Flightline Area Development Plan

Pope Air Force Base
North Carolina

31 March 2003

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URS

Prepared By:
URS Group, Inc.
7720 North 16th Street, Suite 100
Phoenix, AZ 85020

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Executive Summary

The Pope Air Force Base (AFB) Flightline Area Development Plan (ADP) documents new requirements associated with the beddown of the new CC-130J aircraft. This plan deals specifically with accommodating new facilities required by the beddown and strategically planning for the consolidation and siting of associated facilities. To support Pope AFB's aggressive improvements program to make its industrial/flightline areas more efficient, this plan provides decision-makers with a picture of how these capital improvements can be achieved in an already developed area.

Natural, man-made, and policy constraints affecting the area were compiled and considered to better define the task of siting new facilities in the context of the study area. This approach facilitated the development of viable alternatives for further consideration.

Developable land is at a premium due to heavy environmental, topographical, and spatial constraints. Steep terrain, wetlands, or other habitat issues affect a large portion of the land available for development.

The built environment is situated along a narrow, linear circulation pattern that generally parallels the airfield. While this provides good apron frontage opportunities, it exacerbates functional relationships between flightline hangars and maintenance back-shop functions.

New force protection initiatives require deeper setbacks from streets and greater standoffs for parking. It is difficult to achieve these new requirements due to the linear layout of the study area. Resolution of this force protection issue will be costly either in consumption of land or in structural mitigation of the affected facilities.

The Aerospace Ground Equipment (AGE) Facility and Yard, the Corrosion Control Facility, one and two-bay hangars, the Flight Simulator, and the CC-130J Hulk Training Facility are appropriately sited given the function and requirements for access to the flightline. None of these facilities encroach on the natural environment; however, there are some issues associated with Installation Restoration Program (IRP) sites in the area of the flightline.

The flightline facilities take advantage of available frontage and maximize opportunities by demolishing old, unused, or inadequate buildings. The CC-130J Flight Simulator will be located on the former Rodeo Building site. This area offers convenient walking-distance access to simulator customers. The CC-130J Hulk Trainer is proposed as an addition to the existing E-model facility, allowing staff to remain consolidated. The trainer will also be accessible to Air Force, Army, and Special Operations personnel.

Sites for other new facilities are located in the northern part of the study area. To accommodate the size of the facilities while providing adequate parking within a reasonable radius of the buildings, a future land use plan was developed that consolidates functions, sites

buildings within walking distance of related functions, and centralizes parking. This plan allows flexibility for future development of facilities or new missions, while avoiding encroachment into habitat areas.

Facilities that are sited in the North Sub-Area are the 23 Fighter Group (FG) Consolidated Maintenance Facility, 23 FG Headquarters, the Electronic Countermeasures (ECM) Consolidated Maintenance Facility, and the 14th and 682d Air Support Operations Squadrons' facilities. Economies of scale can be achieved by collocating the new Base Operations facility with the Passenger Terminal, leaving an area east of the Passenger Terminal available should a freestanding facility be desired. The Central Deployment Center is tentatively sited in the area of the passenger (PAX) terminal.

Force protection measures were addressed, with parking and circulation as the main issues. The increased setback will necessitate structural hardening of facilities that are within 10 meters of the roadway. Parking options include increasing the existing setbacks or structurally mitigating affected facilities.

It is recommended that Fortress Street be closed to Personally Owned Vehicle (POV) traffic and parking to increase safety in an area that has heavy pedestrian traffic and inadequate building setbacks. Limiting POV access mitigates the roadway setback issue and provides a second-tier restriction to the flightline.

Parking availability will suffer from force protection measures and new construction. In the South Sub-Area, additional parking is proposed for areas west of Surveyor Street where several buildings will be demolished.

A major effort of this ADP was the siting of a proposed 43d Consolidated Maintenance Facility. After exploring several options, the Maintenance Group selected the present location of the Propeller Maintenance Shop (Building 715) as the preferred site. This option allows for new facility construction to be accomplished in a single phase with minimal displacement of functions. An alternate site for consideration is the current location of the AGE, Maintenance, and Avionics facilities. This location provides for superior functional relationships to the rest of the flightline, but construction would require phasing and temporary facilities to accommodate displaced functions.

It is recommended that this ADP be used as a guide for the siting and design of new facilities and parking locations. It provides design recommendations within the framework of natural, manmade, and policy constraints.

Introduction

Pope Air Force Base (AFB) was established in 1919 on the Ft. Bragg Military Reservation northeast of Fayetteville, North Carolina. With the 1941 relocation of the U.S. Army's 82nd Airborne Division to Ft. Bragg, a relationship was established making the 43d Airlift Wing (AW) and Pope AFB synonymous with American power projection, providing global airlift operations and precision combat support of multi-service operations.

Continuing this tradition of responsive airlift capability, Pope AFB is preparing for the CC-130J beddown. This new airframe, along with other developments in defense installation planning, necessitates a review of the Base's capital improvement plan for the study area.

This Area Development Plan (ADP) was prepared to examine existing facilities and conditions, and to develop a plan for proposed construction projects associated with the CC-130J beddown.

Pope AFB is the first operational base in the U.S. Air Force with a real-world mission to beddown the CC-130J transport aircraft. The 43 AW is scheduled to receive the initial four CC-130J aircraft in FY06. Current plans call for the exchange of one C-130E for each CC-130J delivered to the Base. The 43 AW will take delivery of the balance of the 31 CC-130J aircraft from FY07 through FY11. The current delivery schedule to Pope AFB (by unit) is listed in Table 1.

Table 1 – CC-130J Delivery Schedule **

Unit	Quantity	Fiscal Year
2AS	4	FY06
	5	FY07
	6	FY08
41AS	8	FY10
	8	FY11
Total	31	

**As of 10 OCT 2002 CC-130J Delivery Plan

An aggressive approach is required to properly address the study area's current physical environment (portions of the flightline and industrial area) and its relationship to supporting aircraft to accomplish the Base's critical mission. Past development of the industrial land on the northwest side of the ramp has been piecemeal in nature, and functional relationships important to efficient logistical and maintenance operations have been compromised over time due to the limited land available.

PURPOSE/PROJECT OVERVIEW

In response to Pope's changing requirements and anticipated beddown, an Air Force Planning Assistance Team (PAT) developed a conceptual siting plan that consolidates functions and sites new facilities needed to accommodate the new beddown.

Proposed capital improvements are based on and evaluated against functional requirements, current building conditions, and existing physical constraints. The ultimate objective is to arrive at the best value within these parameters while facilitating the CC-130J mission beddown.

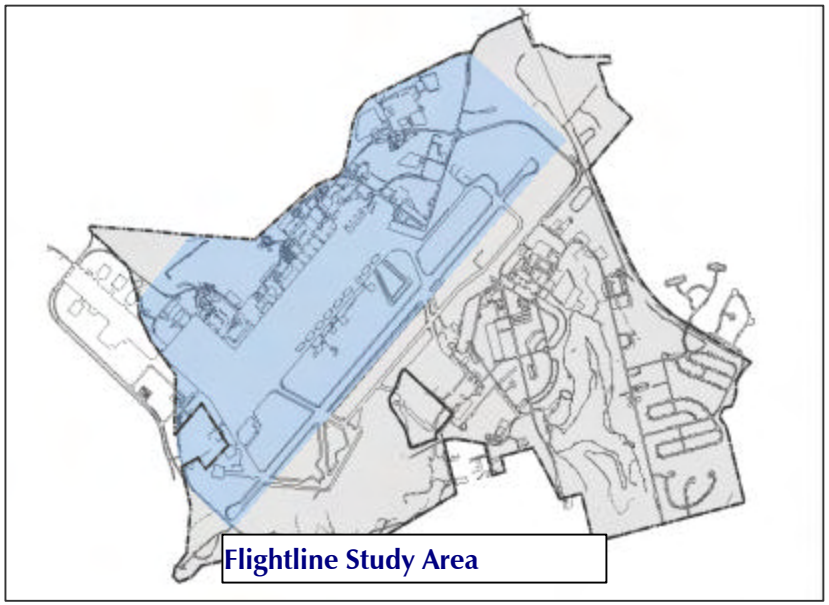
This ADP's major objectives are to:

- validate or identify viable alternatives (if applicable) to the existing PAT proposal for a consolidated maintenance facility and other beddown facilities
- incorporate force protection requirements including parking impacts and entry control points along the Flightline
- provide for all modes of circulation through the study area
- identify facility and infrastructure capacities

- identify capital improvements that are directly associated with the beddown as it relates to the study area
- effectively realign facility locations with functional relationships, thereby enhancing operational readiness and support at Pope AFB

PLAN DEVELOPMENT

The Flightline Area Development Plan was developed to address facility sitings and force protection issues associated with the new CC-130J beddown at Pope AFB.



Tasks leading to the accomplishment of this plan included:

- a site visit with detailed interviews of Base personnel
- review of available documentation provided by Base representatives
- staff briefings
- a planning charette involving Base personnel and decision makers

This interactive approach was further strengthened by opportunities for Base representatives to participate through comment and review.

Other related components of the plan (provided under separate cover) include a Utility Distribution Systems Study, conversion of existing electronic data to Geographic Information System (GIS) data, creation of a project Website, and a three-dimensional simulation of the facilities proposed with implementation of this ADP. Reference maps for utilities are included in Appendix 6.

