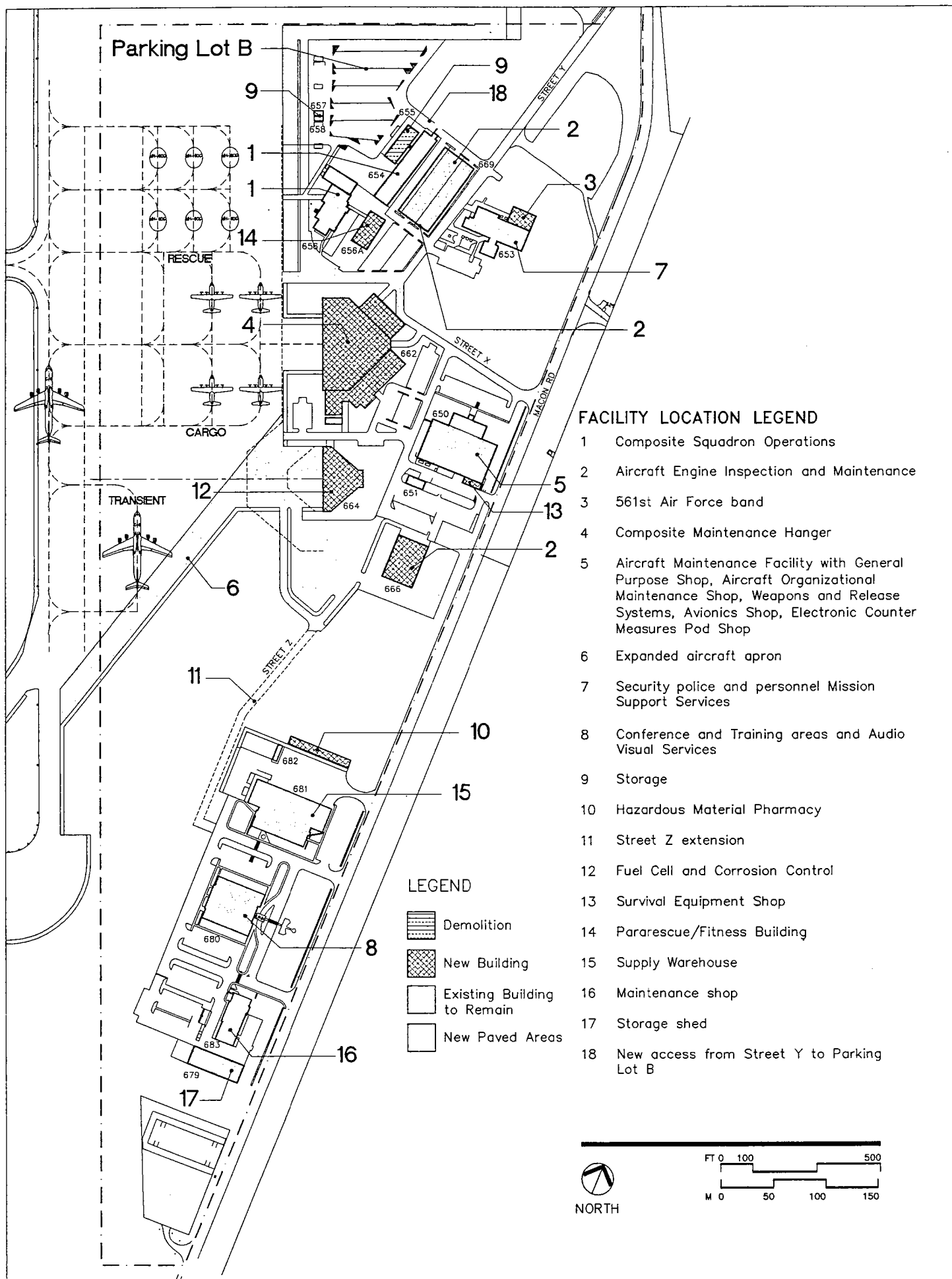
- consolidate 129th Rescue Wing activities into the existing 95-acre operations area;
- begin after completion of present development plans, as discussed in Section 2.1.1;
- not require new land to be acquired outside the existing Moffett Federal Airfield boundary; and
- not require relocation of other tenant activities.

The three project alternatives primarily involve variations on the location of buildings, parking, and streets and reduce the potential for disturbance of areas where burrowing owls have been sighted south of Building 653.

2.2.1 Alternative 1

Figure 2-2 depicts the layout of Alternative 1. This alternative would differ from the proposed action as follows:

- the 4,000-sf band area would be located in a new addition on the north side of Building 653;
- the location of Building 656A, the Pararescue/Fitness Building, would be moved south into a separate building that would no longer create a link between Buildings 656 and 654;
- aircraft parking spots would be shifted east;
- the Composite Maintenance Hangar would be shifted north and would have an additional shop area on the northeast side;
- the intersection of Street X and Street Y and the parking area south of Building 654 would be reconfigured to accommodate the shifted location of the Composite Maintenance Hangar; and



Source: DMJM 1995

Figure 2-2
Alternative 1

- the existing parking area south of Building 653 and the expansion of the aircraft apron would not be as large as under the proposed action, which would reduce the potential for disturbance of burrowing owls.

2.2.2 Alternative 2

Figure 2-3 depicts the layout of Alternative 2. This alternative would differ from the proposed action as follows:

- the new Engine Inspection and Maintenance Shop (Building 666) would be rotated to be in a north/south orientation;
- the north/south connector road (Street Z) would be moved east of Buildings 668 and 681;
- the location of Building 656A, the Pararescue/Fitness Building, would be moved south into a separate building that would no longer create a link between Buildings 656 and 654;
- aircraft parking spots would be shifted east;
- the Composite Maintenance Hangar would be shifted north and would have an additional shop area on the northeast side;
- the intersection of Street X and Street Y and the parking area south of Building 654 would be reconfigured to accommodate the shifted location of the Composite Maintenance Hangar; and
- the existing parking area south of Building 653 and the expansion of the aircraft apron would not be as large as under the proposed action, which would reduce the potential for disturbance of burrowing owls.

2.2.3 Alternative 3

Figure 2-4 depicts the layout of Alternative 3. This alternative would differ from the proposed action as follows:

- the new Engine Inspection and Maintenance Shop (Building 666) would be rotated to be oriented in a north/south direction;
- the alignment of the north/south connector (Street Z) would be realigned slightly;
- the location of Building 678 (Building 656A under Alternatives 1 and 2), the Pararescue/Fitness Building, would be moved to directly east of the intersection of Street X and Street Y;

- additional parking would be provided in the area south of Building 654; and
- aircraft parking spots would be shifted east;
- the Composite Maintenance Hangar would be shifted north and would have an additional shop area on the northeast side;
- the intersection of Street X and Street Y and the parking area south of Building 654 would be reconfigured to accommodate the shifted location of the Composite Maintenance Hangar; and
- the existing parking area south of Building 653 and the expansion of the aircraft apron would not be as large as under the proposed action, which would reduce the potential for disturbance of burrowing owls.

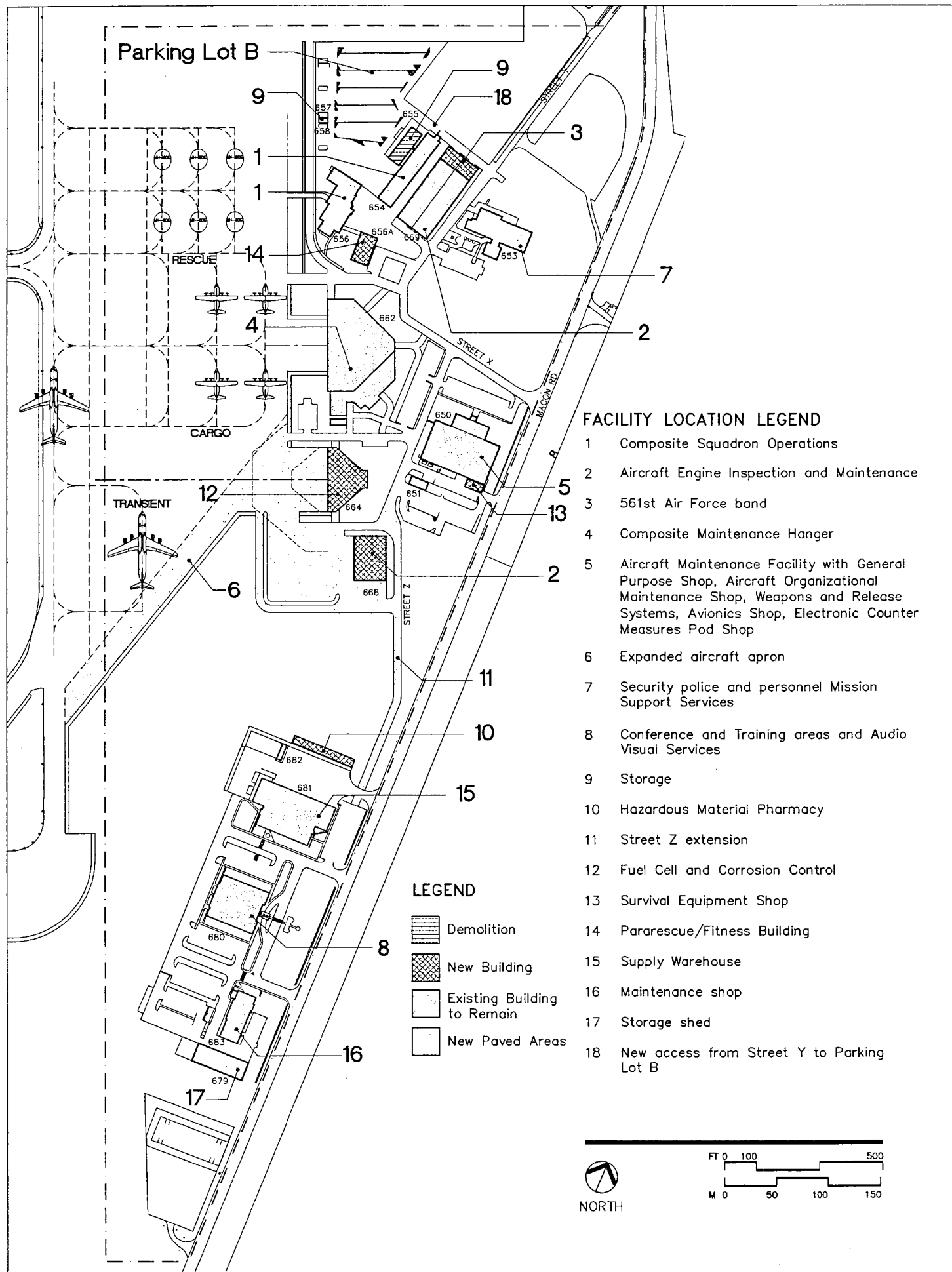
2.2.4 Alternative 4

Alternative 4, the no-action alternative, would maintain the status quo and avoid all impacts associated with the proposed action. Under this alternative, the 129th Rescue Wing would continue operating as it currently does. Facilities would remain in their current configuration and would not be consolidated to a single site.

2.3 SPECIAL OPERATING PROCEDURES

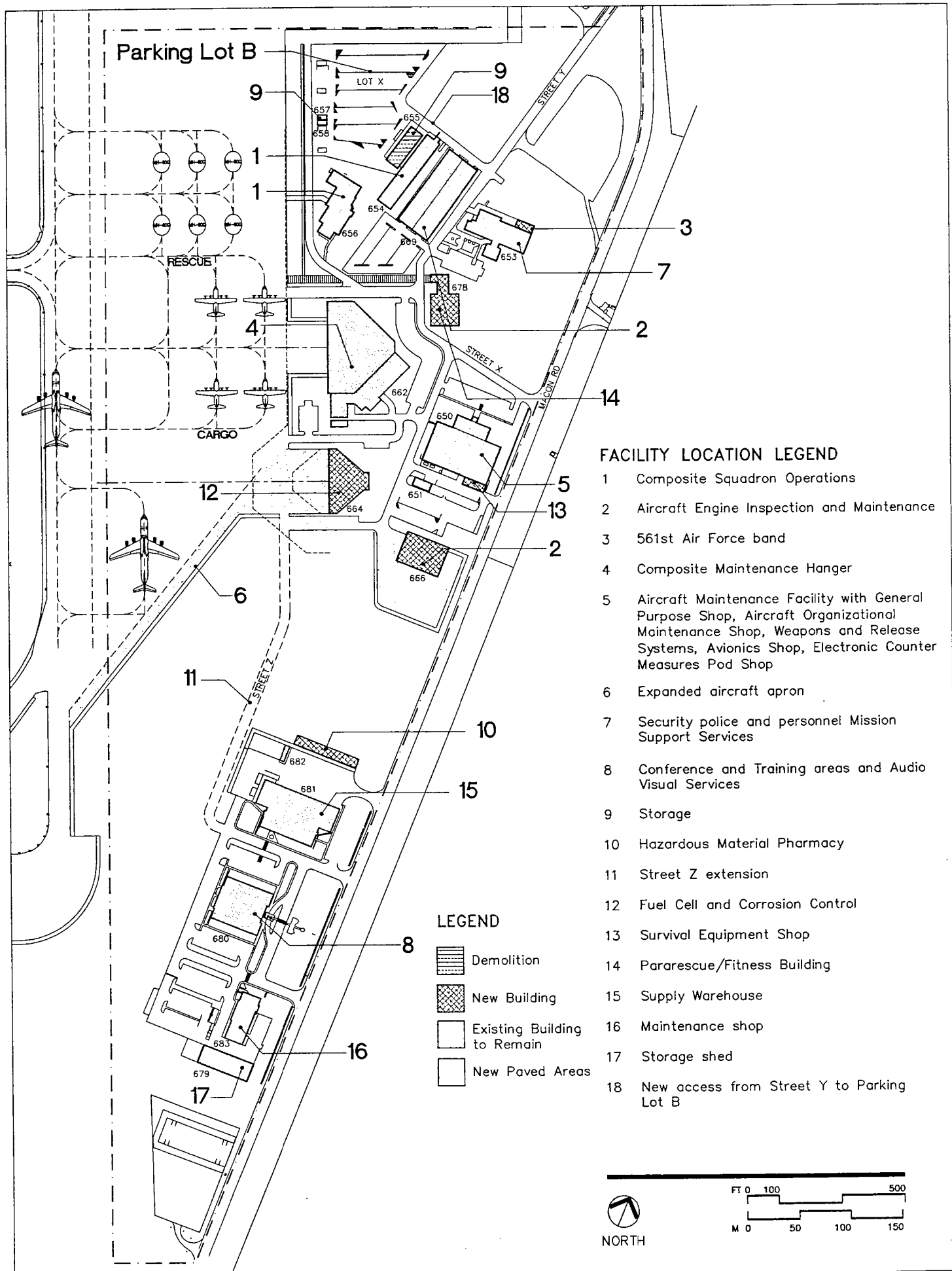
The following special operating procedures (SOPs) are incorporated into the proposed action to mitigate potentially significant environmental impacts. In some cases, these SOPs are mitigation measures taken from the Moffett Field Comprehensive Use Plan Final Environmental Assessment (Brady and Associates 1994).

- **SOP-1.** New structures shall be designed to minimize seismic and geotechnical hazards; differential settlement; and the effects of shallow groundwater, liquefaction, and expansive clay soils. Geotechnical investigations shall be required for all new facilities. Foundations and structures of new facilities and modifications to existing facilities shall be designed and constructed in conformance with the Uniform Building Code.
- **SOP-2.** Construction and demolition activities shall follow best management practices described in the Santa Clara Valley Nonpoint Source Program to control erosion and sedimentation both on and off the project site.
- **SOP-3.** Construction managers and contractors shall ensure that practices that minimize impacts on natural habitats are followed during construction and demolition activities. Such practices include site management to control soil erosion and nonpoint-source runoff, and proper disposal of construction and demolition material and debris.



Source: DMJM 1995

Figure 2-3
Alternative 2



Source: DMJM 1995

Figure 2-4
Alternative 3

- **SOP-4.** Burrowing owl surveys will be conducted by NASA's wildlife biologist at the project site during late winter (before February 1 and before construction begins) to identify potential spring and summer nesting sites. Surveys will also be conducted during the spring nesting season to identify active burrows and nest sites. To ensure that no nesting areas are disturbed by construction activities, a survey will be conducted no more than 30 days before grading. If no active burrowing owl burrows are found in the affected area (within 100 feet of the construction site), no additional special procedures are needed.