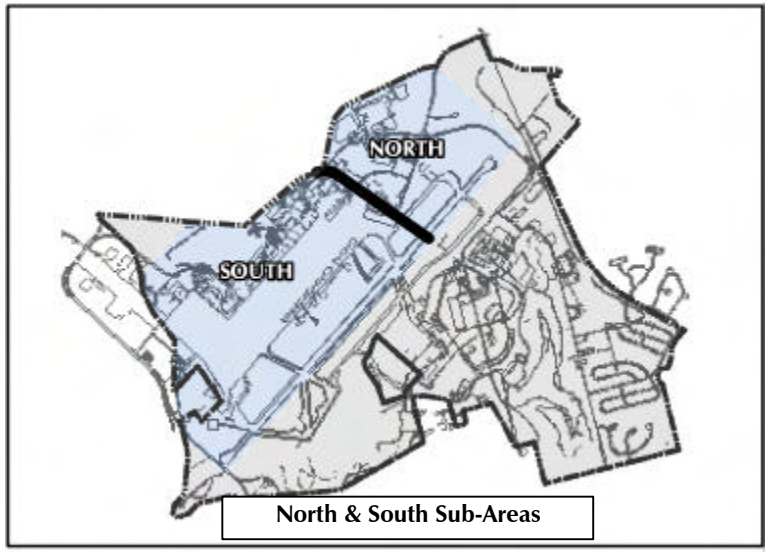
PROJECT AREA DESCRIPTION

The study area for the CC-130J Flightline Area Development Plan is comprised of two main elements: the industrial area and a portion of the flightline area located on the northwest side of Pope AFB. Major characteristics of this area include:

Charette with Flightline Users

- a northeast to southwest orientation
- generally parallel to the northwest side of the airfield, along the Blue and Silver ramps
- Green Ramp and Ft. Bragg to the west
- perimeter fence and West Manchester Road to the north with the Little River further to the north
- Manchester and Reilly Roads and the City of Spring Lake to the east

PROJECT AREA BREAKDOWN



North & South Sub-Areas

To improve identification and discussion of plan alternatives, the study area has been divided generally along the east-west segment of Surveyor Street into two sub-areas (South and North). These areas run along Surveyor Street and are generally north and south of Booster Street.

South Sub-Area

The South Sub-Area houses the industrial, maintenance, and operational functions within the study area. It is located primarily south of Surveyor Street in the vicinity of Hangars 4 and 5 (Building 708) and parallels Surveyor and Fortress Streets between the apron and the perimeter fence/West Manchester Road.

North Sub-Area

The North Sub-Area contains the greatest amount of developable land in the study area. This area is in the shape of a pie wedge, north of Surveyor Street and Hangars 4 and 5 (Building 708).

PLAN FORMAT

This Area Development Plan is divided into five major components:

- **Executive Summary** – a concise recap of the plan's purpose, existing conditions that drive site selection criteria, and a summary of the plan's recommendations
- **Introduction** – gives an overview of the project
- **Existing Conditions** – identifies opportunities and issues relative to developing the CC-130J beddown facilities
- **Plan Findings and Recommendations** – discusses the study's approach and recommendations for future land use
- **Appendices** – selected background information, references or analyses
    - Appendix 1: List of Acronyms
    - Appendix 2: Force Protection Standards
    - Appendix 3: Facility Description
    - Appendix 4: Planning Assistance Team Concept
    - Appendix 5: Plans and Regulations
    - Appendix 6: Utility Maps

MANMADE ENVIRONMENT

The following sections address several aspects of Pope's manmade environment such as the built environment, gates, vehicular and pedestrian circulation, force protection, parking in the flightline area, hazardous materials, airfield issues, and explosive safety.

Built Environment

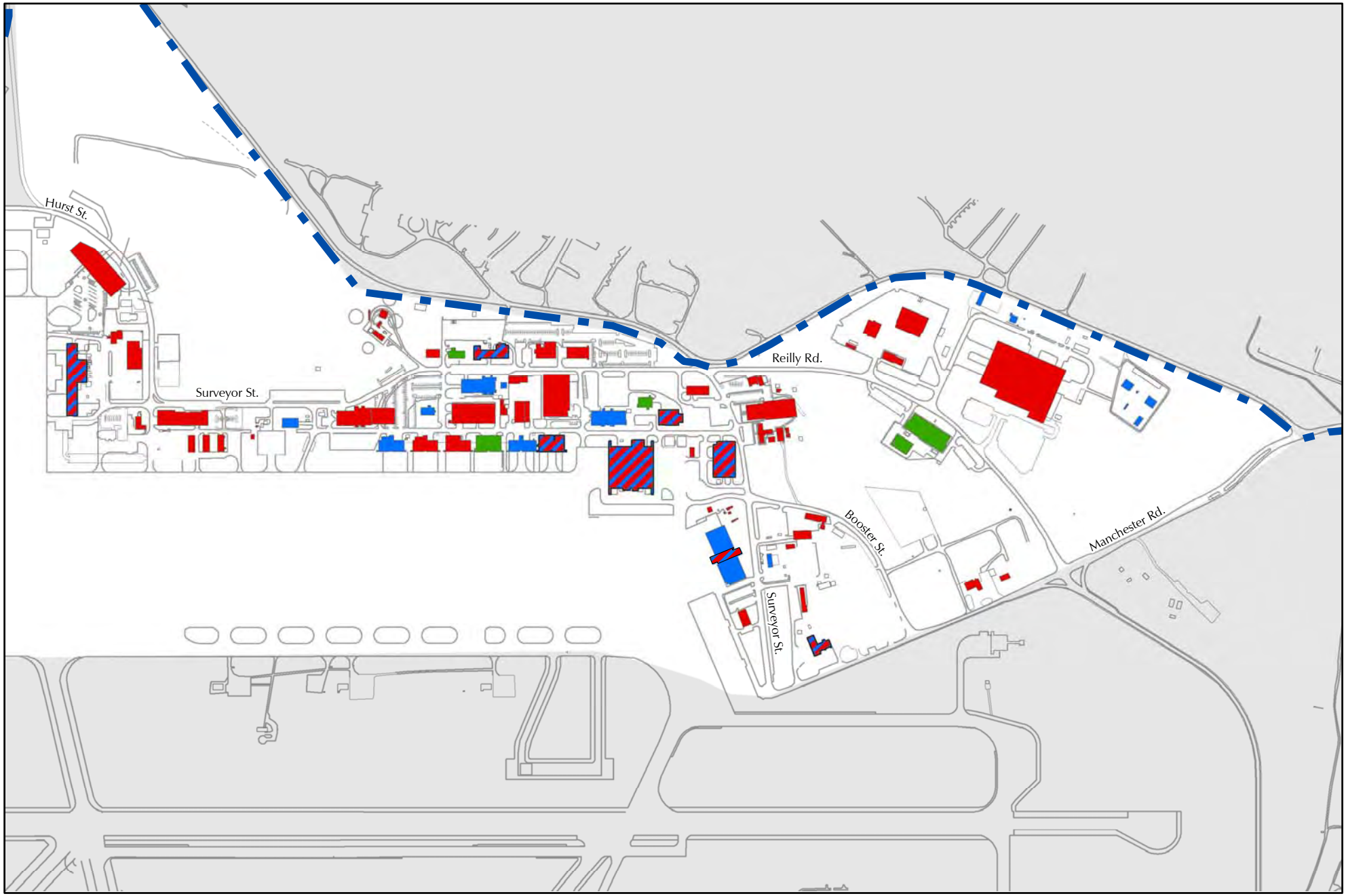
The flightline supports two C-130E squadrons assigned to the 43d Airlift Wing and two A-10 squadrons of the 23d Fighter Group, as well as a variety of Special Operations and transient aircraft. Buildings immediately adjacent to the flightline are primarily hangars housing operations-related functions to support these aircraft. Facilities supporting the host unit (43d Airlift Wing), the 23d Fighter Group, and other tenants are shown in Figure 1, Occupant.

AGE Holding Area

Immediately adjacent to the flightline are six nose docks, three hangars, a Passenger Terminal (PAX), and an Aerospace Ground Equipment (AGE) yard. Construction is set to begin on a Corrosion Control Facility at the southeast end of the flightline. Planned improvements include construction of a two-bay hangar, an AGE facility, and a one-bay hangar, as well as the demolition of a nose dock. Building 708 is designated as a historic building and houses Hangars 4 and 5. Most flightline facilities are old and many are in poor condition either structurally or mechanically.

Nose Dock - Building 734

The project area consists of 89 identified facilities and structures, some of which were constructed as early as 1934. Of these facilities, 21 (24 percent) are between 40 and 70 years old, and 23 facilities (26 percent) were constructed between 20 to 40 years ago. These buildings were originally designed to accommodate different missions



Pope AFB Boundary

43 Airlift Wing (AW)

23 Fighter Group (FG)

43 AW and 23 FG

Tenant

NORTH

0 400 800 Feet

Figure 1
Occupant

Source: 43 CES, Pope AFB, Fort Bragg

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and airframes. Renovating or retrofitting existing facilities is not always the most efficient and cost effective manner by which to meet changing operational needs.

The highest density of facilities is located in the central section of the study area (South Sub-Area). There is a wide mix of uses that include administrative, educational, medical, operational, and heavy industrial functions. The lack of available, developable land is made apparent by the ad hoc arrangement of buildings, resulting in a lack of well-ordered relationships between land uses and poor spacing between facilities. Due to the elongated nature of the area, a defined separation between flightline facilities and secondary or tertiary support buildings is absent.

Circulation

Circulation encompasses three main topics: Base access gates, vehicular circulation, and pedestrian circulation. Detailed descriptions of these topics follow.

Base Access Gates

While two of Pope AFB's four entry gates are located within the study area, neither of them creates an adverse impact on the flightline (see Figure 2, Vehicular Circulation).

- The Manchester Road gate serves as the north entry to the Base and is the most convenient to the study area. Most traffic is dispersed at the intersection of Manchester and Reilly Roads.
- The Main Gate is located on Reilly Road and provides the primary access to Pope AFB from Ft. Bragg. Pass and Registration is located at this facility and is accessed via Fort Bragg off of the All-American Highway.
- Armistead Gate, like the Main Gate, interfaces with Ft. Bragg. This gate is located just east of, and runs parallel to, the Main Gate.

The Airborne Gate accesses the study area from the west, and links Fort Bragg to the Green, Blue, and Silver Ramp areas of Pope AFB.

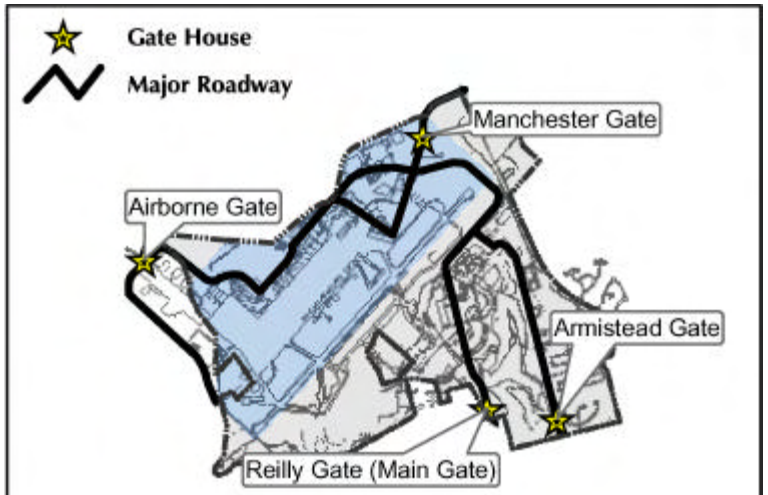


Figure 2 – Vehicular Circulation

Vehicular Circulation

Located outside of the installation, West Manchester Road provides civilian access to private residences immediately north of the road, as well as controlled military access to the Ft. Bragg water treatment facility. This road was previously open to civilian traffic, however, Ft. Bragg has increased force protection and blocked the road where the South and North Sub-Areas meet the study area fence line. Although the blockade secures the water treatment plant, civilian access to a portion of the road bordering the middle and edge of the northernmost study area still exists. A sharp curve on West Manchester, north of the roadblock, comes within five feet of the perimeter fence at approximately the intersection of Surveyor and Reilly Roads.

Within the Base's controlled perimeter, four major vehicular access routes into the study area exist – Reilly Road, Armistead Street, Manchester Road, and Hurst Street.

- Reilly Road originates at Reilly Gate located at the Pope AFB/Ft. Bragg boundary, south of the study area. It traverses the northeast end of the airfield and enters the study area from the east.
- Armistead Street is a major tributary to Reilly Road south of the airfield. This street originates at Armistead Gate, directly east of Reilly Gate.
- Manchester Road enters the study area from the north (vicinity of Spring Lake) through the Manchester Gate and intersects with Reilly Road at the edge of Pope Park (the northeast corner of the study area).
- Hurst Street originates south of the airfield. It diverges to the west and north from Reilly Road just north of Reilly Gate. Hurst Street enters the study area from the west.

The main vehicular circulation route through the study area is Surveyor Street. This street originates in front of the PAX Terminal (Building 704) and proceeds northwest, where it intersects with Reilly Road at the Base perimeter. At this point, it turns southwest, running roughly parallel to the runway, until it intersects with Hurst Street. Fortress and Booster Streets are the secondary circulation routes in the study area. Fortress Street parallels Surveyor Street's northeast-southwest segment; Booster Street is an arching street that generally parallels Reilly Street and connects Manchester and Surveyor in the North Sub-Area.

Pedestrian Circulation

The primary pedestrian traffic in the study area consists of fitness runners jogging along the perimeter of the airfield and foot traffic between worksites. A jogging lane exists along the length of Reilly Road and south onto Manchester Road, terminating in the area of Pope Technical Education Center (PTEC) (Building 617) (see Figure 3, Pedestrian Circulation).

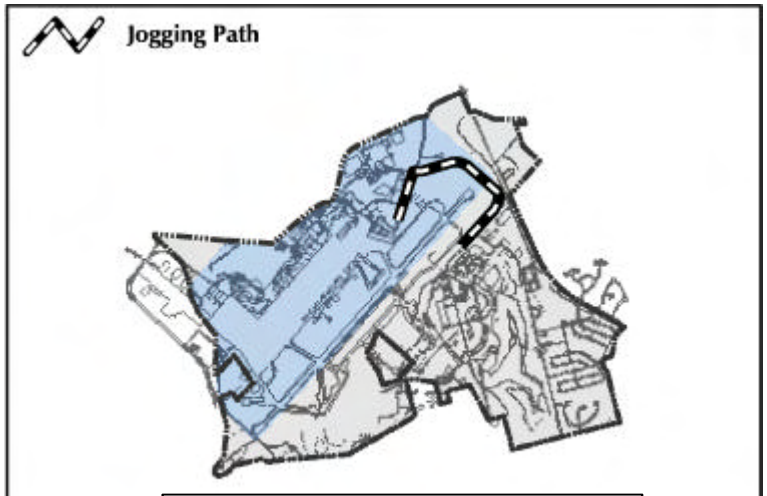


Figure 3 – Pedestrian Circulation

The linear layout of the flightline area, along with discontinuous sidewalks and narrow roadways, discourages walking. The wooded area surrounding the 18 Air Support Operations Group (ASOG) (Building 539) creates a visual and physical barrier for pedestrians who could otherwise access the industrial area and flightline from Building 560.

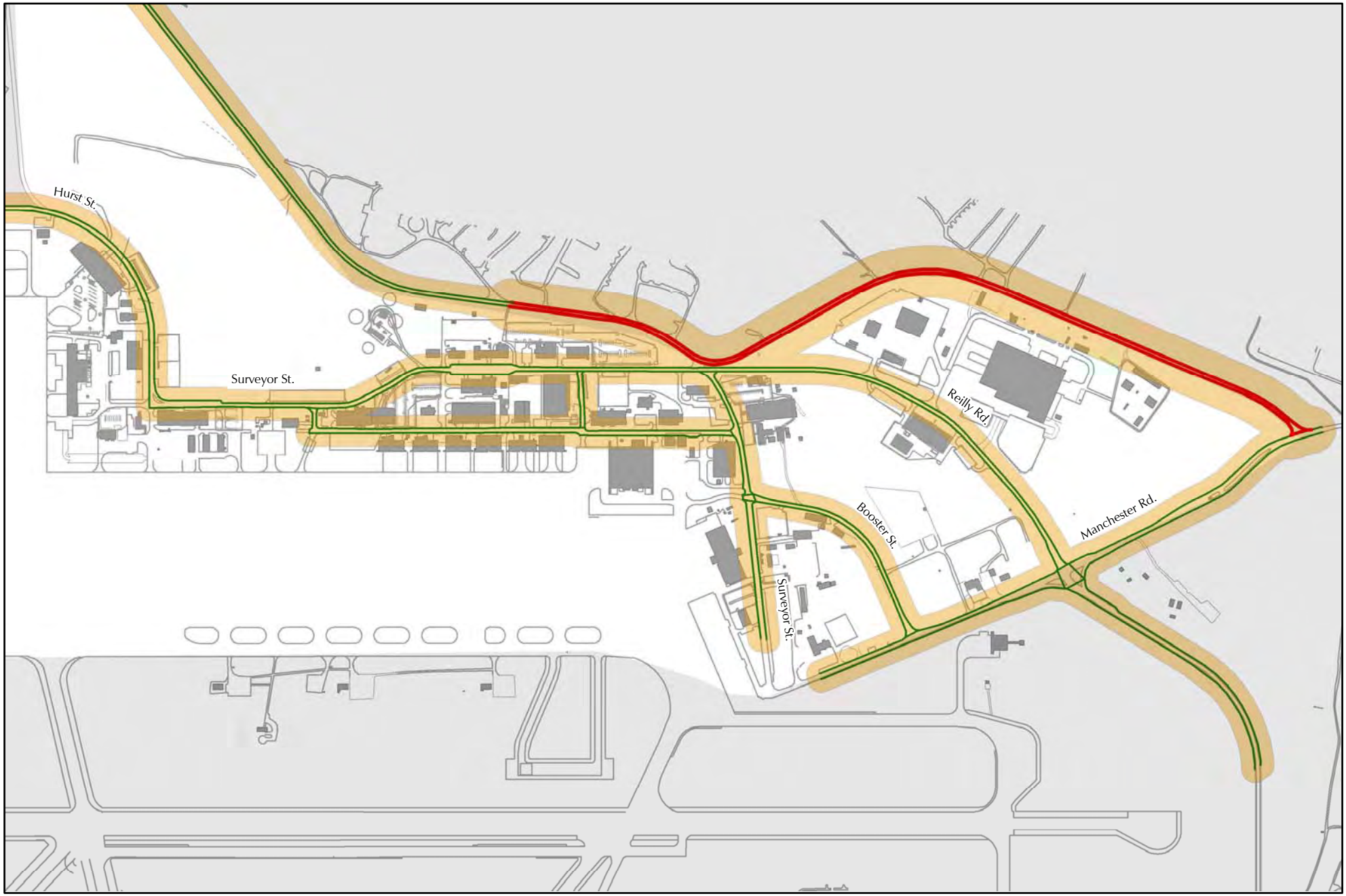
The study area is deceptively more compact than one would expect; total walking distance from Building 560 to Building 764 is approximately 5,800 feet (1.1 miles). As a reference, the walking distance from the Base Fitness Center (Building 402) to the Civil Engineer Readiness Building (Building 519) is approximately 6,700 feet (1.3 miles).