If active burrows are found, the 129th Rescue Wing will change the project, if feasible, to avoid impacts on active burrowing owl nest sites. If active burrows are located in or within 100 feet of construction areas, the 129th Rescue Wing will coordinate with NASA and NASA will prepare and implement a burrowing owl relocation plan before grading begins. Potential burrowing owl relocations and construction of new owl burrows will be conducted in accordance with NASA Code DQH. If burrowing owls are found within the construction area after February 1, owls will not be relocated; construction in the area will stop until the nesting season ends or will continue only after the burrows are cordoned off to form a 50-foot-diameter buffer zone.

After the burrowing owl chicks have fledged and are no longer dependent on the burrows or their parents, the owls will be passively relocated to new artificial burrows constructed onsite. The artificial burrows will be placed in designated burrowing owl habitat areas that have undergone little or no human disturbance. In passive relocation, owls are excluded from burrows by installation of one-way doors in burrow entrances. One-way doors will be left in place at least 48 hours to ensure that the owls have been effectively excluded from the burrow. Burrows will then be excavated by hand to ensure that no owls are in the burrows, and then burrows will be destroyed to eliminate them.

The NASA Office of Safety, Health, and Environmental Services will be notified immediately if burrowing owls or active burrows are encountered or disturbed during construction activities. Code DQH personnel shall be kept informed on an ongoing basis to monitor activities related to burrowing owls.

- **SOP-5.** Previous archaeological documentation indicates that exposed portions of the current project area were surveyed and that no sites of archaeological significance were found. It is possible, however, that archaeological remains are present beneath paved areas and below the ground surface. Because of the high level of archaeological sensitivity in the project area, a qualified archaeologist will be retained to monitor excavation activities associated with the proposed project construction. In the event that human remains or cultural materials are found during construction activities, all project-related construction within a 50-foot radius shall cease and the NASA Office of Safety, Health, and Environmental Services will be notified. Testing and mitigation measures required under the National Historic Preservation Act (16 USC 470), Section 7050.5 of the California Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California shall be implemented.

In the event that human remains are discovered, no further excavation or disturbance shall take place within 50 feet of the site or in any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified by the construction manager or the installation cultural resources manager. The coroner shall determine whether the remains are Native American. If the remains are determined not to be subject to the coroner's authority, the Native American Heritage Commission shall be contacted immediately by the construction manager or the installation environmental office. If no satisfactory agreement can be reached regarding the disposition of remains in accordance with state law, then the remains shall be reinterred, along with associated items, in a location not subject to further disturbance.

If cultural artifacts (unusual amounts of shell or non-native stone) or other related materials or features are uncovered, construction activities shall cease and a qualified archaeologist shall be consulted for management recommendations.

- **SOP-6.** NASA and the 129th Rescue Wing will coordinate to evaluate buildings and structures in the area affected by the proposed action to determine whether the buildings are eligible for listing in the National Register of Historic Places (NRHP) for their role during World War II or the Cold War or as part of technologically or scientifically important activities that occurred at Moffett Field. This evaluation will be conducted in compliance with Section 106 of the National Historic Preservation Act. If buildings are determined to be significant, NASA will develop and implement mitigation measures in consultation with the California State Historic Preservation Officer to avoid adverse impacts.
- **SOP-7.** The following measures specified by the Bay Area Air Quality Management District (BAAQMD) will be implemented during all construction activities to control emissions of particulate matter smaller than 10 microns in diameter (PM10):
 - Water all active construction areas at least twice daily.
 - Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
 - Apply (nontoxic) soil stabilizers to inactive construction areas.
 - Enclose, cover, water twice daily or apply (nontoxic) soil binders to exposed stockpiles (e.g., dirt or sand).
 - Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard.
 - Wash off all trucks and equipment leaving the site.
 - Suspend excavation and grading activity when winds exceed 25 mph.

- Limit traffic speeds on unpaved roads to 15 mph.
 - Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.
 - Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
 - Replant vegetation in disturbed areas as quickly as possible.
 - Install sandbags or other erosion control measures to prevent silt runoff to public roadways, if necessary.
- **SOP-8.** The following measures will be implemented during all construction activities involving the removal of asbestos:
- Removal of asbestos will be performed in accordance with all appropriate regulations and standards, including regulations set by the federal Occupational Safety and Health Administration (OSHA), U.S. Environmental Protection Agency (EPA), California OSHA (Cal-OSHA), California EPA (Cal-EPA), and BAAQMD, regarding handling, transport, and disposal of any asbestos-containing material.
 - Any asbestos removal work related to the proposed action will be performed by a state-certified asbestos abatement contractor. The contractor will provide a health and safety plan for employees engaging in asbestos removal.
 - A state-certified laboratory shall be used to analyze all air and bulk asbestos samples taken during asbestos removal.
- **SOP-9.** The following measures will be implemented during all construction activities involving the removal of materials containing lead:
- All federal OSHA, EPA, Cal-OSHA, Cal-EPA, and BAAQMD regulations regarding the handling of lead-containing materials shall be adhered to by any contractor engaging in such activities.
 - Air sampling and monitoring for lead shall be conducted during construction activities.
 - All blasting material, including water from water-blasting, shall be contained, sampled, and properly disposed of.
 - Flame-torch cutting or other methods that would result in emission of lead fumes shall not be used.

3.0 AFFECTED ENVIRONMENT

This section describes the natural environment and development around Moffett Federal Airfield, specifically in the area to be affected by the proposed action. Existing conditions in the study area (i.e., the affected environment) serve as the basis from which to evaluate environmental impacts related to implementation of the proposed action. The following descriptions are based in part on information in the Moffett Field Comprehensive Use Plan (NASA Ames Research Center 1993); the Moffett Field Comprehensive Use Plan Final Environmental Assessment (Brady and Associates 1994); the 129th Rescue Wing Master Plan (DMJM 1995); and other resource documents provided by CA ANG, NASA, and Navy staff. These sources were supplemented by field surveys and interviews with staff from the facility and various local, regional, state, and federal agencies.

Following are descriptions of the existing environment within the project site and its relationship with the surrounding environment. Specifically, the affected environment is described in relation to land use, historic and cultural resources, population and housing, earth resources, water resources, transportation and circulation, air quality, noise, public services and utilities, hazardous materials, and visual resources. Environmental conditions are described relative to how they may be potentially affected by the proposed action.

3.1 LAND USE AND ZONING

Moffett Federal Airfield is located at the southern end of San Francisco Bay in an unincorporated portion of Santa Clara County. The 2,343-acre facility is bounded by Sunnyvale to the east, Mountain View to the west and south, and San Francisco Bay to the north. State Route 101 is the primary access route to the installation and runs along the south boundary. The current zoning of the installation is A-1-20S-BD, which allows general residential and agricultural uses and, through the use permit process, allows for other uses and developments that are appropriate for a particular location. All current uses are consistent with existing zoning. Although Moffett Federal Airfield is constitutionally exempt from the application of local land use plans and policies, NASA intends to cooperate with the Cities of Sunnyvale and Mountain View on matters of mutual concern.

Figure 3-1 depicts land uses outside the installation. Land uses directly adjacent to the installation are primarily industrial, associated with the high-technology industry. A golf course is located in the southern clear zone for the runway. Military housing is located adjacent to the southwestern corner of the installation. Facilities for the Lockheed Missile and Space Company are located along the eastern boundary of the installation, adjacent to the area where 129th Rescue Wing operations would be consolidated under the proposed action. In general, land uses surrounding Moffett Federal Airfield are compatible with the airfield.

Figure 3-2 depicts land uses within the boundaries of Moffett Federal Airfield and identifies the 15 primary land use types at the facility. The center of the site is dominated by the airfield, which clearly divides the eastern and western portions of the site. Predominant land uses in the eastern portion are fuels and ordnance storage with ordnance safety zones, operations and maintenance, and administration and training. The west side primarily consists of housing, services,

and recreation. Administration and billeting facilities are located in Shenandoah Plaza (Area 4). Land uses on the Ames Research Center site are characterized by clusters of large-scale aerospace research facilities interspersed with support areas.

3.2 HISTORICAL AND CULTURAL RESOURCES

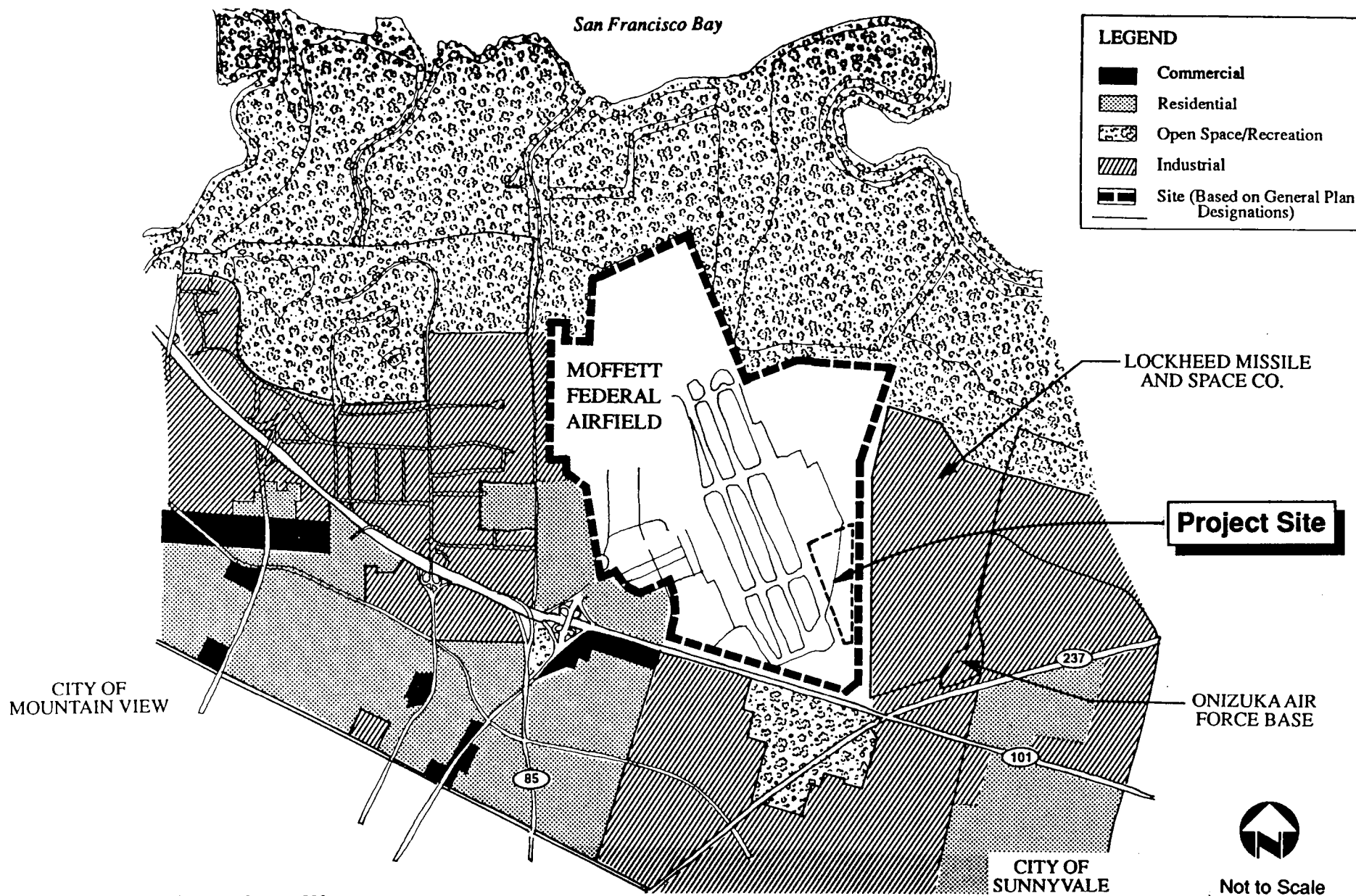
The region presently occupied by Moffett Federal Airfield was favorably situated for prehistoric and historic populations. The proximity of San Francisco Bay and the presence of several freshwater creeks in the area were factors that undoubtedly influenced aboriginal occupation. Ethnographically, the installation is within the boundaries of the former Costanoan or Ohlone tribal areas. Since the 19th century, the production and transportation of agricultural products has been the primary historic use of the area. Historic maps suggest some potential for historical archaeological resources on and around Moffett Federal Airfield, including a landing, stage stop, and residences dating from the 1850s through the 1890s. During the early 1930s, the installation was first established as Sunnyvale Naval Air Station, part of the U.S. Navy's "lighter-than-air" program to patrol the Pacific with dirigibles.

3.2.1 Archaeological Resources

The area around the installation has been studied extensively for archaeological resources as part of U.S. Navy, NASA, and other development and highway projects. An archaeological overview and survey was completed in 1991 by Basin Research Associates for the Western Division Naval Facilities Engineering Command in San Bruno, California (Garaventa and Anastasio 1991). That report provided contextual information for cultural resources at the installation, summarized the results of many earlier surveys, and reported the results of a reconnaissance survey of previously unsurveyed areas. The reconnaissance survey was confined to approximately 120 acres and consisted primarily of the unpaved areas between runways and between Hangar Nos. 1 and 2, and scattered areas of the installation periphery along Macon Road (Garaventa and Anastasio 1991). This survey appears to have included the exposed surface areas in the project area.

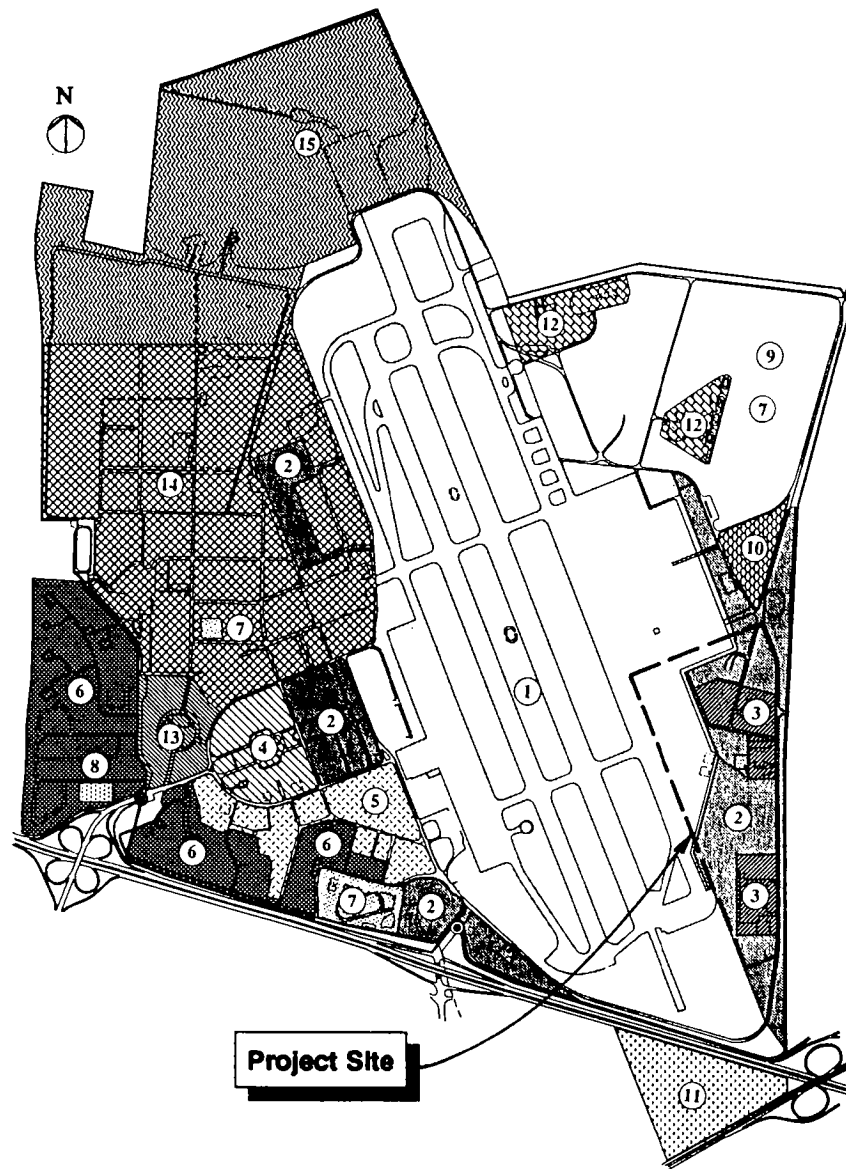
At least 10 formally recorded prehistoric or prehistoric/historic archaeological sites have been reported (in previous inventories) within the boundaries of Moffett Federal Airfield. Only one of these sites was located during the 1991 survey. Four or more of the sites were associated with Ynigo, a Native American who in 1844 was granted a large parcel of land (part of which is now occupied by the airfield) by the Mexican government of California. This land, known as Rancho Polsoni, was home to Ynigo and other Native Americans from approximately 1834 through the 1860s (Hendry and Bowman 1940). As late as the 1870s, the area including and surrounding the present installation was still referred to as the "Ynigo Reservation" (Thompson and West 1876). At least one adobe residence from the rancho period has been identified on historic maps as being in the southeastern portion of Moffett Federal Airfield and within the boundaries of the project area.
















Although the installation and the project area are sensitive areas for archaeological resources, ongoing subsurface improvements and development of the military installation have apparently compromised the integrity of previously recorded sites. None of the archaeological resources previously recorded or identified within the boundaries of Moffett Federal Airfield appear to be



Source: NASA Ames Research Center 1993.

Figure 3-1
Land Uses outside Moffett Federal Airfield Boundaries



- | | | |
|---|---|---|
|  1. Airfield Operations |  4. Administration/Billeting |  7. Recreation |
|  2. Operations & Maintenance |  5. Personnel Services |  8. Medical Support |
|  3. Administration/Training |  6. Housing |  9. Ordnance Safety Zone |
|  10. Fuel Operations |  13. NASA Admin | |
|  11. Airfield Clearance |  14. NASA R&D | |
|  12. Ordnance Storage |  15. Wetlands | |

Source: NASA Ames Research Center 1993.

Figure 3-2
Land Uses within Moffett Federal Airfield Boundaries

eligible for listing in the NRHP (Garaventa and Anastasio 1991). However, the Moffett Field Comprehensive Use Plan (NASA Ames Research Center 1993) indicates that several archaeological sites have recently been nominated for inclusion in the NRHP.

3.2.2 Architectural Resources

A portion of the buildings at Moffett Federal Airfield were inventoried and evaluated for NRHP eligibility by the Navy in 1991, culminating in the preparation of an NRHP nomination form (Urban Programmers 1991, Wall pers. comm.). This evaluation included an assessment of Moffett Federal Airfield's buildings and structures that constituted the 1933 original base plan area and the area where Hangar Nos. 2 and 3 are located. Buildings found to be eligible for the NRHP were listed in the NRHP as a district in 1994 (Wall pers. comm., Urban Programmers 1991). Forty-three buildings, structures, and objects were found to contribute to the district, while 54 buildings were found not to contribute to the significance of the district. The nomination included the Shenandoah Plaza area and three historic hangars for lighter-than-air aircraft. The hangars were also determined to be eligible for listing in the NRHP as individual resources significant for their distinctive qualities of engineering and architectural design. Hangar No. 1 is also recognized by the Navy as a Naval Historic Landmark. The Shenandoah Plaza Historic District includes administrative, residential, and naval operations buildings in a landscaped complex. Most of the buildings are a combination of Spanish Colonial Revival and Mission Revival styles (Brady and Associates 1994, Urban Programmers 1991). This district is known as the Central District (Urban Programmers 1991) or the Shenandoah Plaza Historic District (Brady and Associates 1994).

Buildings to be affected by the proposed action, including Buildings 300, 301, and 669 (formerly Building 49), were recommended to be ineligible for listing in the NRHP. Building 655 has not been evaluated (Urban Programmers 1991).

No buildings at the installation have been inventoried or evaluated for their significance during the Cold War (Kovar pers. comm.). Only the Unitary Wind Tunnel complex at the Ames Research Center at Moffett Federal Airfield has been evaluated for technological and scientific significance and has been designated a National Historic Landmark based on its association with the development of the U.S. space program (NASA Ames Research Center 1992).

Three of the four buildings that will be affected by the proposed action have been recommended as being ineligible for listing in the NRHP for significance during World War II. One building has not been evaluated for World War II significance. The State Historic Preservation Officer has not concurred with these recommendations. None of the buildings have been evaluated for determination of their possible significance during the Cold War or their contribution to technology and scientific themes.

3.3 POPULATION AND HOUSING

The employee population of Moffett Federal Airfield is approximately 10,000 (Brady and Associates 1994). The weekday population of the 129th Rescue Wing is 283; during weekend unit training assemblies, the population increases to 829. These totals include the 561st Air Force Band,

which is part of the 129th Rescue Wing and is authorized to comprise 36 people. Table 3-1 lists the current 129th Rescue Wing population and unit designations (DMJM 1995). Historically, housing for staff at Moffett Federal Airfield has been available in the residential areas of nearby Onizuka Air Force Base. Approximately 300 residential units are located within the boundaries of Moffett Federal Airfield (Brady and Associates 1994).

3.4 EARTH RESOURCES

3.4.1 Topography

Moffett Federal Airfield is located on a gently sloping alluvial plain along the southwestern end of San Francisco Bay. The terrain is generally flat and slopes at a 1% rate from about 40 feet above sea level on the south side to sea level on the north side. Salt evaporation ponds form the site's northern border. The northern portion of the site may be inundated by 100-year tidal flooding but is protected by constructed dikes. The two parallel airfield runways that split the property, running approximately northwest to southwest, are built on artificial fill and extend out into the area's marsh tideland (DMJM 1995).

3.4.2 Geology and Seismicity

The area within and around the airfield is characterized by a great linear depression filled with alluvial gravel and freshwater sediments. These deposits range in origin from the Pleistocene epoch to recent times and overlie down-warped Tertiary-period and Mesozoic-era formations (DMJM 1995). The area where 129th Rescue Wing operations would be consolidated is located in the Santa Clara Valley, along the southern margin of the San Francisco Bay, on fine-grained alluvial deposits from the Holocene epoch. These deposits are generally less than 10 feet thick and overlie older alluvial fan and stream terrace deposits.

The site is in a seismically active region of California and is classified in Seismic Zone IV, the geological rating for an area with the highest incidence of earthquakes. No active or potentially active faults are mapped as traversing the site or in the immediate vicinity of the site. The potential for fault ground rupture in the area, therefore, is low (Harlan Tait Associates 1995). Most earthquakes in the area have occurred, and will probably occur in the future, on one of the active fault zones of the San Andreas fault system that traverse the region. The area is subject to seismic movement caused by activity along the Hayward Fault and the Calaveras Fault, 9 miles and 13 miles to the northeast, respectively, and the San Andreas Fault, which runs through the area 9 miles to the southwest.

No comprehensive seismic evaluation of the buildings occupied by the 129th Rescue Wing has been made. Only one building, Hangar 3, has been subject to a seismic evaluation by a structural engineer (DMJM 1995). The study of Hangar 3 identified seismic safety deficiencies, and recommendations for retrofitting the building were made. Immediately after the Loma Prieta earthquake in October 1989, staff at the 129th Rescue Wing inspected all facilities for damage. This investigation identified only minor cosmetic damage.

Table 3-1. Current Population of 129th Rescue Wing

Unit Designation	Population
129th Rescue Wing	59
129th Rescue Squadron	118
129th Maintenance Squadron	180
129th Mission Support Squadron	69
129th Mission Support Flight	37
129th Logistics Squadron	118
129th Civil Engineering Squadron	138
129th Services Flight	20
129th Tactical Hospital	48
561st Air Force Band	35
DL North Highlands	<u>5</u>
Total	829

Source: DMJM 1995.

3.4.3 Soils

The soil at Moffett Federal Airfield is composed of deep alluvial fill of interlensing gravel, sand, and clay more than 1,000 feet thick. Surface materials consist of braided stream gravel, silt, and clay, all obscured by a deep soil mantle and overlapped by bay mud to the north. The soil contains four different soil groups as classified by the U.S. Soil Conservation Service: the Alviso, Sunnyvale, Castro, and Clear Lake series. Soil in the area where 129th Rescue Wing operations would be consolidated is predominantly Sunnyvale clay. These series are composed primarily of clay and silty clay, and all three series have similar engineering and hydrologic characteristics. (DMJM 1995.)

Because the soils are plastic and are saturated with groundwater a few feet below the ground, special engineering is required for facility construction. The plasticity of the soil allows heavy loads to compress it, causing differential settlement around built structures. High clay content causes high shrinkage potential because clay expands when wet and shrinks when dry. This can cause building foundations and roads to shift and deform, in addition to causing underground pipelines to bend and break. The low permeability of the soil can lead to corrosion of untreated steel pipe and cause water to pond during heavy rain. (DMJM 1995.)

3.5 WATER RESOURCES

The major water resources in the area of Moffett Federal Airfield are San Francisco Bay, Stevens Creek, and the Santa Clara Valley groundwater basin.

3.5.1 Surface Water Hydrology

San Francisco Bay is north of Moffett Federal Airfield and is the largest body of water in the project area. Guadalupe and Alviso Sloughs to the east and Mountain View and Charleston Sloughs to the west carry surface runoff to the bay. The airfield resides in the Stevens Creek drainage basin, which is located along the west side of the installation. The storm drainage system for the installation and the neighboring developed area discharges into this drainage basin, bringing the water level in the bay near Moffett Federal Airfield to a maximum of approximately 5 feet above sea level. A series of Santa Clara Valley Water District flood control levees and the Cargill Salt evaporator levees north of the facility provide marginal protection from tidal flooding to Moffett Federal Airfield. (DMJM 1995.)

The 100-year floodplain at Moffett Federal Airfield is 7.5 feet above sea level and splits the installation with an irregular line that runs approximately north to south across the airfield runways (Figure 3-3). Aside from the pararescue area, the munitions area, and the small arms range, all 129th Rescue Wing facilities are outside the floodplain. The area where 129th Rescue Wing operations would be consolidated under the proposed action is completely outside the 100-year floodplain.

3.5.2 Groundwater Hydrology

In the area where 129th Rescue Wing operations would be consolidated, groundwater levels vary seasonally and with location, depending on rainfall and runoff. Shallow groundwater levels are generally 5-9 feet below the ground surface (Harlan Tait Associates 1995).

Gradual subsidence of the land surface in the area of Moffett Federal Airfield has been monitored since 1932 because of a decline in artesian pressure. This subsidence has been caused by extensive groundwater pumping from deep aquifers to irrigate agricultural fields and help meet increasing demands on the municipal water supply. The continuous withdrawal resulted in land subsidence in the project area of as much as 7 feet between 1934 and 1967 (Harlan Tait Associates 1995). The state-implemented water importation plan and improved management of groundwater pumping have reduced the use of artesian wells, which in turn has allowed artesian pressures to recover somewhat. Local subsidence has virtually halted since 1969, and future subsidence is unlikely. (DMJM 1995.)

3.6 BIOLOGICAL RESOURCES

3.6.1 Vegetation and Wildlife

Moffett Federal Airfield consists of three distinct wildlife habitats: urban (developed or landscaped), cropland, and wetlands. The urban areas include buildings, roads, runways, planted trees and shrubs, groundcover, and grasslands. The primary agricultural crops are grains and alfalfa. The wetlands consist of seasonal wetlands, sloughs and creeks, ponds, and tidal wetlands (e.g., salt marshes and salt flats). The tidal wetlands consist of cordgrass (*Spartina* sp.), pickleweed (*Salicornia* sp.), and salt grass (*Distichlis* sp.).

Although Moffett Federal Airfield supports native and non-native habitats, the project site consists primarily of buildings, roads, and landscaped and grassland vegetation. The affected area is located between the runway and other developed areas. No natural wildlife habitats are present at the project site.

The urban and developed areas are used by resident and migratory wildlife, especially by common wildlife species that tolerate human activity and human development. Wildlife species that use the project site include raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), California ground squirrel (*Spermophilus beecheyi*), and burrowing owls (*Speotyto cunicularia*). Additional wildlife species that probably occupy the project site include mourning dove (*Zenaida macroura*), Brewer's blackbird (*Euphagus cyanocephalus*), and house finch (*Carpodacus mexicanus*).

3.6.2 Threatened, Endangered, and Candidate Species and Species of Concern

Four sensitive plant species could be present at Moffett Federal Airfield: Point Reyes bird's beak (*Cordylanthus* spp.), state-listed and federally listed as endangered; marsh gum plant (*Grindelia humilis*), a species of concern; delta tule pea (*Lathyrus jepsonii* spp.), a species of concern; and hairless popcorn flower (*Plagiobothrys glaber*), a species of concern. These species are restricted

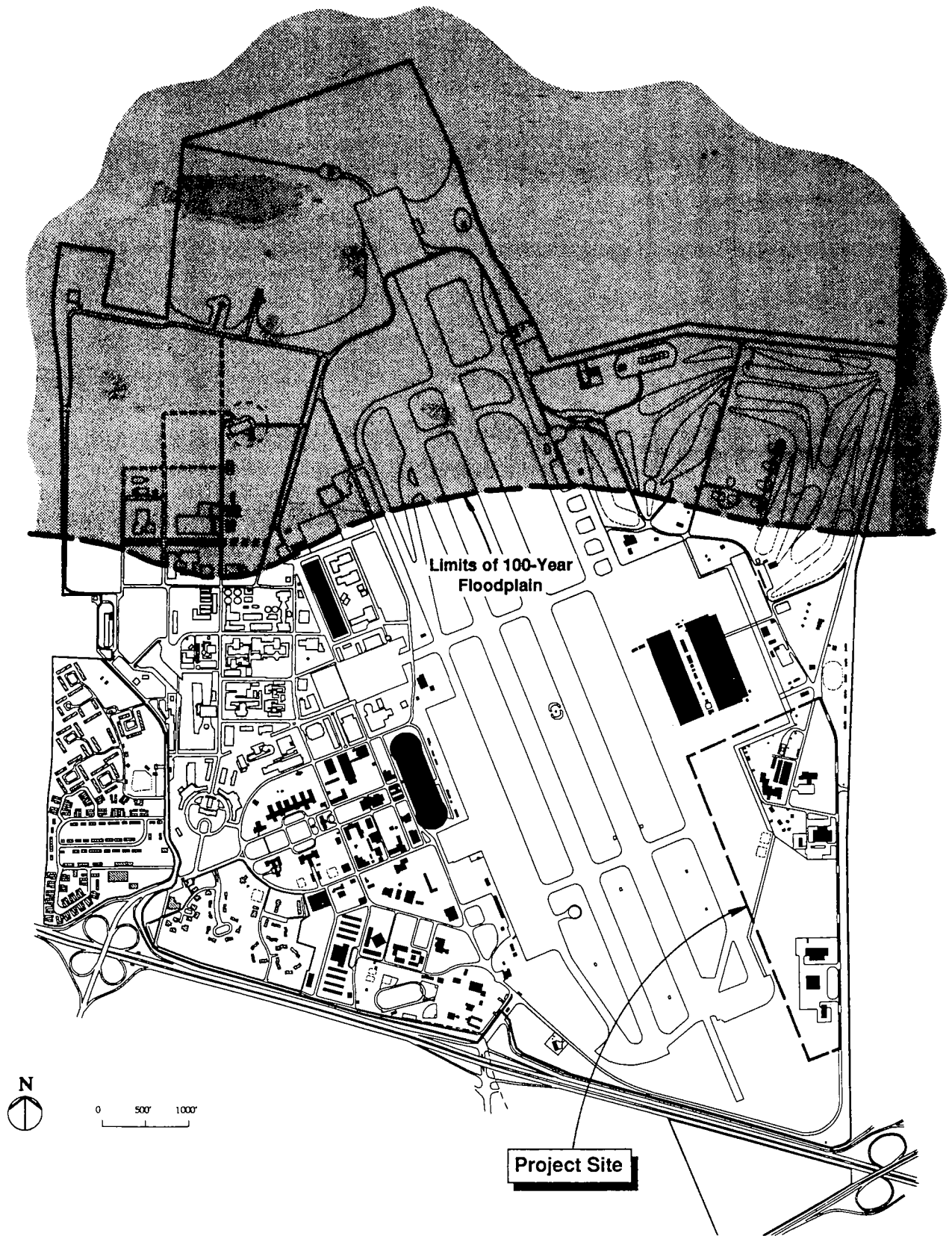


Figure 3-3
100-Year Floodplain at Moffett Federal Airfield

to wetland habitats, however. No suitable habitat for sensitive plant species is present at the installation.