Force Protection

The study area was developed over time and in an era of lower security requirements. Setbacks from the roadways have generally

Parking Within FP Standoff Distance

been shallow with adjacent parking. A Department of Defense-mandated effort is underway to significantly increase the security of base facilities by minimizing targets of opportunity (Appendix 2). New measures will affect this Area Development Plan most predominantly in terms of setbacks/standoff distances required from parking and from roadways to facilities. Roadway setbacks are illustrated in Figure 4, Street Standoff Distances.



Roadway (Government Controlled)

Roadway (Public)

Street Standoff Area

NORTH

0 400 800 Feet

Figure 4
Street Standoff Distances

Source: 43 CES, Pope AFB, Fort Bragg

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Compliance with force protection measures will impact most parking areas. Available parking, in many cases, does not equal convenient parking. The following series of maps illustrate the required setbacks as they relate to existing facility locations. They show setbacks from roadways, force protection standoff distances applied to buildings, and the resulting compliant parking. As illustrated in Table 2, when current standoff requirements are applied to the study area's existing facilities, roadways, and parking areas, the worse case scenario (25 meter standoff) net parking loss is approximately 756 spaces (5.87 acres). Mitigation efforts such as structural hardening could reduce the required standoff to 10 meters, minimizing parking space loss.

Table 2 – Force Protection Impacts on Parking

	Spaces
Existing Parking	2,278
Parking Loss Within 25m, Unmitigated	756
Parking Loss Within 10m, Mitigated	129
Parking Saved With Mitigation	**627**

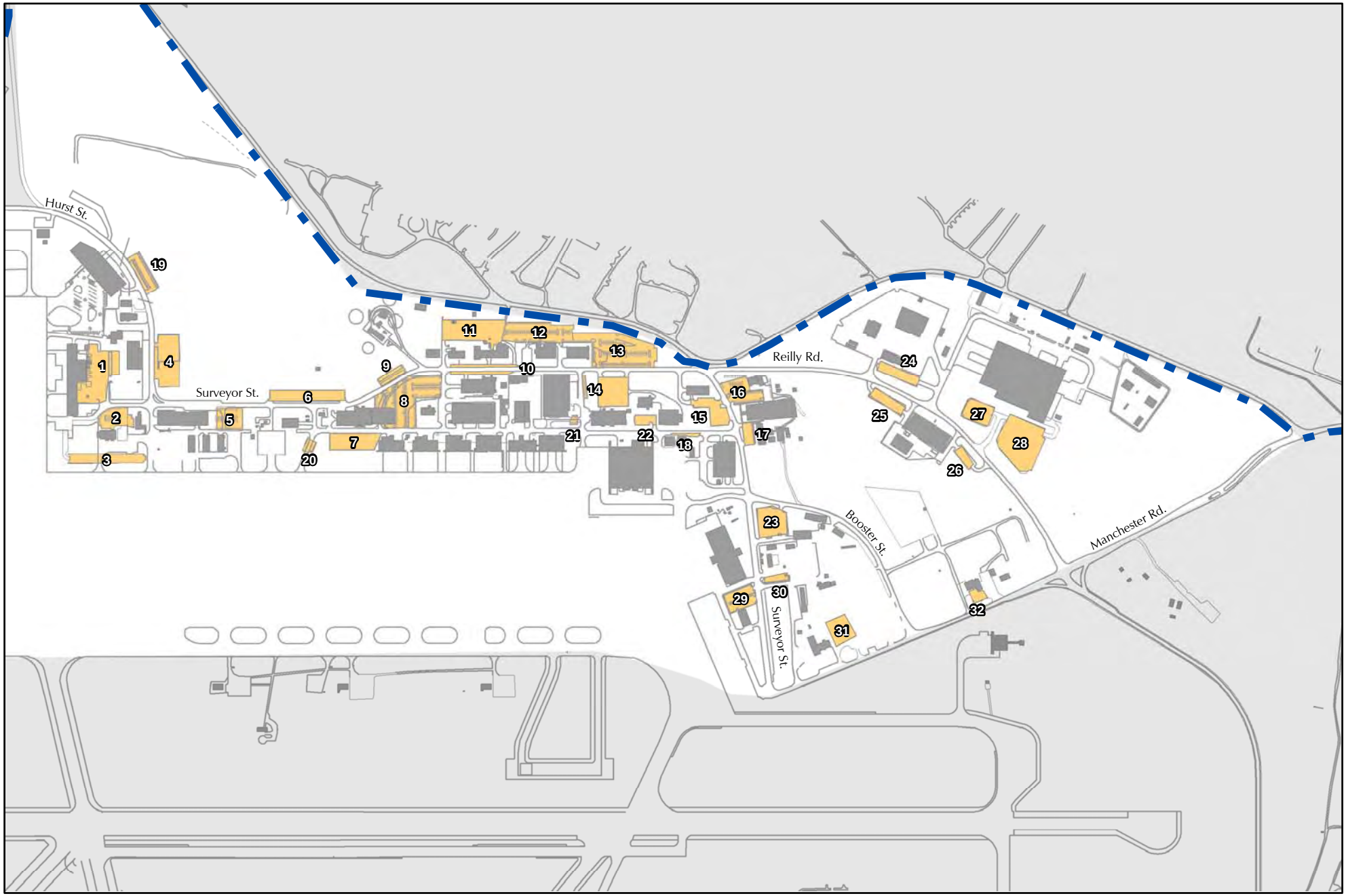
Parking

Parking in the industrial area is at a premium due to heavy natural and manmade constraints. Many of the existing personally owned vehicle (POV) parking lots are over capacity and are inconvenient for workers. The new force protection guidelines increase facility standoff distances to POV parking and roadway setbacks.

Parking demand in the flightline/industrial area was analyzed in light of the force protection guidelines. In addition, the Flightline Parking Study produced by the Military Traffic Management Command (MTMC) in July 2001 was referenced for actual parking survey data pertaining to existing lots. These surveys gave counts of 18 existing POV lots. For this ADP, 14 additional lots were evaluated for capacities. Existing POV parking lots are depicted in Figure 5, Existing POV Parking.

Compliance with force protection measures will impact most parking areas that serve existing buildings (see Appendix 2). Standoff requirements are based upon occupancy levels. For existing buildings within a controlled perimeter, the new standoff requirement is an *effective* standoff of 10 meters for buildings classified as "inhabited," a "primary gathering building," or "billeting." However, all new construction requires a 25-meter standoff so land requirements for new construction are significantly higher than in the past. In the case of existing facilities, options for compliance are:

- reducing lot capacity to comply with new standoff requirements
- reconfiguring or expanding lots away from a facility where possible
- analyzing threats to determine the required level of protection
- structurally hardening facilities to mitigate the effect of potential terrorist acts (UFC 4-010-01, 31 July 2002)



Pope AFB Boundary

Existing Buildings

POV Parking

NORTH

0 400 800 Feet

Figure 5

Existing POV Parking

Source: 43 CES, Pope AFB, Fort Bragg

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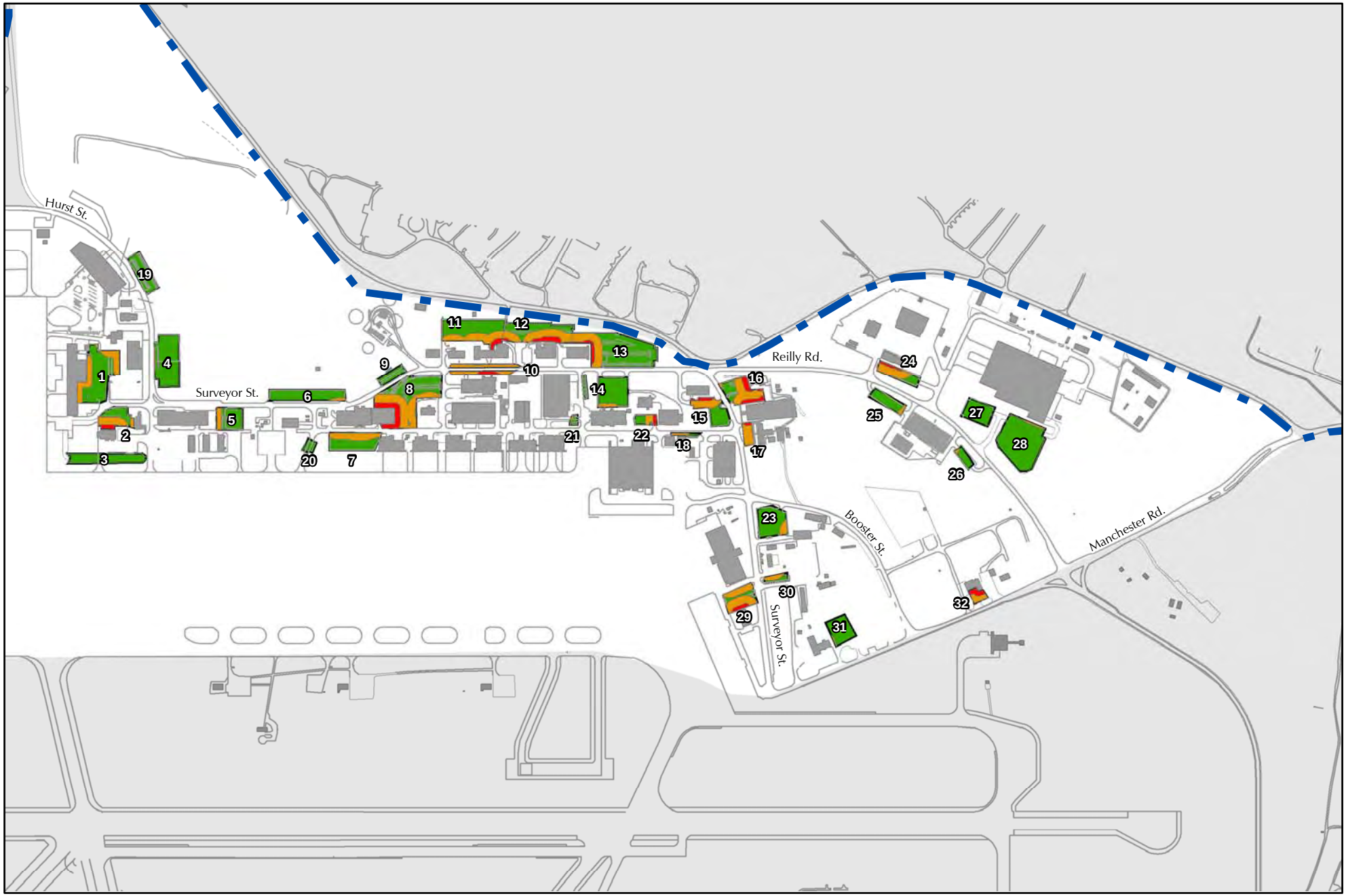
The overall parking availability for the study area is calculated at approximately 2,328 spaces. A worse case scenario requiring maximum standoff distances will affect 756 spaces. Implementation of mitigation measures or findings of compliance may reduce the number of noncompliant parking spaces by as much as 628 spaces. Overall, the net loss could be 128 spaces.