Eight animal species that are classified as threatened, endangered, or candidate species or species of concern either have been observed at or near Moffett Federal Airfield or could use habitats at the installation (Layne and Harding-Smith 1995, Natural Diversity Data Base 1996). These species are the burrowing owl, California clapper rail (*Laterallus jamaicensis coturniculus*), salt marsh harvest mouse (*Reithrodontomys raviventris raviventris*), western snowy plover (*Charadrius alexandrinus nivosus*), California least tern (*Sterna antillarum browni*), salt marsh common yellowthroat (*Geothlypis trichas sinuosa*), California tiger salamander (*Ambystoma californiense*), and California red-legged frog (*Rana aurora draytonii*).

The burrowing owl (a federal species of concern and a state species of special concern) has been recorded throughout much of the airfield. The burrowing owl occurs in grassland and other open space areas at the installation, including the project site. Figure 3-4 depicts known burrowing owl habitat and sightings identified in previous studies (Brady and Associates 1994). As indicated in Figure 3-4, six burrowing owl dens or adult owls have been reported in or near the area affected by the project. Typically, adult burrowing owls select their nests in late winter, before the mating season, which begins in February. The young usually will have fledged from the burrows and are no longer dependent on their parents by September.

The California clapper rail (state-listed and federally listed as endangered), salt marsh harvest mouse (state-listed and federally listed as endangered), western snowy plover (federally listed as threatened and a state species of special concern), California least tern (state-listed and federally listed as endangered), and salt marsh common yellowthroat (a state species of special concern and a federal species of concern) have been recorded at Moffett Federal Airfield (Layne and Harding-Smith 1995), but no suitable breeding or foraging habitat is present at or adjacent to the project site.

Potential habitat for the California tiger salamander (a federal candidate for listing as threatened or endangered and a state species of special concern) and California red-legged frog (federally listed as threatened and a state species of special concern) is located in the golf course area and other wetlands, but no suitable habitat occurs at or adjacent to the project site for these species. No records for these species are known at Moffett Federal Airfield.

Also, no suitable habitat exists at or adjacent to the project site for the American peregrine falcon (*Falco peregrinus anatum*) (state-listed and federally listed as endangered), delta smelt (*Hypomesus transpacificus*) (federally listed as threatened), San Bruno elfin butterfly (*Incisalia mossii*) (federally listed as endangered), bay checkerspot butterfly (*Euphydryas editha bayensis*) (federally listed as threatened), California sea blite (*Suaeda californica*) (federally listed as endangered), coho salmon (*Oncorhynchus kisuteh*) (proposed for federal listing as threatened), Sacramento splittail (*Pogonichthys macrolepidotus*) (proposed for federal listing as threatened), and bat species of concern.

No suitable habitat exists at or adjacent to the project site for the following species of federal concern: tricolored blackbird (*Agelaius tricolor*), Bell's sage sparrow (*Amphispiza belli belli*),

ferruginous hawk (*Buteo regalis*), little willow flycatcher (*Empidonax traillii brewsteri*), Alameda song sparrow (*Melospiza melodia maxillaris*), northwestern and southwestern pond turtles (*Clemmys marmorata marmorata* and *C. m. pallida*, respectively), California horned lizard (*Phrynosoma coronatum frontale*), foothill yellow-legged frog (*Rana boylei*), western spadefoot toad (*Scaphiopus hammondi*), Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*), alkali milkvetch (*Astragalus tener* var. *tener*), northcoast bird's-beak (*Cordylanthus maritimus* ssp. *palustris*), south bay clarkia (*Clarki concinna* ssp. *automixa*), Hoover's button-celery (*Eryngium aristulatum* var. *hooveri*), papoose spikeweed (*Hemizonia parryi* ssp. *congdonii*), valley spearscale (*Atriplex joaquiniana*), Mt. Hamilton thistle (*Cirsium fontinale* var. *campylon*), fragrant fritillary (*Fritillaria liliacea*), caper-fruited tropidocarpum (*Tropidocarpum capparideum*), Dudley's lousewort (*Pedicularis dudleyi*), legenere (*Legenere limosa*), crystal springs lessingia (*Lessingia arachnoidea*), and Mission Delores campion (*Silene verecunda* ssp. *verecunda*).

No suitable habitat exists for the following federally listed endangered species: robust spineflower (*Chorizanthe robusta*), Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*), Santa Clara Valley dudleya (*Dudleya setchellii*), San Mateo thornmint (*Acanthomintha duttonii*), fountain thistle (*Cirsium fontinale* var. *fontinale*), and white-rayed pentachaeta (*Pentachaeta bellidiflora*).

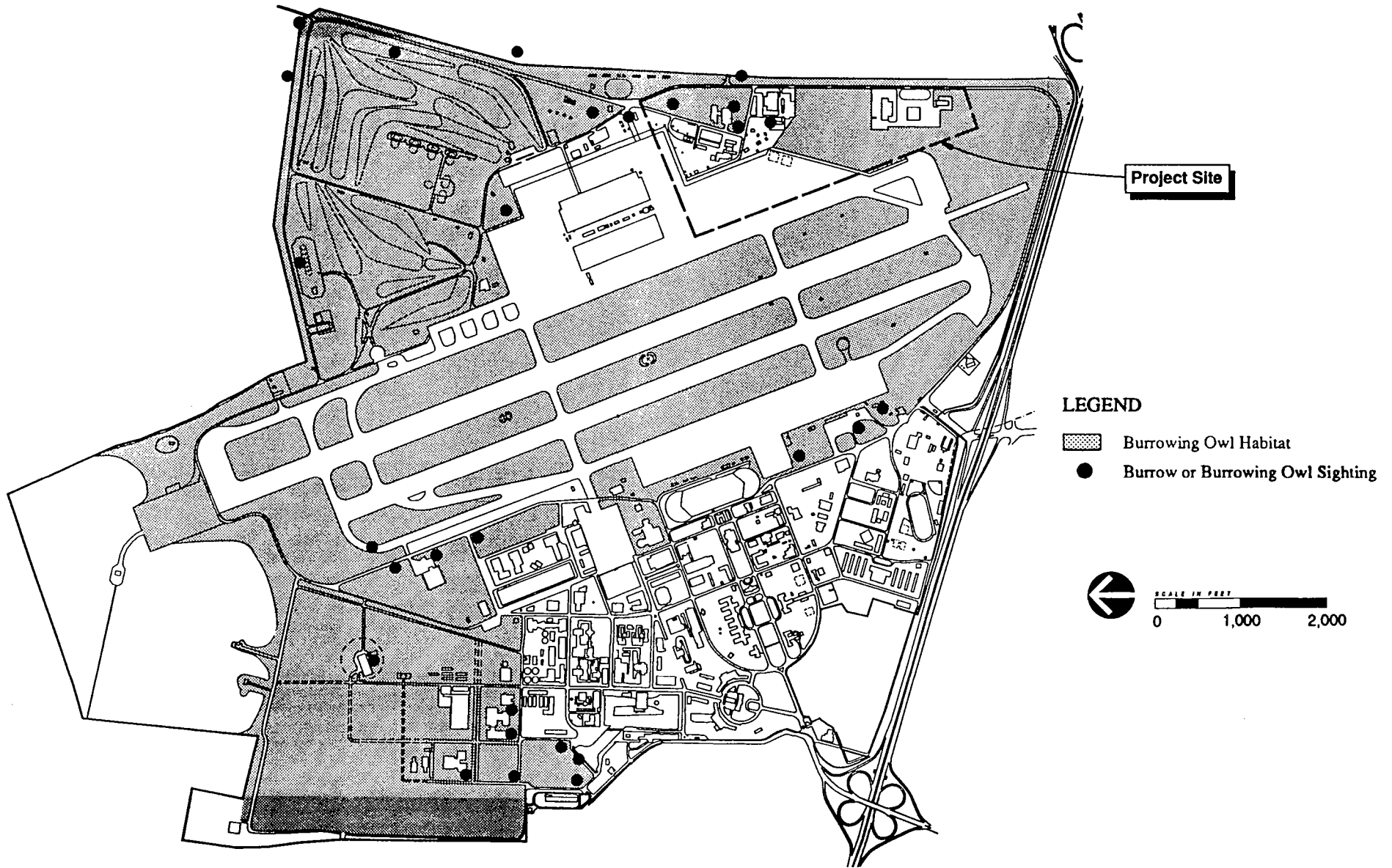
Also, no suitable habitat exists at or adjacent to the project site for the Marin dwarf-flax (*Hesperolinen congestum*) (federally listed as threatened) and Contra Costa goldfields (*Lasthenia conjugens*) (proposed for federal listing as endangered).

3.6.3 Wetlands and Sensitive Habitats

The levees that fringe Moffett Federal Airfield have eliminated regular tidal action. Some areas of salt marsh and other wetlands are present at the installation, but none are located at or adjacent to the project site. No other sensitive habitats (e.g., Moffett Channel and Stevens Creek) are present at the project site (Brady and Associates 1994, Layne and Harding-Smith 1995).

3.7 TRANSPORTATION AND CIRCULATION

The primary means of ground transportation to and from Moffett Federal Airfield is automobile. A NASA shuttle provides transportation to and from the Mountain View CalTrain station, and Santa Clara County buses provide service to the airfield (Brady and Associates 1994). Two interchanges along U.S. Highway 101, at Moffett Boulevard and Ellis Street, provide access to Moffett Federal Airfield. The installation has four primary gates: the Main Gate, the NASA Ames Gate, the South Gate, and the East Gate. The area where 129th Rescue Wing operations would be consolidated is reached by Macon Road, which runs along the eastern boundary of the installation. Figure 3-5 depicts the internal roadway system. Detailed information on traffic volumes, turning movements, and inbound traffic backups is provided in the Moffett Field Comprehensive Use Plan Final Environmental Assessment (Brady and Associates 1994).

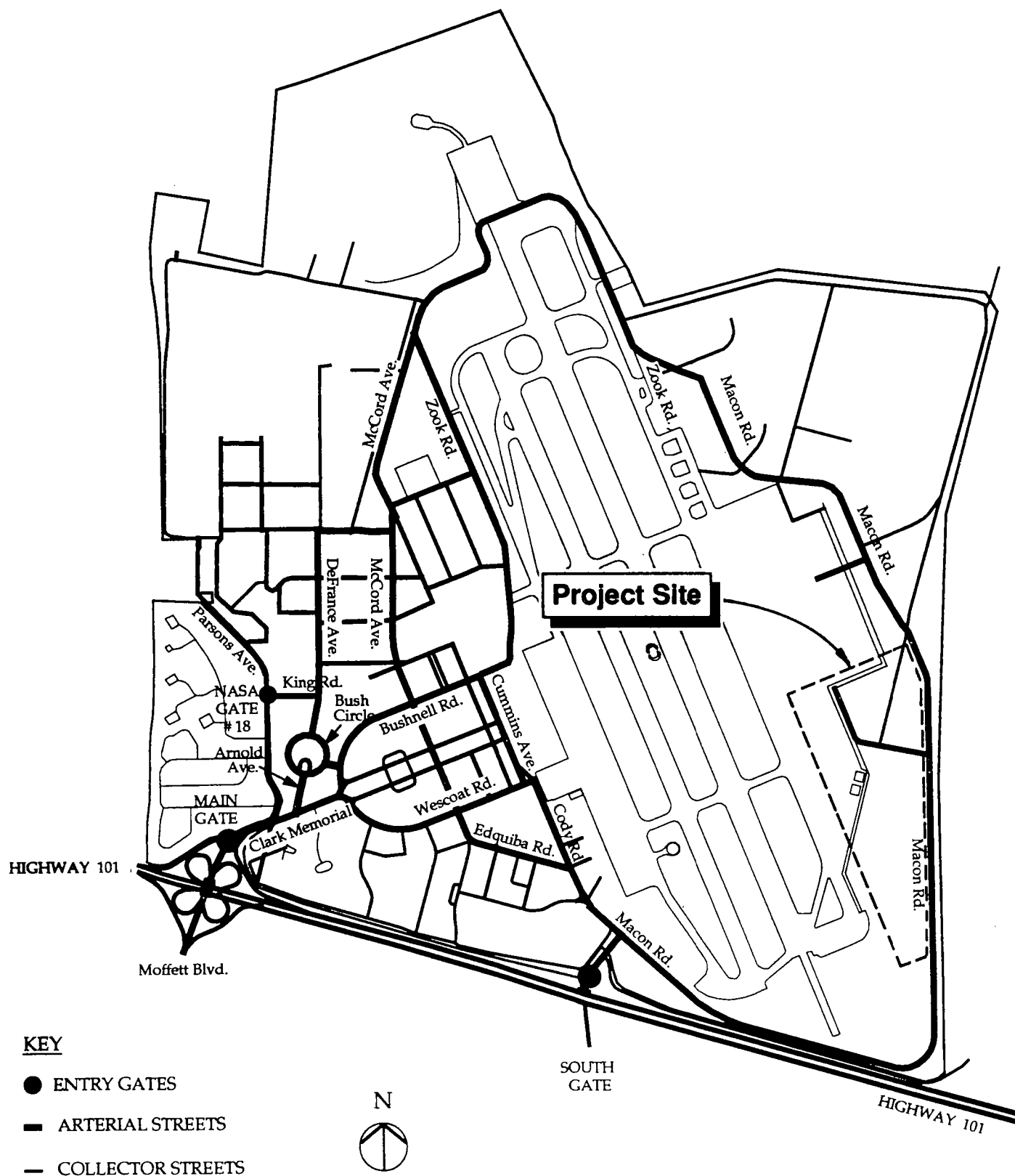


Source: Brady and Associates 1994.



Jones & Stokes Associates, Inc.

Figure 3-4
Burrowing Owl Habitat and Sightings



Source: NASA Ames Research Center 1993.

Figure 3-5
Internal Roadway System at Moffett Federal Airfield

Air traffic near Moffett Federal Airfield includes high-density traffic from the nearby San Jose and San Francisco International Airports. Traffic in the regional airspace is strictly controlled by a system that involves complex airspace restrictions and tower/air route control.

3.8 AIR QUALITY

3.8.1 Climate and Meteorological Conditions

Moffett Federal Airfield is located in the San Francisco Air Basin (SFAB) and has a warm, dry climate that is typically described as subtropical. Although rain is common during the fall and winter months, thunderstorms and heavy rains are not frequent occurrences.

The annual mean temperature is about 58°F. The summers are warm and sunny with high temperatures averaging 79°F in July and August. The winters are wet, with temperatures in December and January averaging 38°F. Eighty percent of the annual rainfall (which averages 18 inches) occurs from November through March because a semipermanent high-pressure area above the northern Pacific Ocean retreats southward in the winter. In summer, this same semipermanent high-pressure area moves northward and holds storm tracks well to the north, allowing little or no rain at the installation.

Moffett Federal Airfield is in a zone of prevailing westerly and northerly winds during most of the year. The average wind velocity is 7 miles per hour, with stronger winds during the day, occasionally gusting to 25 miles per hour. The installation is located in the Santa Clara Valley and is surrounded by low-lying hills that protect it from the high winds and dangerous gusts that sometimes blow in from the Pacific Ocean.

Low-lying sea fog is another climatic feature of Moffett Federal Airfield. The fog varies from a negligible percentage in May to a maximum of 19% in December and decreases again to 3% in March.

3.8.2 Air Quality Standards, Pollutant Health Effects, and Monitoring Data

Moffett Federal Airfield is located in the Santa Clara County portion of the San Francisco Air Basin (SFAB). Air quality management in California is governed by the federal and California Clean Air Acts and the California Health and Safety Code, which require that levels of air pollutants in ambient air be monitored to ensure that they remain below levels determined to be safe for human exposure.

Ozone is a public health concern because it is a respiratory irritant that increases susceptibility to respiratory infections. Ozone causes substantial damage to leaf tissues of crops and natural vegetation and damages many materials by acting as a chemical oxidizing agent. To limit harm to people and other living things, state and federal standards for ozone have been set for a 1-hour averaging time. The state 1-hour ozone standard is 0.09 part per million (ppm), not to be exceeded at any time. The federal 1-hour ozone standard is 0.12 ppm, not to be exceeded more than three times in any 3-year period. The state ozone standards were violated several times during the

last 4 years at the Mountain View monitoring station, as well as at other stations in Santa Clara County. The federal ozone standards were not exceeded at the Mountain View station during the last 4 years but were exceeded at other stations in Santa Clara County. (California Air Resources Board 1991, 1992, 1993, 1994.)