If no mitigation efforts are initiated, several POV lots will be heavily affected. The following lots will sustain large amounts of parking loss due to current UFC regulations: 2, 7, 8, 10-13, 15-18, 22, 24, 29, 30, and 32 (see Figure 6, Compliant POV Parking). These lots will lose at least half of their capacity, and in some cases, no parking will comply without mitigation. Parking lot 29 (between the PAX Terminal and Building 708) serves as a prime example of where no usable space will be left for POV parking.

The closure of Fortress Street to POV traffic and the development of new facilities, especially along the flightline in the South Sub-Area, will eliminate valuable parking in lots 7 and 20. Lot 3 will be eliminated to accommodate the AGE storage yard. Parking spaces lost to new construction will be recaptured with the demolition of Buildings 719, 729, 739, and 779, and with the construction of new parking in their place west of Surveyor Street.



Pope AFB Boundary

000 Parking Lot Number
(From Flightline Parking Study, July 2001)

Existing Buildings

POV Parking Compliant

POV Parking Non-Compliant
(Compliant if Structural Mitigation Applied)

POV Parking Non-Compliant
(No Parking Allowed)

NORTH

0 400 800 Feet

Figure 6
Compliant POV Parking

Source: 43 CES, Pope AFB, Fort Bragg

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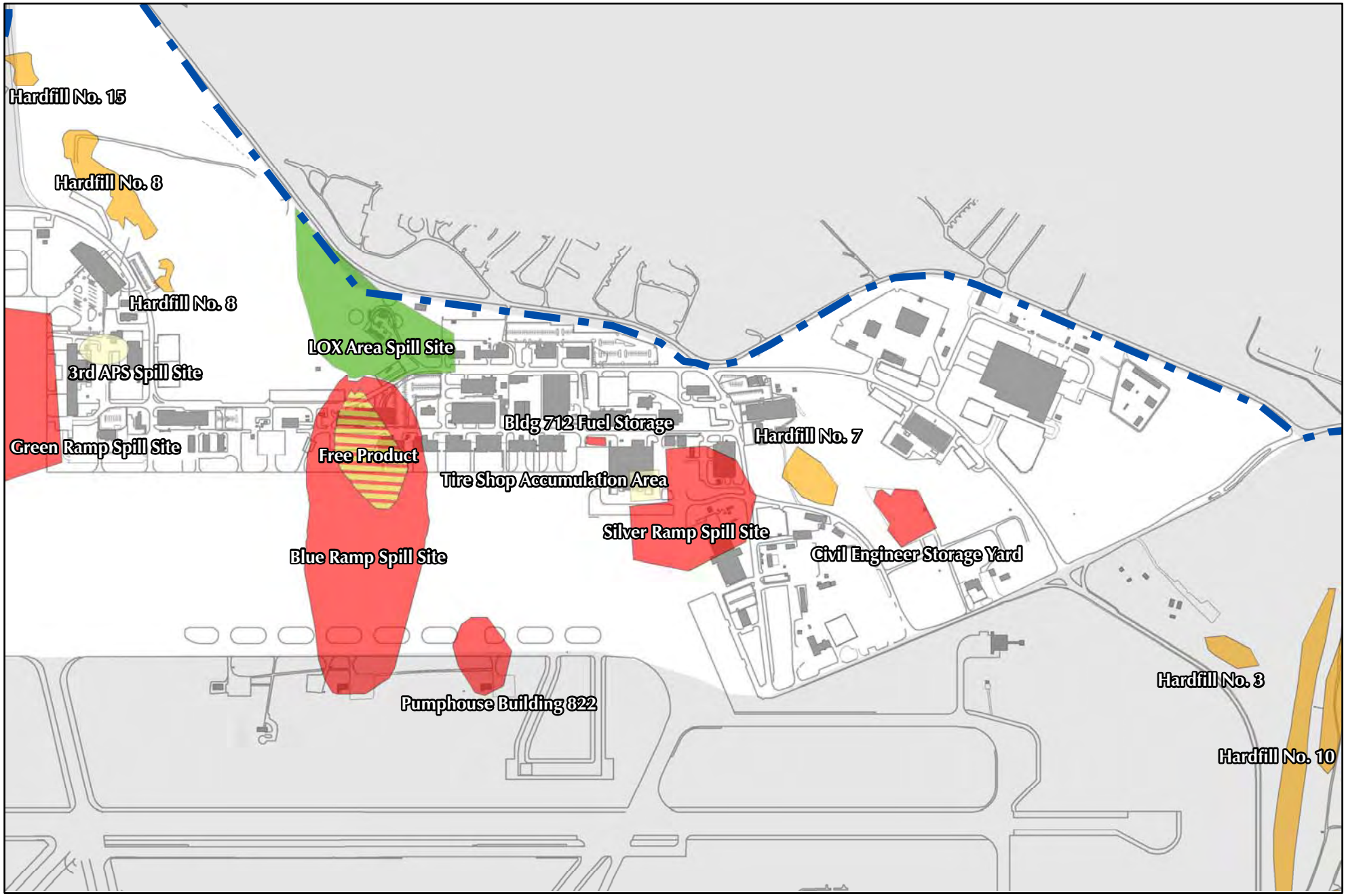
Hazardous Materials/IRP Sites

Thirteen locations within the study area are Installation Restoration Program (IRP) sites, which may, depending on the type of contamination, impact buildable areas in both the South and North Sub-Areas. The presence of contaminants such as fuel, solvents, or former landfill/hardfill sites, and the date of discovery define IRP sites. There are five spill sites and four former landfill/hardfill sites in the study area (see Figure 7, IRP Sites).

The spill sites on Blue Ramp and Silver Ramp are in areas proposed as construction sites for new facilities. The former Civil Engineer Storage Yard is also proposed as a construction site for the 14 Air Support Operations Squadron's (ASOS) motor pool. Design and construction of any facility on a designated IRP site must be in accordance with the Pope Air Force Base Institutional Control Plan (ICP).

Airfield

The Airfield is in overall poor condition. As detailed in a November 2002 Air Force magazine article entitled “Under the Rubble,” the field had to be closed for several weeks in both 2002 and 2001 for repairs. Large chunks of concrete are currently breaking loose from the runway and taxiways. A failed stormwater pipe has created sinkholes beneath the primary taxiway. Also, the airfield lacks the required frangible airfield lighting required for aircraft safety.



Pope AFB Boundary
Contamination
Landfill
Sub-Surface Free Product
Fuel
Solvent

NORTH 0 400 800 Feet

Figure 7
IRP Sites

Source: 43 CES, Pope AFB, Fort Bragg

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The runway measures 150 feet wide by 8,500 feet long. The primary surface runs parallel to the centerline of the runway and ends just short of Building 617 and the hush house. Reilly Road and the attached jogging path traverse the clear zone at the northeast end of the runway. Land in the North Sub-Area was held in reserve for some time in anticipation of a runway expansion but was recently released. This makes some large developable parcels of land available for development. Redesign of the area must take into consideration the primary surface and 7:1 slope. Land uses should still consider the need to be proximate to the airfield.

Explosive Safety

Explosive Safety Quantity Distance (ESQD) arcs exist for the Munitions Storage Area located northeast of Building 560 and for the Hot Cargo Pads and Army Ammunition Holding Areas on the airfield. ESQD arcs are illustrated in Figure 8, ESQD Arc.

Munitions Storage Area

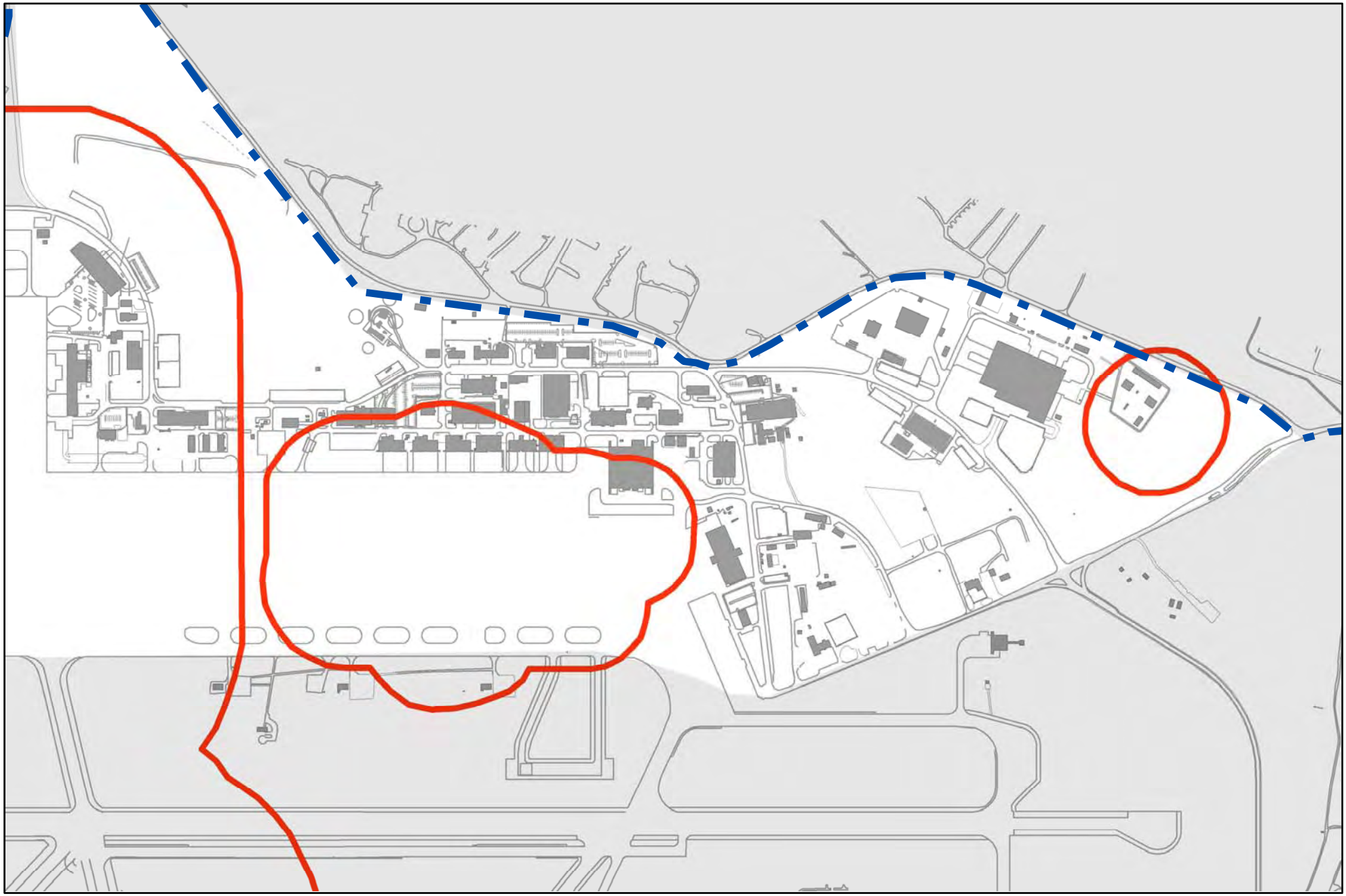
The ESQD arcs for the Munitions Storage Area do not adversely affect non-related buildings on the installation, indicating that there is adequate storage capacity and appropriate siting of explosives. A small portion of the ESQD arc extends beyond the Base boundaries.

Hot Cargo Pads

The flightline is almost entirely affected by explosives sitings and ESQD arcs associated with Hot Cargo pads and palletized explosives holding areas. Facilities affected by the arcs are the nose docks, Hangar 6, the proposed new hangars, and all of the area along Green Ramp.

U.S. Army Ammunition Holding Areas (AHA)

The Army has four Ammunition Holding Areas (AHA) located on Green Ramp. These facilities are for the temporary storage of ammunition awaiting transport. The associated ESQD arcs affect the entire area between Green Ramp, Hurst Street, and Building 753.



Pope AFB Boundary

QD Arcs

NORTH

0 400 800 Feet

Figure 8
ESQD Arcs

Source: 43 CES, Pope AFB, Fort Bragg

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NATURAL ENVIRONMENT

The study area presents several natural environmental constraints that must be considered during the development process. The following sections detail several natural opportunities and constraints.

Topography and Soil Limits

The study area topography contains a mixture of flat terrain, steep and vegetated ravines, and wooded wetlands. Over time, development of roadways and facilities in the industrial area has consumed most of the available flat areas. Two areas of significant undulating terrain are located adjacent and parallel to Surveyor Street continuing north and Hurst Drive near the Engine Test Stand. The remaining undeveloped land on Base is constrained by limiting slopes and unstable soils, requiring alternative building site considerations with appropriate mitigation efforts such as cut and fill, soil stabilization, retaining walls, etc. There are three sites that are designated as Critical Erosion Areas; an area across Surveyor Street from building 738 should also be assessed for soil stability. A large portion of the land in the North Sub-Area is subject to occasional flooding due to poor drainage. Areas affected include the transportation yard, Building 560, the munitions storage area north of Surveyor, and the ASOG on the south side of the street. These issues are depicted on Figure 9, Topography & Soil Limits.

Hydrology

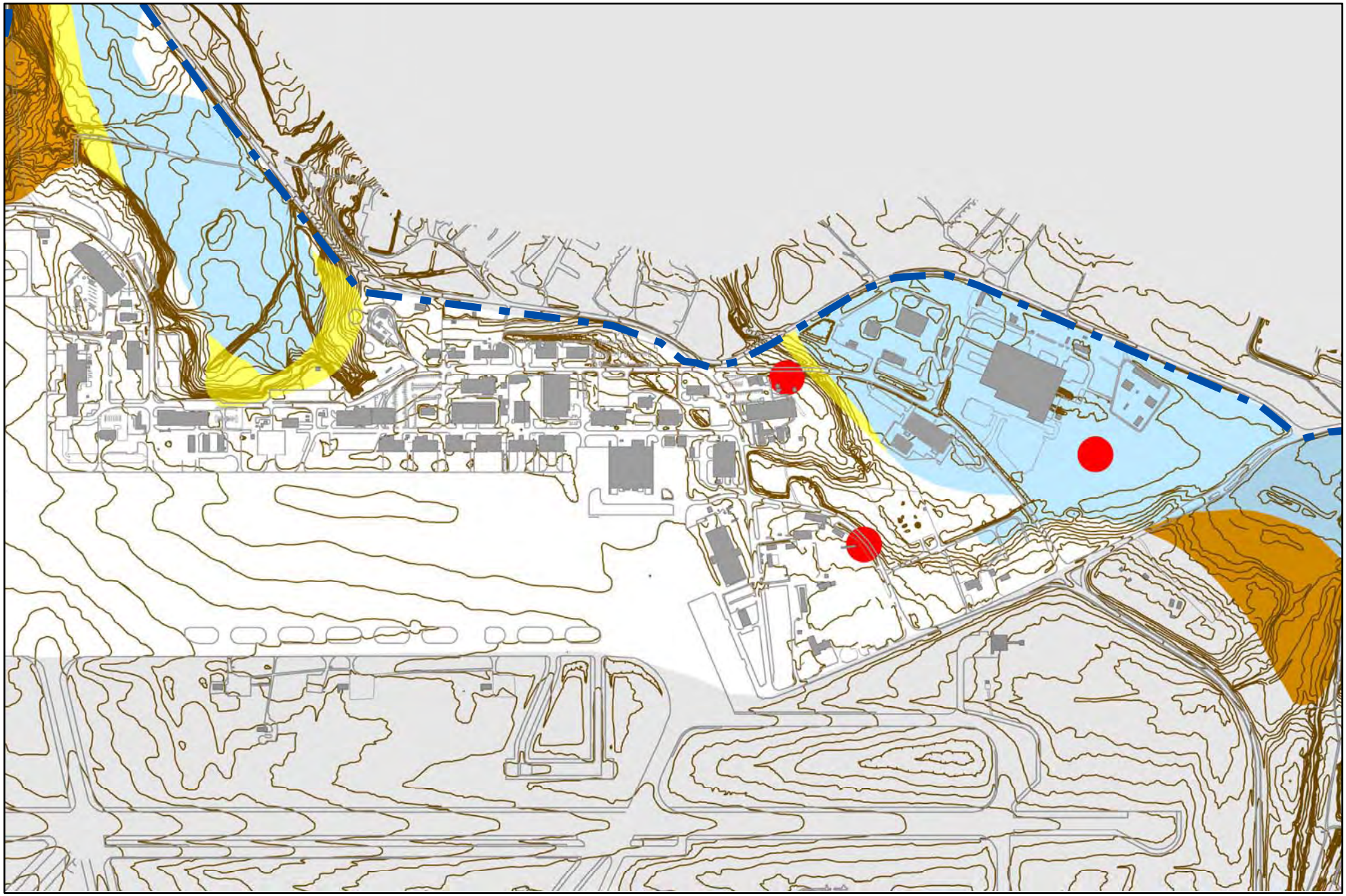
Hydrological issues impact a large portion of the study area. Pope AFB receives approximately 47 inches of precipitation per year (3.9 inches per month average), with the maximum occurrence in June, July, and August (14.8 cumulative inches). Stormwater runoff follows the natural slope of the terrain and generally flows northward.

As noted in Figure 10, Hydrology, two of three areas on the Base designated as 100-year floodplains lie within the study area. Several facilities are built within the 100-year floodplain.