Health concerns associated with suspended particulate matter focus on particles small enough to reach the lungs when inhaled because they can lodge in the lungs and contribute to respiratory problems, including permanent lung damage. Fine particles can also interfere with the body's mechanism for clearing the respiratory tract and act as a carrier of adsorbed toxic substances. Few particles larger than 10 microns in diameter reach the lungs, so particulate matter smaller than 10 microns in diameter (PM10) is the focus of the state and federal standards. State and federal PM10 standards have been set for 24-hour and annual averaging times. The state 24-hour PM10 standard is 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and the federal 24-hour standard is 150 $\mu\text{g}/\text{m}^3$. The state annual PM10 standard is 30 $\mu\text{g}/\text{m}^3$ as an annual geometric mean, whereas the federal annual PM10 standard is 50 $\mu\text{g}/\text{m}^3$ as an annual arithmetic mean. Federal and state 24-hour PM10 standards may not be exceeded more than 1 day per year, and annual standards may not be exceeded at all.

There is no PM10 monitoring station located in Mountain View. The state PM10 standards were exceeded several times during the last 4 years, however, at several monitoring stations elsewhere in Santa Clara County. The federal PM10 standards were exceeded at some of these stations during 1990 and 1991, but no exceedances occurred during 1992 or 1993. (California Air Resources Board 1991, 1992, 1993, 1994.)

Asbestos. Health effects associated with exposure to asbestos are similar to those associated with exposure to PM10. Air quality monitoring is not conducted for asbestos because it is not a criteria pollutant.

Lead. Health effects associated with exposure to lead include gastrointestinal disturbance, anemia, kidney disease, and, in severe cases, neuromuscular and neurologic dysfunction. Of particular concern is low-level lead exposure during infancy and childhood, which can adversely affect neurobehavioral performance and growth. Lead is currently classified as a probable human carcinogen (South Coast Air Quality Management District 1993). State and federal lead standards have been set for 30-day and quarter-year averaging times, respectively. The state lead standard is an average concentration of 1.5 $\mu\text{g}/\text{m}^3$ over any 30-day period. The federal lead standard is an average concentration of 1.5 $\mu\text{g}/\text{m}^3$ over any calendar quarter. The state criterion may not be equaled or exceeded. The federal criterion may not be exceeded on more than one day per year.

There is no lead monitoring station in Mountain View. However, lead monitoring is performed at other locations within Santa Clara County. Neither the state nor federal lead standard was violated at any station in Santa Clara County during 1990, 1991, 1992, or 1993. (California Air Resources Board 1991, 1992, 1993, 1994.)

3.8.3 Local Emissions

An emissions inventory was prepared for the 129th Rescue Wing in early 1995 (EA Engineering Science and Technology 1995). Although the emissions information in that document is applicable to 1993, it is representative of current emissions from 129th Rescue Wing facilities because activities have not changed since that time. Table 3-2 summarizes the results of this inventory.

3.8.4 Attainment Status and Air Quality Planning

The project region is classified as a serious nonattainment area for the state ozone standards, an attainment area for the federal ozone standards, a nonattainment area for the state PM10 standards, and an unclassified area for the federal PM10 standards (Bay Area Air Quality Management District 1995, Steinberger pers. comm.).

The U.S. Environmental Protection Agency oversees implementation of the federal Clean Air Act. The California Air Resources Board (ARB), a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California and regulates directly emitted mobile-source pollutants and fuel content. The ARB divides the state into air basins, based on meteorological and geographical conditions and, to the extent feasible, political boundaries. The BAAQMD is responsible for control of stationary and indirect sources, air monitoring, and preparation of air quality attainment plans in the SFAB.

The BAAQMD prepared a Clean Air Plan (CAP) that was approved in 1991 and prepared an update to the CAP in 1994. The main objective of the CAP is to attain the state air quality standards for ozone. The CAP presents a comprehensive strategy to reduce emissions from stationary, mobile, and area sources through implementation of additional control measures for existing stationary sources, a permitting program resulting in no net increase in emissions from new stationary sources, transportation control measures, and provisions for indirect source controls (Bay Area Air Quality Management District 1995).

The project's consistency with the CAP should be determined by first assessing whether the proposed action is consistent with applicable local plans and then assessing whether those plans are consistent with the CAP (Bay Area Air Quality Management District 1995). Because the proposed action would not result in an increase in vehicle miles traveled and would not result in a net increase in emissions from other sources, however, it would not be inconsistent with the 1991 CAP or the 1994 update.

3.9 NOISE

The noise environment in the vicinity of Moffett Federal Airfield is dominated by noise from ground transportation, aircraft, and wind tunnel facilities. Aircraft operations, including operations associated with the 129th Rescue Wing, are a significant source of noise. In addition to NASA and military aircraft, a variety of government and civilian aircraft also use the airfield. Aircraft types include U.S. Air Force Lockheed C-5 and C-141 transports, civilian Boeing 747 cargo jets, and

smaller executive and business aircraft. The 129th Rescue Wing uses six HH-60G helicopters and four HC-130P aircraft. Historically, aviation activities at Moffett Federal Airfield have averaged about 80,000 annual operations. Of these, approximately 60,000 have actually occurred on the airfield; the rest were typically overflights by aircraft traversing the airspace (Brady and Associates 1994).

As a result of the transfer of Moffett Federal Airfield from the Navy to NASA and the phasing out of active-duty P-3 squadrons, overall aviation activity at the airfield has decreased over the past few years. During the 12-month period from November 1992 through October 1993, total aircraft activity was about 51,500 operations. Of these, approximately 13,000 were overflights and about 38,500 actually took place at the field. Aircraft noise contours for these baseline conditions are depicted in Figure 3-6. The noise contours are expressed in terms of community noise equivalent level (CNEL), which is the cumulative noise measure adopted by the State of California for assessing aircraft noise impacts. CNEL is a 24-hour average sound level expressed in decibels (dB), with a 5-dB adjustment to sound levels during evening hours (7-10 a.m.) and a 10-dB adjustment during nighttime hours (10 p.m.-7 a.m.). These adjustments account for people's lower tolerance for noise intrusion during evening and nighttime hours.

Although noise from wind tunnel operations is also a significant source of noise at Moffett Federal Airfield, use of the wind tunnel is not related to any 129th Rescue Wing activities. The 80-foot by 120-foot wind tunnel, located in the southwestern portion of the installation, generates sound levels as high as 90 A-weighted decibels (dBA). According to the City of Mountain View Planning Department, the city gets complaints from time to time concerning wind tunnel noise. Most of these complaints are related to a low-level hum that is audible late at night during wind tunnel operation.

3.10 PUBLIC SERVICES AND UTILITIES

3.10.1 Gas and Electricity

Pacific Gas and Electric Company provides power and natural gas to Moffett Federal Airfield. In 1993, total electrical usage was 820,000 megawatt hours (MWh), which equates to approximately 82 MWh per employee annually. Natural gas is used primarily for steam generation, hot water, and space heating. Consumption of natural gas in 1993 was 590,000 million British thermal units (MBTUs), which equates to 59 MBTUs per employee annually. (Brady and Associates 1994.)

3.10.2 Water

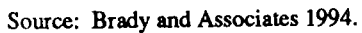
Water supply is provided by the San Francisco Water Company, which obtains water primarily from the Hetch Hetchy Reservoir in the Sierra Nevada. In 1991, the facility used a total of 412 million gallons of water.

Table 3-2. Summary of 1993 Stationary-Source Emissions from 129th Rescue Wing Facilities at Moffett Federal Airfield

Activity	Particulate Matter		Sulfur Dioxide		Nitrogen Oxides		Carbon Monoxide		Reactive Organic Gas*		Hazardous Air Pollutants	
	lbs/yr	tons/yr	lbs/yr	tons/yr	lbs/yr	tons/yr	lbs/yr	tons/yr	lbs/yr	tons/yr	lbs/yr	tons/yr
Combustion Source Emissions												
Heating and hot water units	26	0.0	1	0.0	208	0.1	74	0.0	13	0.0	2	0.0
Generator	<u>1</u>	<u>0.0</u>	<u>1</u>	<u>0.0</u>	<u>7</u>	<u>0.0</u>	<u>2</u>	<u>0.0</u>	<u>1</u>	<u>0.0</u>	<u>0</u>	<u>0.0</u>
Subtotal	27	0.0	2	0.0	215	0.1	76	0.0	14	0.0	2	0.0
Fuel Storage Operations												
Fuel storage/transfer	--	--	--	--	--	--	--	--	10,395	5.2	1,993	1.0
Operational Sources												
Shop operations	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>3,656</u>	<u>1.8</u>	<u>1,306</u>	<u>0.7</u>
Total	27	0.0	2	0.0	215	0.1	76	0.0	14,065	7.0	3,301	1.7

*Includes heating-unit toxic organic constituents (TOCs) and generator hydrocarbons on a pound-for-pound basis.

Source: EA Engineering Science and Technology 1995.



3.10.3 Wastewater

The sanitary sewer system at Moffett Federal Airfield comprises two separate systems. The first, with the City of Mountain View, serves housing units in the Onizuka housing area. This system has a maximum discharge limit of 300,000 gallons per day from NASA. These discharges are transported to and treated at the Palo Alto Regional Water Quality Control Plant. The second treatment system, with the City of Sunnyvale, has no specified maximum discharge limit. These discharges are treated at the Sunnyvale Public Owned Treatment Works. In 1991, Moffett Federal Airfield discharged approximately 49 million gallons of sewage into the Sunnyvale system.

3.10.4 Public Services

Fire protection services at the installation are currently provided by the 129th Rescue Wing Fire Department. The department has 47 personnel in Building 580, which is located in the center of the installation adjacent to the airfield. The department maintains three structural fire pumpers; three crash, fire, and rescue vehicles; and five other support and command vehicles. Moffett Federal Airfield also has a cooperative response agreement with the City of Sunnyvale and the City of Mountain View Fire Departments. (Brady and Associates 1994.)

Police protection and security at Moffett Federal Airfield are the responsibility of NASA and are provided through private contractors. The installation is operated as a closed federal facility. It is surrounded by a security fence, and security clearance must be obtained to gain entry through one of three guarded access gates. (Brady and Associates 1994.)

Moffett Federal Airfield has no active landfills. Solid waste collection and disposal are handled through Waste Management, Inc., a private contractor. A total of approximately 14 tons of solid waste was collected at the installation from October 1991 to September 1992. Recent reductions in the collection needs at the facility are largely attributable to implementation of a monthly recycling program and an overall decrease in employee population.

3.11 HAZARDOUS MATERIALS AND WASTES

Maintenance and repair activities associated with 129th Rescue Wing operations involve the use and generation of hazardous materials such as paints, solvents, expended firefighting foam, and fuel and oil products. The materials are currently dispensed from Buildings 146, 682, 683, 684, the flight line, and Hangar 3.

3.11.1 Petroleum, Oil, and Lubricants (POL)

The fuel farm for Moffett Federal Airfield, operated by a Defense Fuel Supply Center contractor, is located in the northeast corner of the facility, just north of the intersection of Macon Road and East Petrol Road, near the golf course and the ordnance storage area. The fuel farm provides for the storage and delivery of fuel for aircraft, vehicles, and other uses (e.g., emergency generators). Jet fuel is received by barge and pumped to several large storage tanks. From these tanks, fuel is dispensed to aircraft from hydrants at the fuel facility on the eastern portion of the

airfield. The fuel farm consists of four 567,000-gallon storage tanks and a 105,000-gallon "day" tank in which fuel for immediate use is stored. The present fuel requirements at Moffett Federal Airfield are approximately 1 million gallons of aviation fuel per month. To ensure that the existing fuel farm tanks do not pose a threat to the environment, the Navy has tested the tanks for leaks. No evidence of leaking has been found, and only minor repair and upgrading are required.

3.11.2 Spill Prevention and Response

129th Rescue Wing personnel are trained in methods and procedures to reduce the likelihood of fuel and other toxic material spills. In the event of a spill, cleanup procedures are in place. Procedures also address the cleanup and storage of toxic materials used during routine operations at the installation. The governing regulations for spill prevention are in the NASA Spill Prevention Plan, which took effect in December 1994. All resident agencies at Moffett Federal Airfield are required to follow these regulations.

3.11.3 Installation Restoration Program

Nineteen cleanup sites at Moffett Federal Airfield have been identified by the Navy as potential sites of hazardous waste disposal or spills, and all are under investigation for remediation under the Navy's Installation Restoration Program (IRP). Remediation of hazardous waste remains the responsibility of the Navy, even though custody of the installation has been transferred to NASA. Three additional sites have been informally identified by the Navy as areas with potential environmental constraints.

The 19 known cleanup sites have been segregated into five "operable units" (OUs). This allows sites with similar contaminants, or that require similar remediation measures, to be studied and cleaned up simultaneously.

Of the 19 cleanup sites identified at the installation, six are located in areas occupied by the 129th Rescue Wing. Only two of these six sites, however, are located in the area where the 129th Rescue Wing would consolidate its operations under the proposed action (Figure 3-7). These cleanup sites are considered a constraint to new development. Where possible, an uncontaminated site or the least contaminated site will be chosen for new development. In the event that contaminated soil or groundwater is encountered as part of new development, the U.S. Navy will perform environmental remediation.

Hazardous materials such as asbestos and polychlorinated biphenyls (PCBs) are present in existing facilities. NASA will coordinate the permit process for hazardous waste and hazardous materials as needed to accommodate 129th Rescue Wing operations. As facility uses change and further development occurs, NASA will work with the 129th Rescue Wing to minimize waste, plan and prepare for waste storage, and avoid emergency situations. Each building in which toxic or hazardous materials will be used must have an emergency action plan. In addition, the user of these materials will be required to comply with applicable standards set by the state and federal Occupational Safety and Health Administration.

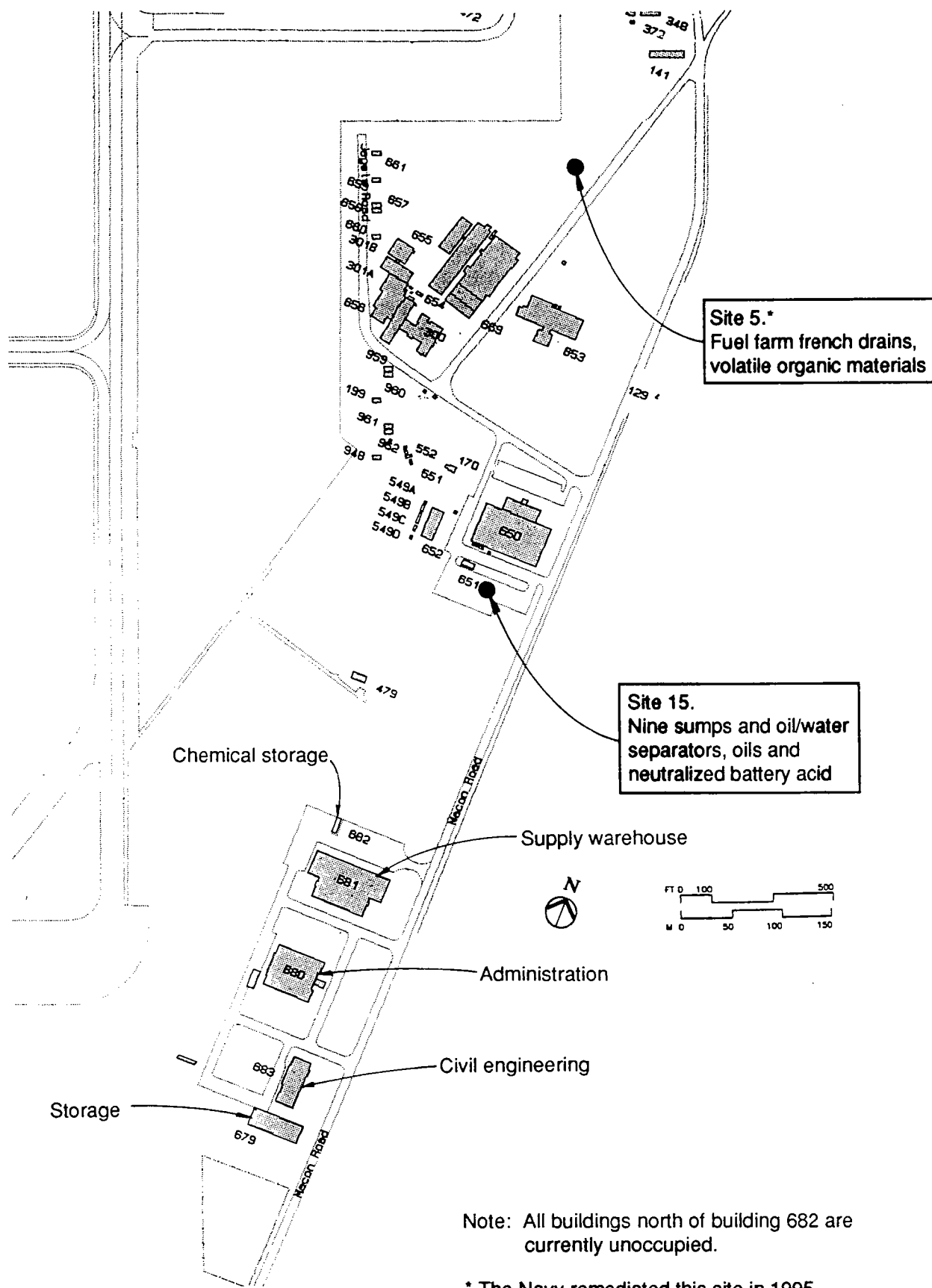


Figure 3-7
Locations of Hazardous Materials on the Project Site

In addition to the NASA spill prevention plan mentioned above, several plans related to hazardous materials have been developed for Moffett Federal Airfield:

- the Hazardous Materials Plan, which ensures that the installation meets all federal, state, and local regulation regarding hazardous wastes;
- the Hazardous Waste Minimization Plan, which outlines measures to reduce hazardous waste output;
- the Spill Contingency Plan, which identifies response procedures and the organizations responsible and lists site-specific contingency plans in case of toxic spills; and
- the Hazard Communication Program Plan, which identifies sources of information regarding hazardous materials.