Biological Resources

Four sites within the study area are designated as wetlands, comprising approximately 42 percent (roughly 64 acres) of existing wetlands on Pope AFB, as shown in Figure 11, Biological Resources. The areas tend to be habitat for wildlife; development in these areas will require further environmental analysis and mitigation. Consequently, financial expenditures on these efforts must be factored into the cost of development for any project located in wetlands as well as additional time for compliance review and permits.

The undeveloped areas within the study area maintain stands of mature trees, groundcover, and wildlife. Inactive Red-Cockaded Woodpecker (RCW) Group 285 exists near the Munitions Storage Area, however it has been designated as non-managed and abandoned. While the potential exists for RCW migration into Pope AFB, it is unlikely given the amount of human activity in the area.



Pope AFB Boundary
Critical Erosion Area
Topographical Contour (2 Foot Interval)
Severe Slopes
Seepage, Erosion
Wet Soil, Ocassional Flooding

NORTH 0 400 800 Feet

Figure 9
Topography & Soil Limits

Source: 43 CES, Pope AFB, Fort Bragg

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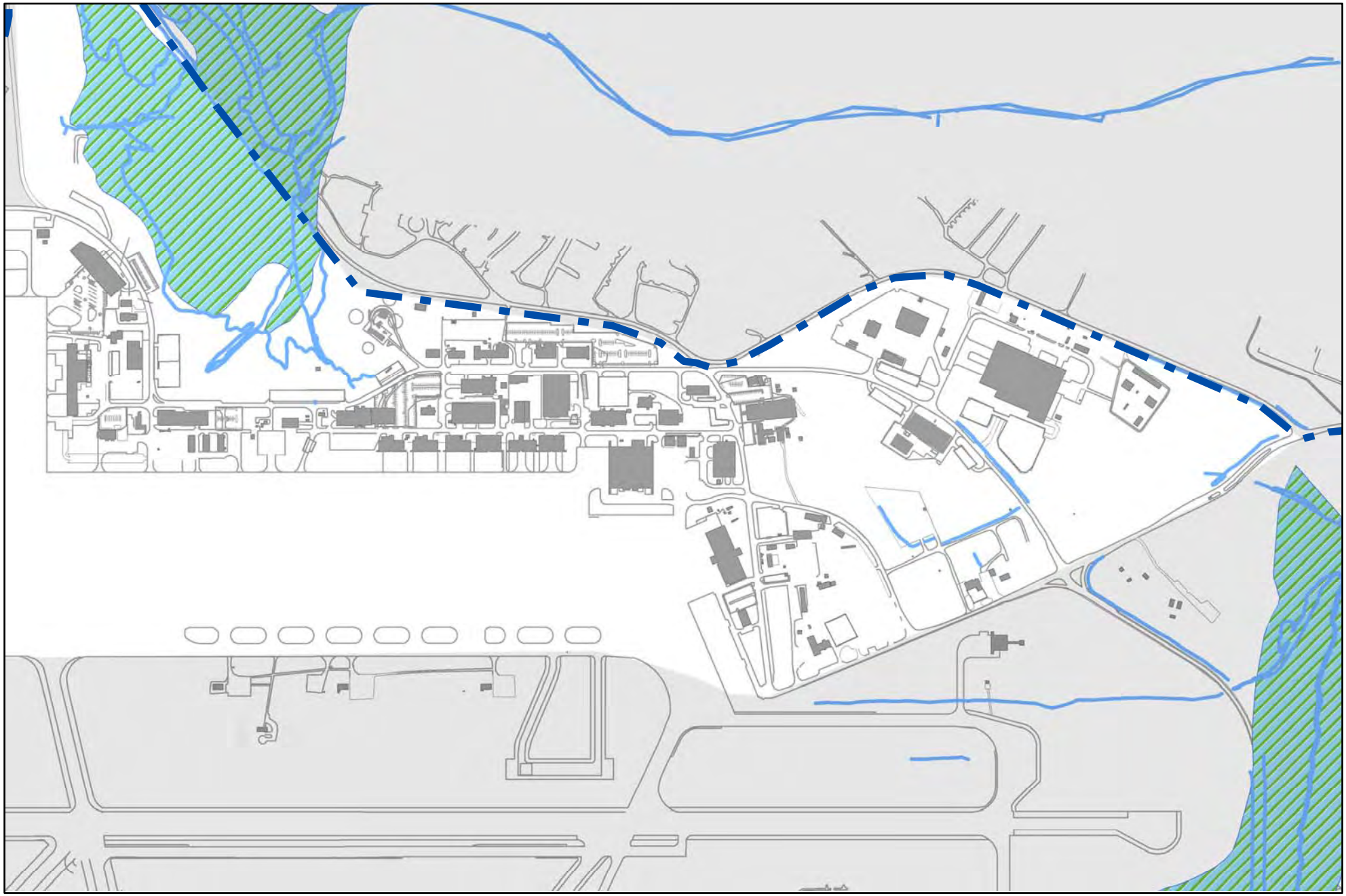

Pope AFB Boundary

Surface Water

100 Year Flood Plain

NORTH

0 400 800 Feet

Figure 10
Hydrology

Source: 43 CES, Pope AFB, Fort Bragg

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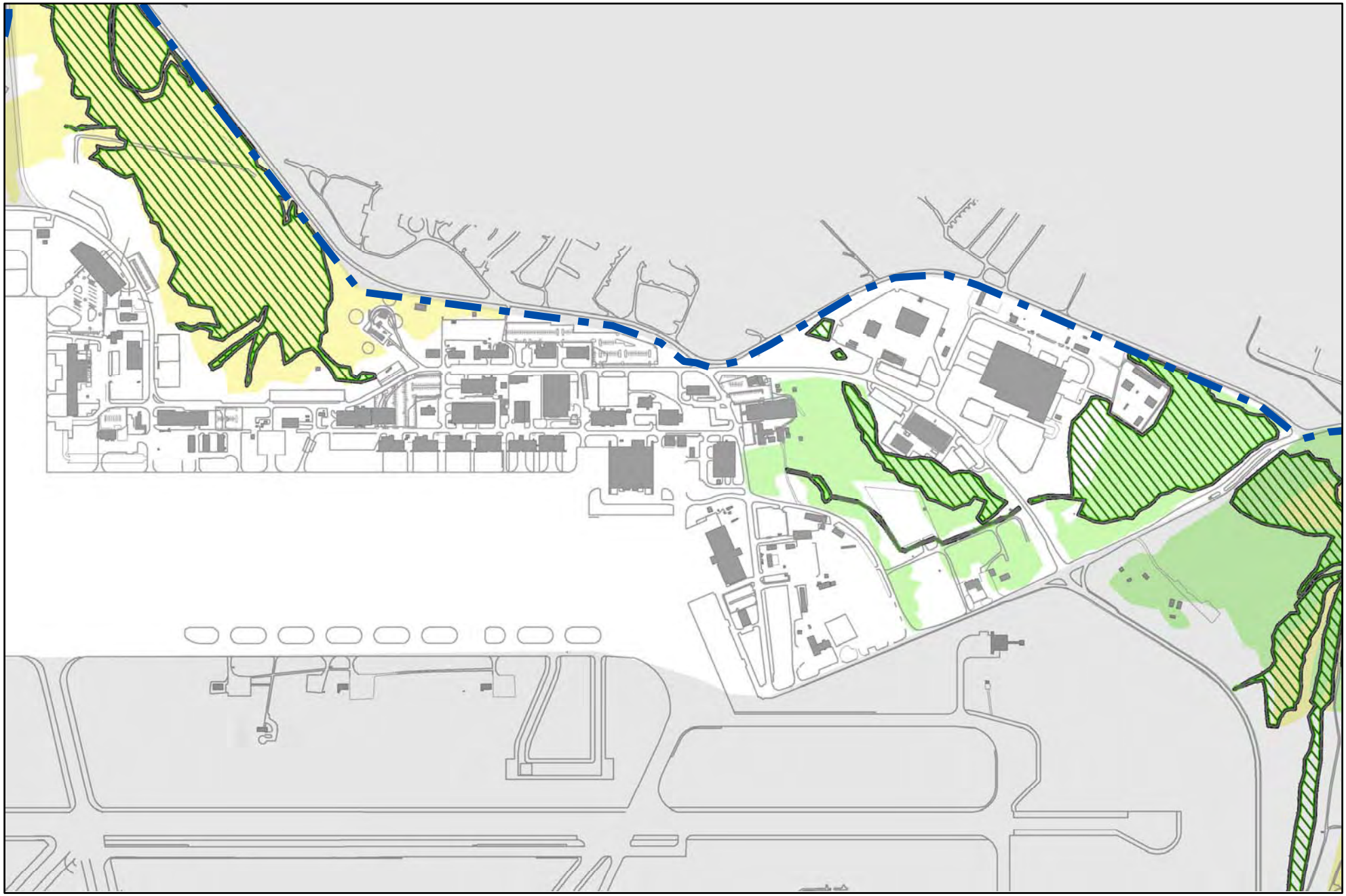

Pope AFB Boundary

Potential RCW Habitat

Forest Stand

Wetland

NORTH

0 400 800 Feet

Figure 11

Biological Resources

Source: 43 CES, Pope AFB, Fort Bragg

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Should this occur, it would present additional development constraints. Fort Bragg RCW Group 466 Cluster is in a designated foraging area, which overlaps the northwest part of the South Sub-Area.