These plans, which were originally developed by the Navy, have been or will be adopted, as applicable, by NASA.

3.12 VISUAL RESOURCES

The site where 129th Rescue Wing operations would be consolidated under the proposed action is located on the east side of the installation near Hangars 2 and 3, the large former airship hangars. The scenic quality of the area is low. The area is flat, with little change in topography, and no outstanding natural features are located near the proposed site. The visual setting of the area is defined by the two large hangars, the runways, and the commercial/industrial-style buildings in the area. Land uses to the east, beyond the installation's boundaries, are commercial (primarily office buildings). The combination of the variety of individual building types and the adjacent vacant land and open area of the runways creates a diverse visual character.

Potentially sensitive viewpoints are U.S. Highway 101 along the southern boundary of Moffett Federal Airfield, a golf course in the northeastern corner of the facility, and a golf course beyond the southern boundary in the airfield clearance zone. In general, observers from these viewpoints are not expected to have a high level of concern for the visual environment in the project area.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 LAND USE AND ZONING

Moffett Federal Airfield is designated A-1-20S-BD in the Santa Clara County zoning ordinance. This is a general use zoning designation. The proposed action, which consists of the relocation and consolidation of existing uses, will occur entirely within the existing boundaries of the installation and is consistent with existing onsite zoning. As described below, no adverse effects related to land use compatibility (e.g., traffic, air quality, noise, or views) would occur and no adverse effects on land uses outside the facility are anticipated.

4.2 HISTORICAL AND CULTURAL RESOURCES

4.2.1 Archaeological Resources

The proposed action would involve a moderate to high level of ground disturbance throughout a significant portion of the 129th Rescue Wing's southernmost parcel of land at Moffett Federal Airfield. Subsurface improvements and new building construction; construction access areas; and alteration of streets, parking, and access areas may affect potential archaeological resources. Results of previous archaeological studies conducted at the installation indicate that the project area is archaeologically sensitive and may contain surface or subsurface evidence of prehistoric and early historic occupation sites. Many of these studies also suggest that many archaeological resources at Moffett Federal Airfield and in the surrounding area have been significantly altered or destroyed by historic and modern activities.

Unpaved portions of the project area were surveyed in conjunction with a cultural resource study completed for the installation (Garaventa and Anastasio 1991). No archaeological sites were located during this survey. It does not appear that the proposed action will affect any known archaeological sites. Implementation of SOP-5 will ensure that adverse effects on archaeological resources will be avoided.

4.2.2 Architectural Resources

Some buildings at the installation have been previously evaluated for their historical significance by the Navy, resulting in the nomination and listing of a historic architectural district in the NRHP (Brady and Associates 1994). Most of the buildings and structures included in the NRHP district or otherwise designated as landmark properties at the installation are on the western side of the installation and would not be directly or indirectly affected by the proposed action.

Hangar Nos. 2 and 3, which are included in the historic district and are also listed individually in the NRHP, are separate from other historic properties and are north of the current project area. As part of the proposed action, the 129th Rescue Wing would relocate its present operations in Hangar No. 3 (which utilize approximately 16% of the building) to a new composite maintenance hangar. Because the operations relocation would not result in the abandonment or discontinued maintenance of Hangar No. 3, there would be no direct or indirect effects on the

historic property. Any subsequent modifications to the hangar would be regulated by the Navy's Historic Structures Preservation Plan (NAV FAC MO-913, September 1991). The physical and visual setting of the historic hangars would not be affected by the construction of new buildings in the project area to the south.

Under the proposed action, Buildings 652, 655, 669, 300, 301, 301A, 301B, and 654 would be demolished or renovated. Buildings 300, 655, and 669 date to 1945 or before. The remainder of the buildings date to the 1960s and 1970s. Buildings 300, 301, and 669 have been recommended as ineligible for listing in the NRHP for their significance during World War II. No evaluation has been conducted for Building 655, which was constructed in 1945. These buildings could be significant because of their role during the Cold War or as part of the scientific and technological advances undertaken at Moffett Field.

In addition, nine "line shacks" dating to the 1950s would be demolished. These buildings could be significant because of their role during the Cold War or as part of the scientific and technological advances undertaken at Moffett Field. Implementation of SOP-6 will ensure that adverse effects on architectural resources will be avoided.

4.3 POPULATION AND HOUSING

The proposed action involves relocating existing 129th Rescue Wing personnel within the bounds of Moffett Federal Airfield and would not increase the number of personnel assigned to the unit. Accordingly, the proposed action would not directly affect employment at the installation, and the total population of the area is not expected to change as a result of implementing the proposed action. No major economic benefits or detriments are anticipated under the proposed action. Construction activities could result in minor, short-term benefits to the local economy if local construction companies, labor, and materials are used. Because ongoing operations would continue under the proposed action, no effect on the local economy is anticipated beyond the construction phase.

4.4 EARTH RESOURCES

The proposed action is not anticipated to have adverse effects on earth resources. No changes in topography or surface relief features would result from implementation of the proposed action because the project site is flat. SOP-1 and SOP-2 would ensure that best management practices to control excessive erosion of soils and offsite sedimentation would be used during construction and demolition activities.

Because the site is located in a seismically active region of California and is classified in seismic zone 4, the geological rating for an area with the highest incidence of earthquakes, damage to structures and risk to human life because of seismic shaking are possible. Implementing SOP-1, however, would ensure that the design of new and modified structures conforms with the Uniform Building Code to minimize seismic hazards.

Differential settlement is possible around built structures in the project area because the soils are plastic and are saturated a few feet below the ground surface. Also, the high clay content of expansive soils could cause building foundations to shift and deform. Implementing SOP-1, however, would ensure that the potential adverse effects of these soil characteristics are minimized by requiring that building design and construction conform with the Uniform Building Code.

4.5 WATER RESOURCES

The proposed action would not have adverse effects on surface water or groundwater hydrology. The project site and all new project-related construction would be located outside the 100-year floodplain and would have no effect on floodplain hydrology. The Moffett Field Comprehensive Use Plan final EA evaluates changes in absorption rates, drainage patterns, and the rate or amount of runoff expected with implementation of Future Concept 1 of the Comprehensive Use Plan. The evaluation states that implementation of the plan will result in the development of approximately 100 acres of land, bringing the total developed land acreage to 1,250 acres. The EA concludes that no major changes in absorption rates, drainage patterns, or the rate or amount of runoff expected will occur with implementation of Future Concept 1 because the amount of land to be developed under the plan is small relative to the amount of existing impervious surfaces. Under the proposed action, development will occur on approximately 20 acres of land. A large portion of this area has been previously developed or paved. Accordingly, the increase in impervious surfaces associated with the proposed action is very small relative to the extent of existing developed areas and no significant changes in water absorption rates, drainage patterns, or the rate and amount of runoff are expected.

4.5.1 Surface Water

Implementing SOP-1 and SOP-2 would ensure that best management practices to control excessive erosion of soils and offsite sedimentation are used during construction and demolition activities. In addition, Moffett Federal Airfield has been granted a National Pollutant Discharge Elimination System permit for stormwater runoff under the federal Clean Water Act. Pollutants in water discharged from the installation are regulated by the Regional Water Quality Control Board, and significant levels of harmful pollutants would not be permitted to enter San Francisco Bay as a result of the proposed action. Runoff from Moffett Federal Airfield is a very small fraction of the total runoff toward Steven Creek and San Francisco Bay, and no substantial effects are expected from incremental runoff associated with the proposed action.

4.5.2 Groundwater

In recent years, groundwater has been used only for irrigation; the potable water for Moffett Federal Airfield comes primarily from the Hetch Hetchy Reservoir in the Sierra Nevada. Because the proposed action would not result in an increase in the number of personnel in the unit, water use would not increase. In addition, the amount of impervious surfaces in the project area would not increase substantially with implementation of the proposed action. For these reasons, no adverse impacts related to the direction, rate of flow, or quantity of groundwater would occur with implementation of the proposed action.

4.6 BIOLOGICAL RESOURCES

4.6.1 Vegetation and Wildlife

Implementation of the proposed action would not have substantial adverse impacts on common vegetation and wildlife resources at the project site. No wildlife habitats would be fragmented by the project, and no wildlife movement corridors would be affected.

4.6.2 Threatened, Endangered, and Candidate Species and Species of Concern

Burrowing owls are known to nest in the grassy or open areas of the project site. Construction activities associated with the proposed action could disturb or cause mortality of adults, nestlings, or fledgling burrowing owls. This impact is considered significant because the burrowing owl is a federal nongame bird species of management concern and a state species of special concern. Burrowing owls are also protected under the federal Migratory Bird Treaty Act. Implementing SOP-4 would reduce this impact to a less-than-significant level by ensuring that construction activities are designed and scheduled to avoid and minimize impacts on burrowing owls.

No other sensitive plant or wildlife species would be directly or indirectly affected by the project because they do not occur at the project site and no suitable habitat is present at or adjacent to the project site.

4.6.3 Wetlands and Sensitive Habitats

No wetlands or sensitive habitats are present at or adjacent to the project site; therefore, no adverse impacts would occur on these resources. Wildlife movement would not be affected by the project.

4.7 TRANSPORTATION AND CIRCULATION

No increase in the number of aircraft, aircraft activity, or personnel assigned to the unit would occur with implementation of the proposed action. Except for minor increases in traffic that might occur during construction and demolition of facilities, no changes in surface or air traffic volumes or patterns will take place with implementation of the proposed action.

4.8 AIR QUALITY

4.8.1 Methodology

4.8.1.1 Construction-Related Impacts

Three sources of construction-related emissions are assessed in this EA: exhaust and dust, asbestos-containing materials, and lead-based paint. According to the BAAQMD, construction-related exhaust and dust emissions need not be quantified to allow an assessment of significance. Therefore, construction-related impacts related to exhaust and dust emissions are assessed

qualitatively in this document. Additionally, impacts related to the demolition and renovation of buildings that contain asbestos and lead-based paint are also assessed qualitatively.

4.8.1.2 Operation-Related Impacts

Stationary sources are the primary source of operation-related emissions associated with the proposed action. These stationary sources are hot water heaters, heating units, and generators (hereafter collectively referred to as "units") that would be installed in new and renovated buildings, as well as existing units in buildings that would be used by the 129th Rescue Wing. Although shop operations, fuel storage, and fuel transfer are also existing stationary sources of pollution, no change in these operations is expected to take place as part of the proposed action. Therefore, these sources are not considered in this analysis.

In general, any new structure that is built as part of the proposed action would replace an existing structure currently used by 129th Rescue Wing personnel. Therefore, the overall number of units that would be used as part of the proposed action is not expected to be greater than the number of units currently used in 129th Rescue Wing facilities. Additionally, emissions from individual units that would be replaced under the proposed action would be less than or equal to existing emissions from such equipment currently operating in 129th Rescue Wing facilities because the new equipment is expected to emit less pollution than the equipment it would be replacing. Emissions from individual units that would not be replaced under the proposed action would remain the same as under current conditions. Therefore, operation-related emissions under the proposed action would be equal to or less than existing emissions from 129th Rescue Wing facilities.

As described in the "Affected Environment" discussion of air quality (Section 3.8), an inventory of 1993 emissions from 129th Rescue Wing facilities was produced in early 1995. The results of the combustion-source portion of this inventory, which are representative of current emissions from 129th Rescue Wing facilities, are shown in Table 3-2. These emission levels serve an upper bound for operation-related emissions of the proposed action in this analysis.

4.8.1.3 Conformity Screening

For any project involving federal funding or federal approval, the project proponent is required to show conformity with the EPA's general conformity rule if the project would result in emissions of nonattainment pollutants that exceed specified levels. These pollutant threshold levels, called "de minimis" emission levels, vary from pollutant to pollutant and depend on the attainment status of individual air basins. As discussed in Section 3.8, the project area is in attainment of federal ozone standards and is an unclassified area for PM₁₀. Although the project area is in attainment of federal ozone standards, it is technically a maintenance area and is, therefore, subject to conformity. Because the project area is unclassified for PM₁₀, however, conformity screening for PM₁₀ is not necessary. According to EPA, the applicable de minimis levels for this project are 100 tons per year (tpy) of reactive organic gases (ROG) and 100 tpy of nitrogen oxides (NO_x).

As explained above, annual pollutant emissions from the proposed action is expected to be less than or equal to the existing combustion source emissions shown in Table 3-2. Table 3-2 shows that less than 1 tpy of ROG and NO_x are emitted under existing conditions. Therefore, because the proposed action would not exceed the 100-tpy de minimis thresholds for ROG and NO_x, no conformity analysis is required.

4.8.2 Impact Evaluation

A project will normally have a significant air quality effect if it will:

- violate any ambient air quality standard,
- expose sensitive receptors to substantial pollutant concentrations, or
- contribute substantially to an existing or projected air quality violation.

For this analysis, significance criteria developed by the BAAQMD were used to determine the significance level of air quality impacts related to the proposed action. The BAAQMD has included a list of pollutant-reducing construction practices in its CEQA guidelines (Bay Area Air Quality Management District 1995). Construction-related impacts are considered significant if:

- BAAQMD PM10-reducing construction practices are not included as part of the proposed action or
- lead or asbestos would be released as a result of construction, demolition, or renovation.

Operation-related emissions are considered significant if emissions exceed the BAAQMD's thresholds of:

- 80 pounds per day (ppd) of ROG,
- 80 ppd of NO_x, or
- 80 ppd of PM10 (Bay Area Air Quality Management District 1995).

4.8.2.1 Construction-Related Impacts

Construction of the proposed action would result in a short-term increase in generation of PM10 emissions caused by earth-moving activities and the operation of internal combustion equipment. Because the BAAQMD's pollutant-reducing construction measures are included in SOP-7, this impact is not considered significant.

As part of the proposed action, Buildings 300, 301B, 652, 655, and 669 would be demolished and Buildings 650, 653, 654, and 656 would undergo varying degrees of renovation. Buildings 300, 654, and 656 are known to contain asbestos-containing materials (ACM). Although not supported by testing, Buildings 301B, 650, 652, 655, and 669 are assumed to contain ACM as well. Disturbance of ACM during demolition or renovation could result in the emission of asbestos fibers. Implementing SOP-8, which relates to the handling of such materials, would be sufficient to prevent

the release of asbestos fibers during demolition and renovation. This impact, therefore, is not considered significant.

Testing for lead-based paints has been performed on some of the facilities, and each of the buildings that would be demolished or renovated is assumed to contain small amounts of lead-based paint, commonly found on window sills. Disturbance of material containing lead-based paint during demolition or renovation could result in the emission of lead dust. Implementing SOP-9, which relates to the handling of such materials, would be sufficient to prevent the release of lead dust from lead-based paint during demolition and renovation. This impact, therefore, is not considered significant.

4.8.2.2 Operation-Related Impacts

As explained above, annual pollutant emissions under the proposed action would be less than or equal to the existing combustion-source emissions shown in Table 3-2. Table 3-2 indicates that operation of the proposed action would result in the emission of no more than 14 pounds per year (ppy) of ROG from boilers and generators in 129th Rescue Wing facilities. This is equivalent to less than 1 ppd of ROG, well below the 80-ppd threshold. Accordingly, no long-term increase in ROG emissions during operation of the proposed action would occur.

Table 3-2 indicates that operation of the proposed action would result in the emission of no more than 215 ppy of NO_x from boilers and generators in 129th Rescue Wing facilities. This is equivalent to less than 1 ppd of NO_x, well below the 80-ppd NO_x threshold. Accordingly, no long-term increase in NO_x emissions during operation of the proposed action would occur.

Table 3-2 indicates that operation of the proposed action would result in the emission of no more than 27 ppy of PM10 from boilers and generators in 129th Rescue Wing facilities. This is equivalent to less than 1 ppd of PM10, well below the 80-ppd PM10 threshold. Accordingly, no long-term increase in PM10 emissions during operation of the proposed action would occur.

4.9 NOISE

Under the proposed action, no new aircraft would be assigned to the 129th Rescue Wing and aircraft activity would not increase. Accordingly, no changes in aircraft noise would be associated with the proposed action. For similar reasons, no change in traffic noise is attributable to 129th Rescue Wing operations. Although construction and demolition activities would be a source of noise, that noise would be localized, short-term, and limited to an area that does not contain noise-sensitive land uses.

4.10 PUBLIC SERVICES AND UTILITIES

The proposed action would not result in an increase in the number of personnel in the unit. Accordingly, use of electricity and water and generation of wastewater would not increase substantially. Replacement of diesel-fired heating and ventilating equipment with new, natural gas-fired heating equipment would result in an increase in use of natural gas. This increased demand is

well within the current capacity of Pacific Gas and Electric Company, the local natural gas supplier. Because the number of personnel would not increase and the types of activities conducted would not change, fire and police protection services would not need to be provided at an increased level.

4.11 HAZARDOUS MATERIALS AND WASTES

Two of the 19 hazardous materials cleanup sites identified in the Navy's IRP for Moffett Federal Airfield are located in the area where 129th Rescue Wing operations would be consolidated under the proposed action (Figure 3-5). One of the sites, Site 5, was remediated by the Navy in 1995. Under the proposed action, locations for new facilities have been selected to avoid these contaminated sites. As required under existing agreements, the Navy would perform environmental remediation if contaminated soil or groundwater were encountered during construction or demolition activities. Accordingly, no adverse effects related to existing soil or groundwater contamination would result under the proposed action.

Maintenance and repair activities associated with 129th Rescue Wing operations involve the use and generation of hazardous materials, including paints, solvents, expended firefighting foam, and fuel and oil products. Relocation of these activities into new facilities would not involve a substantial increase in the use or generation of hazardous materials. Implementation of the provisions of the NASA Spill Prevention Plan and other hazardous materials plans in place at Moffett Federal Airfield would ensure that no adverse effects related to hazardous materials would occur under the proposed action.

4.12 VISUAL RESOURCES

In general, the proposed action and alternatives would involve the demolition and construction of buildings that are similar in size to other buildings at the installation. The construction and demolition of these buildings would have a minimal effect on views from the nearby golf courses and U.S. Highway 101. The exceptions to this assessment are the Composite Maintenance Hangar (62,000 sf), the Aircraft Engine Inspection and Repair Shop (14,000 sf), and the Fuel Cell and Corrosion Control facility (15,000 sf). The highest point of the Composite Maintenance Hangar would be 110 feet tall and approximately 276 feet wide.

Because of its size, the hangar would likely be a distinctive new feature in the landscape. This may also be the case with the other two large buildings. However, the overall impact of the buildings on visual quality in the area is considered low because:

- these new structures would conform to the character of the surrounding airfield;
- views would continue to be dominated by Hangars 1, 2, and 3; and
- views of the area from the golf courses and U.S. Highway 101 are not considered highly sensitive.

4.13 ENVIRONMENTAL JUSTICE

Demolition, construction, and relocation activities associated with the proposed action would be primarily confined to areas within the bounds of the installation. Therefore, the proposed action would have no effect on minority or low-income communities.

4.14 ALTERNATIVES TO THE PROPOSED ACTION

Four alternatives to the proposed action, including the No-Action Alternative, were considered and rejected.

4.14.1 Alternatives 1, 2, and 3

Alternatives 1, 2, and 3 all involve consolidation of 129th Rescue Wing operations into the existing 95-acre operations area on the east side of Moffett Federal Airfield. Differences between the alternatives primarily involve building layout and location. All three of the alternatives would reduce the potential for disturbance of burrowing owl habitat south of Building 653 because the existing parking lot south of Building 653 would not be expanded as it would under the proposed action. None of the alternatives would result in additional or more severe environmental impacts than those identified for the proposed action. All of the objectives of the proposed action would be achieved with implementation of any of these alternatives. The proposed action is preferred primarily based on potential efficiency of operation rather than environmental effects and because potential environmental effects, including those on burrowing owls, can be mitigated.

4.14.2 Alternative 4

Alternative 4 is the No-Action Alternative. Under this alternative, the 129th Rescue Wing would continue operating as it does now. Facilities would remain in their current configuration and would not be consolidated at a single site. None of the environmental effects anticipated to occur under the proposed action would take place. None of the objectives of the proposed action would be achieved, however.

5.0 CITATIONS

5.1 PRINTED REFERENCES

- Bay Area Air Quality Management District. 1995. Assessing the air quality impacts of projects and plans. Draft. San Francisco, CA.
- Brady and Associates. 1994. Final environmental assessment - Moffett Field comprehensive use Plan. Berkeley, CA.
- California. Air Resources Board. 1991-1994. California air quality data. Summaries of 1990-1993 air quality data; gaseous and particulate pollutants. Volumes XXII-XXV. Technical Support Division. Sacramento, CA.
- DMJM. 1995. 129th Rescue Wing draft master plan. San Francisco, CA.
- EA Engineering Science and Technology. 1995. 1993 Air emissions inventory for the 129th Rescue Group. Mountain View, CA.
- Garaventa, D., and R. Anastasio. 1991. Archaeological overview and survey, Naval Air Station Moffett Field, Santa Clara County, California, and Naval Auxiliary Landing Field, Crows Landing, Stanislaus County. Basin Research Associates. San Leandro, CA. Prepared for Western Division, Naval Facilities Engineering Command, San Bruno, CA.
- Harlan Tait Associates. 1995. Geotechnical investigation - Composite Maintenance Hangar - California National Guard, Moffett Field, California. San Francisco, CA.
- Hendry, G., and J. Bowman. 1940. The Spanish and Mexican adobe and other buildings in the nine San Francisco Bay counties, 1776 to about 1850. Manuscript on file at the Bancroft Library, University of California, Berkeley, CA.
- Layne, V. L., and E. K. Harding-Smith. 1995. Sensitive species surveys at Moffett Field, 1994. U.S. Fish and Wildlife Service. Unpublished report.
- NASA Ames Research Center. 1992. Environmental resources document, Moffett Field, Santa Clara County, CA.
- _____. 1993. Moffett Field comprehensive use plan. Moffett Field, CA.
- Natural Diversity Data Base. 1996. Computerized database search for special-status wildlife species at Moffett Federal Airfield. California Department of Fish and Game. Sacramento, CA.
- South Coast Air Quality Management District. 1993. CEQA air quality handbook. Diamond Bar, CA.

Thompson and West. 1876. Historical atlas of Santa Clara County, California. San Francisco, CA.
Reprinted in 1973 by Smith and McKay, San Jose, CA.

Urban Programmers. 1991. National Register of Historic Places registration for the U.S. Naval Station Moffett Field. U.S. Navy Engineering Field Activity West. San Francisco, CA.

5.2 PERSONAL COMMUNICATIONS

Kovar, Kathleen. Former environmental specialist, NASA. Moffett Federal Airfield, CA.
July 26, 1996 - telephone conversation.

Steinberger, Joe. Environmental planner. Bay Area Air Quality Management District, San Francisco, CA. March 5, 1996 - telephone conversation.

Wall, Lou. Cultural resource program manager. U.S. Navy Engineering Field Activity West, San Francisco, CA. July 8, 1996 - telephone conversation.

6.0 LIST OF ACRONYMS

AGE	Aircraft Ground Equipment
BAAQMD	Bay Area Air Quality Management District
CA ANG	California Air National Guard
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Occupational Safety and Health Administration
CAP	Clean Air Plan
CEQ	Council on Environmental Quality
CNEL	community noise equivalent level
dB	decibel
dBA	A-weighted decibel
EA	environmental assessment
EPA	U.S. Environmental Protection Agency
FONSI	Finding of No Significant Impact
IRP	Installation Restoration Program
LOX	liquid oxygen
MBTUs	million British thermal units
MWh	megawatt hours
NACA	National Advisory Committee for Aeronautics
NAS	Naval Air Station
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NO _x	nitrogen oxides
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
OU	operable unit
PCB	polychlorinated biphenyl
PM ₁₀	particulate matter smaller than 10 microns in diameter
POL	Petroleum, Oil, and Lubricants
ppd	pounds per day
ppy	pounds per year
ROG	reactive organic gases
sf	square feet
SFAB	San Francisco Air Basin
SOP	special operating procedure
tpy	tons per year
UTA	Unit Training Assembly

Appendix A. IICEP Letters

May 15, 1996

FIELD(1) FIELD(2) FIELD(3), FIELD(4)
FIELD(5)
FIELD(6)
FIELD(7)
FIELD(8), FIELD(9) FIELD(10)

Dear Sir or Madam:

The purpose of this letter is to notify you that the National Guard Bureau, through the Air National Guard Readiness Center (ANGRC), intends to prepare an environmental assessment (EA) to address proposed short-range projects identified in the Master Plan for the California Air National Guard (CA ANG) base located at Moffett Federal Airfield near Mountain View, California.

CA ANG currently leases its facilities from the National Aeronautics and Space Administration (NASA), which is the federal agency responsible for operation of Moffett Federal Airfield. The CA ANG unit at the facility is the 129th Rescue Wing. The unit leases approximately 120 acres from NASA and operates six HH-60G helicopters and four HC-130P aircraft for rescue functions.

The short-range projects are related to the consolidation of 129th Rescue Wing facilities into a contiguous area at Moffett Federal Airfield. This consolidation would include demolishing existing buildings, constructing new buildings, expanding the aircraft apron, and expanding parking and other paved areas. The master plan is currently being prepared and is in draft form. Work on the EA is proceeding at this time so that environmental issues can be considered in the planning process.

A description of the proposed action and alternatives (DOPAA) is included with this letter to provide more detail on the subject projects. A list of other agencies and offices that have been contacted as part of ANGR's Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) policy also is provided. The coordination with these agencies is being conducted in accordance with the Intergovernmental Coordination Act and Executive Order 12372, which directs federal agencies to coordinate with each other and consider state and local views.

Please return any comments regarding the provided attachment within 30 days. If there are any additional agencies or individuals that you believe should review and comment on the proposed action, please include them in your distribution of this letter and attached materials or notify the CA ANG environmental manager. Any comments should be sent to:

Robert Ogle, Environmental Manager
129th Rescue Wing (M/S 7, 129 RQW/EM)
P.O. Box 103
Moffett Federal Airfield, CA 94035-5006

May 15, 1996

Page 2

Should you have any questions about the proposed action or require further information, please contact Mr. Ogle at 415/603-9060 or the consultant who is preparing the EA, Mr. David Buehler of Jones & Stokes Associates, at 916/737-3000.

Sincerely,

STEVEN C. SPEER, Colonel, CA ANG
Commander

SCS:DB:dl

Attachment

IICEP Distribution List

Name	Rank	Organization	Address	City	State	Zip
Environmental Resource Center (SJSU)		Geography/Environmental Studies Department	San Jose State University, One Washington Square	San Jose	CA	95192-0116
Ms. Joy Albertson		U.S. Fish and Wildlife Service	San Francisco Bay National Wildlife Refuge Complex, P.O. Box 524	Newark	CA	94560-
Mr. William Angelino		U.S. Army Corps of Engineers	211 Main Street	San Francisco	CA	94105-1905
Mr. Jim Browning		U. S. Fish and Wildlife Service	2800 Cottage Way, Ste E-1803	Sacramento	CA	95825-
Mr. Stephen Chao	Engineer-in-Charge	Dept of the Navy	EFA West	San Bruno	CA	94066-2402
Mr. Don Chuck		Navy Environmental Coordinator	Moffett Federal Airfield, Bldg 107	Moffett Field	CA	94035-5000
Mr. Ross Colliau		State Clearinghouse	1400 10th St.	Sacramento	CA	95814-
Ms. Jeannine M. DeWald		Department of Fish and Game, Region 3	P. O. Box 47	Davenport	CA	95017-
Ms. Rachel Dinno		Office of Congresswoman Anna Eshoo	698 Emerson St	Palo Alto	CA	94301-
Mr. Dave Farrell		U.S. EPA - Region IX	Mail Code E-3, 75 Hawthorne Street	San Francisco	CA	94105-
Ms. Linda Flaherty		Lockheed Missiles and Space Co.	Orgn. 45-11, Building 041, 1111 Lockheed Way	Sunnyvale	CA	94089-3504
Mr. Steve Garrity		Sierra Club	811 Sevely Drive	Mountain View	CA	94041-
Ms. Cecily Harris		Santa Clara Valley Audubon Society	22221 McClellan Rd.	Cupertino	CA	95014-
Ms. Elizabeth Keicher	Director	Santa Clara County Manufacturing Assoc.	Environmental Programs, 5201 Great America Pkwy., Suite 426	Santa Clara	CA	95054-
Mr. Isah Koboshi		Santa Clara County Planning Office	70 W. Hedding Street	San Jose	CA	95112-
Ms. Linda Lauzze		City of Mountain View	P. O. Box 7540	Mountain View	CA	94039-
Mr. Steve McAdam		S.F. Bay Conservation & Development Commission	Thirty Van Ness Avenue, Suite 2011	San Francisco	CA	94102-6080

Name	Rank	Organization	Address	City	State	Zip
Mr. Steve Moore		Regional Water Quality Control Board	San Francisco Bay Region, 2101 Webster Street; Suite 500	Oakland	CA	94612-
Mr. Lee Quintana		City of San Jose Planning Dept	801 North First Street; Room 400	San Jose	CA	95110-
Mr. Mark Roddin		Metropolitan Transportation Commission	101 Eighth Street	Oakland	CA	94607-4700
Ms. Trudi Ryan		City of Sunnyvale Planning Dept.	456 W. Olive Avenue; P. O. Box 3707	Sunnyvale	CA	94088-3707
Mr. Lenny Siegel	Director	Pacific Studies Center	222B View St.	Mountain View	CA	94041-
Mr. David Smernoff			715 Colorado Avenue #1	Palo Alto	CA	94306-
Mr. Ted Smith	Director	Silicon Valley Toxics Coalition	760 N. First Street	San Jose	CA	95112-
Mr. Joe Steinberger		BAAQMD	939 Ellis St	San Francisco	CA	94109-
Ms. Lynne Trulio		San Jose State University	1984 Silverwood Ave.	Mountain View	CA	94043-
Mr. Garrett Turner		SAIC	NASA/Ames Research Center	Moffett Federal Airfield	CA	94035-1000
Ms. Cherilyn Widell		Office of Historic Preservation	Department of Parks and Recreation, P.O. Box 942896	Sacramento	CA	94296-0001
Mr. Stan Wolfe		Santa Clara Valley Water District	5750 Almaden Expressway	San Jose	CA	95118-
Ms. Irene Zwiernlein		Amah Tribe of Ohlone Costanoan Indians	789 Canada Rd.	Woodside	CA	94062-



METROPOLITAN
TRANSPORTATION
COMMISSION

Joseph P. Bort, MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
Tel.: 510.464.7700
TTY/TDD: 510.464.7769
Fax: 510.464.7848
e-mail: info@mtc-dst.ca.us

May 29, 1996

Dianna McKenna, Chair
Association of Bay Area Governments

James Sperry, Vice Chair
Solano County and Cities

Kristi Ansell
U.S. Department of Housing
and Urban Development

James Barker
Cities of San Mateo County

James T. Beall Jr.
Santa Clara County

Sharon Brown
Cities of Contra Costa County

Joe Brattner
State Division, Transportation
and Housing Agency

Edward R. Campbell
Alameda County

Dorcas M. Giacopini
U.S. Department of Transportation

Mary Griffin
San Mateo County

Ellen Harris
Cities of Alameda County

Tim Hsieh
City and County of San Francisco

Joan McCann
Cities of Santa Clara County

Fred Negri
Napa County and Cities

Jan Rubin
San Francisco Mayor's Appointee

Angelo J. Straziuso
San Francisco Bay Conservation
and Development Commission

Tom Torkelson
Contra Costa County

Doug Wilson
Marin County and Cities

Sharon Wright
Sonoma County and Cities

Lawrence D. Dubois
Executive Director

William F. Hein
Deputy Executive Director

Robert Ogle
129th Rescue Wing, Mail Stop 7, 129 RQW/EM
Environmental Analysis
Post Office Box 103
Moffett Federal Airfield, California 94035-5006

Subject: DOPAA: 129th Rescue Wing Master Plan Short Range Projects

Dear Mr. Ogle:

This letter contains Metropolitan Transportation Commission (MTC) staff recommendations on the transportation system analysis that the Air Force 129th Rescue Wing should include in the EA for the Master Plan Short Range Projects. The proposed project would demolish existing buildings, construct new buildings, expand the aircraft apron, and expand parking and other paved areas.

1. Basic Traffic Impact Information. The EA should provide traffic impact information for US 101, SR237, Central Expressway and other roads. The information should include:
 - Existing traffic;
 - Estimates of future traffic with and without the short range projects;
 - Year 2010 projections of traffic generated by anticipated development in the project's vicinity.

Please present these three types of traffic information as average daily traffic, peak hour trips, and peak hour level of service. In the document, please present traffic volumes on the freeway and expressway interchanges a couple of kilometers from the airport to completely describe project impacts.

2. Trip Distribution. The EA should carefully document the trip distribution assumptions. The report should document anticipated changes in truck movements on US 101 and other regional transportation facilities as a result of the project.

3. Traffic and Air Quality Control Measures. Your project design should encourage both shared ride vans or buses and conventional transit use, as alternatives to driving one's car to the project location. The objective is a design that facilitates the use of alternatives to solo driving.
4. Regional Airport System Plan. The Regional Airport System Plan approved by the Metropolitan Transportation Commission on July 27, 1994, has some specific policies concerning Moffett Field. Page 1-13 of the Plan states the following:
"There is a continuing regional interest in potential civilian use of Moffett, and this interest would be activated if and when NASA no longer requires exclusive use of the facility. The context for the regional interest in Moffett is for a reliever airport or for other civilian uses."
The EA should state the 129th Rescue Wing's security requirements in the context of whether the project would be compatible with some type of civilian use at Moffett. Please include in the analysis the potential use of the Global Positioning System to permit flight paths that minimally impact populated areas for both the Project and No Project alternatives.

MTC and ABAG have a Regional Airport Planning Committee (RAPC), consisting of airport representatives, locally elected officials, BCDC, and the FAA and Caltrans Aeronautics Program to advise on all regional airport matters. RAPC has discussed the Moffett Field situation on a number of occasions, but their next meeting is not until late July, which is after the due date for your receipt of comments. You may wish to make a presentation to the RAPC at its next meeting and solicit the committee's views on the scope of analysis that you should include in the EA. Please let me know if you would like to do this so I can put you on the meeting agenda.

I look forward to reviewing the Draft EA. If we can be of any assistance, please call me at (510) 464-7827.

copies to
Commissioners Beall, McKenna, McCown
Craig Goldblatt
Sandy Hesnard, Caltrans (via email)

Sincerely,



Marc F. Roddin
Santa Clara County Coordinator

Rec'd JSA
July 25, 1996

United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

Ecological Services
Sacramento Field Office
3310 El Camino Avenue, Suite 130
Sacramento, California 95821-6340

1-1-96-SP-1010

July 2, 1996

Colonel Steven C. Speer, CA ANG
Commander
Department of the Air Force
Headquarters 129th Rescue Wing (ANG)
California Air National Guard
Moffett Federal Airfield, CA 94035-5006

Subject: Species Lists for Proposed Short-Range Projects Identified
in the Master Plan for the CA ANG base located at Moffett
Federal Airfield near Mountain View, CA

Dear Colonel Speer:

As requested by letter from your agency dated May 15, 1996, you will find enclosed lists of sensitive species that may be present in or may be affected by projects in the subject project area (see Enclosures A and B). These lists fulfill the requirement of the Fish and Wildlife Service (Service) to provide species lists pursuant to section 7(c) of the Endangered Species Act of 1973, as amended (Act).

The Service used your maps and/or other information to locate the proposed project on a U.S. Geological Survey (USGS) 7.5 minute quadrangle map. The animal species listed in Enclosure A are those species we believe may occur within, or be affected by projects within, the USGS Mountain View Quad, where your project is planned.

The plants listed in Enclosure A are those that have actually been observed in the project quad. Enclosure B is a list of sensitive plants that have been observed in surrounding quads. These plants may also occur in the quad where your project is planned.

Some of the species listed in Enclosures A and B may not be affected by the proposed action. A trained biologist or botanist, familiar with the habitat requirements of the listed species, should determine whether these species or habitats suitable for these species may be affected by the proposed action.

Some pertinent information concerning the distribution, life history, habitat requirements, and published references for the listed species is available upon request. This information may be helpful in preparing the biological assessment for this project, if one is required. Please see Enclosure C for a discussion of the responsibilities Federal agencies have under section 7(c) of the Act and the conditions under which a biological assessment must be prepared by the lead Federal agency or its designated non-Federal representative.

Formal consultation, pursuant to 50 CFR § 402.14, should be initiated if you determine that a listed species may be affected by the proposed project. If you determine that a proposed species may be adversely affected, you should consider requesting a conference with our office pursuant to 50 CFR § 402.10. Informal consultation may be utilized prior to a written request for formal consultation to exchange information and resolve conflicts with respect to a listed species. If a biological assessment is required, and it is not initiated within 90 days of your receipt of this letter, you should informally verify the accuracy of this list with our office.

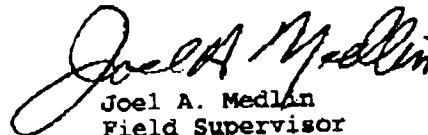
Candidate species are currently being reviewed by the Service and are under consideration for possible listing as endangered or threatened. Candidate species have no protection under the Endangered Species Act, but are included for your consideration as it is possible that one or more of these candidates could be proposed and listed before the subject project is completed. Should the biological assessment reveal that candidate species may be adversely affected, you may wish to contact our office for technical assistance. One of the potential benefits from such technical assistance is that by exploring alternatives early in the planning process, it may be possible to avoid conflicts that could otherwise develop, should a candidate species become listed before the project is completed.

The Service recently changed its policy on candidate species. The term candidate now strictly refers to species for which the Service has on file enough information to propose listing as endangered or threatened. Former category 2 candidate species - species for which listing is possibly appropriate but for which the Service lacks sufficient information to support a listing proposal - are now called species of concern. They are no longer monitored by the Service. However we have retained them on the enclosed list for general information. We encourage consideration of them in project planning, as they may become candidate species in the future.

If the proposed project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by the U.S. Army Corps of Engineers (Corps), a Corps permit shall be required, pursuant to section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act. Impacts to wetland habitats require site specific mitigation and monitoring. You may request a copy of the Service's General Mitigation and Monitoring Guidelines or submit a detailed description of the proposed impacts for specific comments and recommendations.

Please contact Michael Thabault at (916) 979-2725 if you have any questions regarding the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of the section 7 office assistant at this address. If you have any questions regarding wetlands, contact Mark Littlefield at (916) 979-2113.

Sincerely,


Joel A. Medlin
Field Supervisor

Enclosures

ENCLOSURE A

Page 1

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE
SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF
THE FOLLOWING SELECTED QUADS
July 1, 1996

QUAD : 428A MOUNTAIN VIEW

Listed Species**Mammals**salt marsh harvest mouse, *Reithrodontomys raviventris* (E)**Birds**American peregrine falcon, *Falco peregrinus anatum* (E)California clapper rail, *Rallus longirostris obsoletus* (E)California least tern, *Sterna antillarum (=albifrons) browni* (E)**Amphibians**California red-legged frog, *Rana aurora draytonii* (T)**Fish**delta smelt, *Hypomesus transpacificus* (T)**Invertebrates**San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)bay checkerspot butterfly, *Euphydryas editha bayensis* (T)**Plants**California sea blite, *Suaeda californica* (F)Proposed Species**Fish**Coho salmon, *Oncorhynchus kisutch* (PT)Sacramento splittail, *Pogonichthys macrolepidotus* (PT)Candidate Species**Amphibians**California tiger salamander, *Ambystoma californiense* (C)Species of Concern**Mammals**greater western mastiff-bat, *Eumops perotis californicus* (SC)small-footed myotis bat, *Myotis calicolabrum* (SC)long-eared myotis bat, *Myotis evotis* (SC)fringed myotis bat, *Myotis thysanodes* (SC)long-legged myotis bat, *Myotis volans* (SC)Yuma myotis bat, *Myotis yumanensis* (SC)San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)Pacific western big-eared bat, *Plecotus townsendii townsendii* (SC)salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

ENCLOSURE A

Page 2

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE
SPECIES THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF
THE FOLLOWING SELECTED QUADS
July 1, 1996

QUAD : 428A MOUNTAIN VIEW

Species of Concern**Birds**

- tricolored blackbird, *Agelaius tricolor* (SC)
 Bell's sage sparrow, *Amphispiza belli belli* (SC)
 western burrowing owl, *Athene cunicularia hypugea* (SC)
 ferruginous hawk, *Buteo regalis* (SC)
 little willow flycatcher, *Empidonax traillii brewsteri* (SC)
 saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
 black rail, *Lateralus jamaicensis* (SC)
 Alameda (South Bay) song sparrow, *Melospiza melodia maxillaris* (SC)

Reptiles

- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
 southwestern pond turtle, *Clemmys marmorata pallida* (SC)
 California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)
 western spadefoot toad, *Scaphiopus hammondi* (SC)

Invertebrates

- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)

Plants

- alkali milk-vetch, *Astragalus tener* var. *tener* (SC)
 northcoast bird's-beak, *Cordylanthus maritimus* ssp. *palustris* (SC)
 delta tule-pea, *Lathyrus jepsonii* var. *jepsonii* (SC)

Notes:

- | | |
|---|---|
| (E) <i>Endangered</i> | Species that is in danger of extinction throughout all or a significant portion of its range. |
| (T) <i>Threatened</i> | Species that is likely to become endangered within the foreseeable future. |
| (P) <i>Proposed</i> | Species that has been proposed in the <i>Federal Register</i> to be listed as endangered or threatened. |
| (CH) <i>Critical Habitat</i> | Area essential to the conservation of a species. |
| (C) <i>Candidate</i> | Species for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened. |
| (SC) <i>Species of Concern</i> | Species for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking. |
| (CR) <i>Recommended for candidate status.</i> | |
| () <i>Listing petitioned.</i> | |
| (*) <i>Possibly extinct.</i> | |

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

427A CALAVERAS RESERVOIR

LISTED SPECIES

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

South Bay clarkia, *Clarkia concinna* ssp. *automixa* (SC)
delta tule-pea, *Lathyrus jepsonii* var. *jepsonii* (SC)

Notes:

- (E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

427B MILPITAS

LISTED SPECIES

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

Hoover's button-celery, *Eryngium aristulatum* var. *hooveri*(SC)
alkali milk-vetch, *Astragalus tener* var. *tener*(SC)
northcoast bird's-beak, *Cordylanthus maritimus* ssp. *palustris*(SC)
pappose spikeweed, *Hemizonia parryi* ssp. *congdonii*(SC)
valley spearscale, *Atriplex joaquiniana*(SC)

Notes:

(E)—Endangered (T) Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

427C SAN JOSE WEST

LISTED SPECIES

Plants

robust spineflower, *Chorizanthe robusta*(K)

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Notes:

- (E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(EC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

427D SAN JOSE EAST

LISTED SPECIES

Plants

Metcalf Canyon jewelflower, *Streptanthus albidus* ssp. *albidus*(E)
Santa Clara Valley dudleya, *Dudleya setchellii*(E)

PROPOSED SPECIES

Plants

Contra Costa goldfields, *Lasthenia conjugens*(PE)

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

Mt. Hamilton thistle, *Cirsium fontinale* var. *campylon*(SC)
South Bay clarkia, *Clarkia concinna* ssp. *automixa*(SC)
fragrant fritillary, *Pritillaria liliacea*(SC)
pappose spikeweed, *Hemizonia parryi* ssp. *congdonii*(SC)

Notes:

(E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

428B PALO ALTO

LISTED SPECIES

Plants

San Mateo thornmint, *Acanthomintha duttonii*(E)

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

Gairdner's yampah, *Perideridia gairdneri* ssp. *gairdneri*(SC)
Hoover's button-celery, *Eryngium aristulatum* var. *hooveri*(SC)
South Bay clarkia, *Clarkia concinna* ssp. *automixa*(SC)
caper-fruited tropidocarpum, *Tropidocarpum capparideum*(SC)
delta tule-pea, *Lathyrus jepsonii* var. *jepsonii*(SC)

Notes:

(E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

428C MINDEGO HILL

LISTED SPECIES

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

Dudley's lousewort, *Pedicularis dudleyi*(SC)
South Bay clarkia, *Clarkia concinna* ssp. *automixa*(SC)
legenere, *Legenere limosa*(SC)

Notes:

(E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

428D CUPERTINO

LISTED SPECIES

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

South Bay clarkia, *Clarkia concinna* ssp. *automixa*(SC)
caper-fruited tropidocarpum, *Tropidocarpum capparideum*(SC)

Notes:

(E)—Endangered (T)—Threatened (P)—Proposed (CH)—Critical Habitat
(C)—Candidate: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(SC)—Species of Concern: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(1R)—Recommended for Category 1 status.
(2R)—Recommended for Category 2 status.
()—Listing petitioned.
(*)—Possibly extinct.

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES
THAT MAY OCCUR IN OR BE AFFECTED BY PROJECTS IN THE AREA OF THE FOLLOWING
SELECTED QUADS

July 1, 1996

429A WOODSIDE

LISTED SPECIES

Plants

Marin dwarf-flax, *Hesperolinon congestum*(T)
San Mateo thornmint, *Acanthomintha duttonii*(E)
fountain thistle, *Cirsium fontinale* var. *fontinale*(E)
white-rayed pentachaeta, *Pentachaeta bellidiflora*(E)

PROPOSED SPECIES

CANDIDATE SPECIES

SPECIES OF CONCERN

Plants

Crystal Springs lessingia, *Lessingia arachnoidea*(SC)
Dudley's lousewort, *Pedicularis dudleyi*(SC)
Mission Delores campion, *Silene verecunda* ssp. *verecunda*(SC)
fragrant fritillary, *Fritillaria liliacea*(SC)

Enclosure C

FEDERAL AGENCIES' RESPONSIBILITIES UNDER
SECTIONS 7(a) and (c) OF THE ENDANGERED SPECIES ACTSECTION 7(a) Consultation/Conference

Requires: (1) federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species; (2) Consultation with FWS when a federal action may affect a listed endangered or threatened species to insure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the federal agency after determining the action may affect a listed species; and (3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7(c) Biological Assessment-Major Construction Activity¹

Requires federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action² on listed and proposed species. The process begins with a Federal agency requesting from FWS a list of proposed and listed threatened and endangered species. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the list, the accuracy of the species list should be informally verified with our Service. No irreversible commitments of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may proceed; however, no construction may begin.

We recommend the following for inclusion in the BA: an on-site inspection of the area affected by the proposal which may include a detailed survey of the area to determine if the species or suitable habitat are present; a review of literature and scientific data to determine species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of indirect effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, and problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the BA should be forwarded to our office.

¹A construction project (or other undertaking having similar physical impacts) which is a major federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332(2)(C)).

²"Effects of the action" refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.

Appendix B. List of Preparers

APPENDIX B. LIST OF PREPARERS

This EA was prepared by ERM West and Jones & Stokes Associates for the 129th Rescue Wing, Moffett Federal Airfield. The following people were involved in producing this report.

ERM WEST

Mark Bradford	Principal-in-charge
Leslie Goodbody	Project manager

JONES & STOKES ASSOCIATES

Michael Rushton	Principal-in-charge
David Buehler, P.E.	Project manager
Ed Whisler	Wildlife biologist
Trish Fernandez	Cultural resource specialist
Leslie Fryman	Cultural resource specialist
Kimberly Pell	Air quality specialist
Debra Lilly	Publication specialist
Charla McCollum	Word Processor
Tony Rypich	Graphic artist
Bev Fish and Sam Sweitzer	Reproduction services