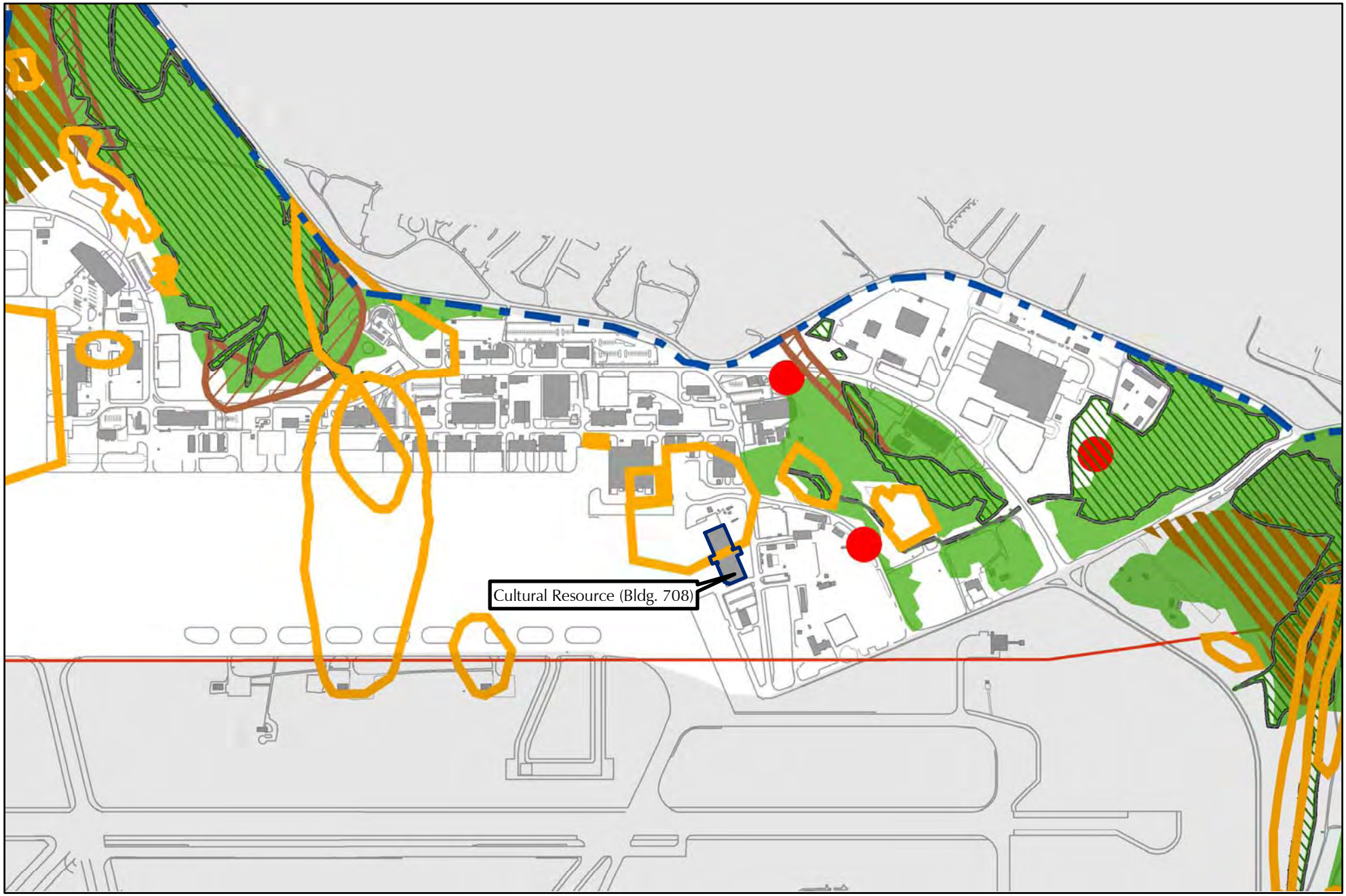
Some pines exist in the northwest part of the South Sub-Area, but are probably insignificant. Two sensitive plant sites are located north and east of Pope Park.

Cultural Resources

There are several old buildings in the Flightline ADP study area that were constructed between 1934 and 1945, but the State Historic Preservation Office (SHPO) has only designated Building 708 as historically significant. Constructed in 1934-1935, this "Double Airplane Hangar" facility features barrel vaults and natural lighting in the hangar bays, with a central administrative area separating the bays. Much of Building 708 features detailed period architecture.

Composite Constraints

The Composite Constraints map (Figure 12) depicts an inclusive view of development constraints on the study area. By viewing this map, the reality of the study area's limited land resources becomes apparent.



Pope AFB Boundary
Airfield Imaginary Surface Boundaries
IRP Sites
Severe Slopes
Critical Erosion Area
Seepage, Erosion
Biological Resources
Wetland

NORTH 0 400 800 Feet

Figure 12
Composite Constraints

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\Constraints_Composite_8.5x11_022003_mjm

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ASSUMPTIONS

The major planning assumptions for the Pope AFB Flightline ADP are:

- Any action has an inherent cost due to limited developable land.
- Cost of land should be a primary consideration given the constraints associated with the Industrial Area of Pope AFB.
- Cost of land development should be calculated in terms of actual cost and opportunity cost. Preservation of natural habitat increases the value of developable land.

18 ASOG – Building 539

- Removal and mitigation of natural habitat significantly increases construction cost. Cost of mitigation associated with filling wetlands must be included in the cost of the Military Construction (MILCON) project. If necessary and possible, wetlands banking should be used and funded under the appropriate MILCON projects.
- Parking requirements (quantity and force protection) should be viewed as a constraint to utilizing remaining developable land. Parking is a low-intensity use on high-value land.

Booster/Surveyor Intersection

- Demolition of existing buildings could result in loss of land use due to force protection requirements for newly constructed buildings/facilities.
- Construction of new buildings or building relocations will require dedicated parking.

CURRENT PROJECTS/NEW CONSTRUCTION

A key objective of the CC-130J Flightline ADP is to effectively realign facility locations with functional relationships, thereby enhancing operational readiness and support at Pope AFB.

Current Projects

Several capital improvement projects are currently underway in the study area. For this study, current projects are referred to as Projects A, B, and C on Figure 13, Capital Improvements Plan. Descriptions of these project follow.

Project A – Corrosion Control Facility

The current corrosion control function is located in Nose Dock #4, which is inadequate in shelter, capacity and emissions control. The new Corrosion Control Facility will be a two-bay, 69,965 square foot structure situated on ramp frontage southwest of the existing nose docks and east of Building 752. Buildings 745 and 755 will be demolished as part of site preparation. This project is necessary given the number of aircraft assigned and the requirements for frequent washing and painting within specific environmental constraints. Nose Dock #4 will be turned over to the 23 FG after construction of the new Corrosion Control Facility is complete.

Project B – Aircraft Parts Store Improvement

The Aircraft Parts Store Improvement is a companion project to the Maintenance Training Facility. When the supply receiving function is relocated from Building 560 to Building 720, it can be reorganized and consolidated. Improvements to Building 720 will be primarily internal with the exception of two loading docks and an associated truck turning area on the Mach Street side (north side) of the facility. The loading docks will require excavation to make them level with the warehouse floor and truck beds. This, along with the turn-around area, will result in traffic restrictions on Mach Street. The relocation of the receiving function will result in a nominal increase in parking demand (lot #14) and some increase in circulation traffic for parts pick-up.

Project C – Maintenance Training Facility

This project moves a portion of the training function (43d Maintenance Operations Squadron (MOS)) from its present location in the Pope Technical Education Center (PTEC - Building 617) to a warehouse area that is located in Building 560. It also collocates Air Education and Training Command's Field Training Detachment (FTD) with PTEC. FTD will provide in-depth maintenance training for both C-130E and C-130J aircraft. The space is becoming available by moving the supply receiving function from 560 to Building 720. The primary impact in the area of Building 560 will be increased parking demand due to an average daily student load (ADSL) of 70 personnel. The parking demand for the lot adjacent to Building 617 will decrease. This location will remain a training facility for the 23d Fighter Group Maintenance Squadron.

Figure 13 – Capital Improvements Plan

New Construction

Capital improvement projects shown in Table 3 and detailed below were assessed for potential impacts to the installation's flightline and its ability to accommodate future missions. It was determined that the Corrosion Control Facility and improvement to the Aircraft Parts Store are both situated appropriately, as are the other funded projects listed in Table 3.

The remaining projects on Table 3 seek to consolidate functions, to better align personnel with their respective missions, and provide improved facilities. For this plan, these projects are referred to as Projects 1 through 15. Structural descriptions of these projects follow.

South Sub-Area

Project 1 – Aerospace Ground Equipment Facility

This project will serve to consolidate functions that are now dispersed among several facilities. Funded for FY 04, the new facility will consist of 30,139 square feet and will provide AGE bays, a wash rack, tool crib, offices, and an improved service area. In addition to the new AGE facility, an associated AGE storage yard is authorized (approximately 26,600 square feet). The new facility will be situated on the southerly end of the Blue Ramp, south of the 41st Airlift Squadron (Building 753). Buildings 757 and 759 will be demolished to prepare the site for construction. The existing facility (Building 723) will be unclimatized storage for the 43 Maintenance Group (MXG) and Building 735 will become the 43 Aircraft Maintenance Squadron (AMXS) headquarters.

Project 2 – Two-Bay Hangar

Funded for FY 04, the Two-Bay Hangar will be constructed on the flightline southwest of Nose Dock 1 (Building 736) and east of (Building 752) on the south end of Blue Ramp. This will be a 58,000 square foot Fuel Cell Maintenance facility that directly supports the CC-130J beddown, as there are only two other bays on Base that are adequately sized for the new airframe.

Project 3 – CC-130J Flight Simulator

Funded for FY 07, the new flight simulator will be a two-story structure built on the west side of Surveyor Street at the former Rodeo location. Associated parking demand will be accommodated on site (Lot #8). During the beddown phase-in period, both simulators will be operated concurrently, however the existing simulator will be removed upon full stand-up of the new airframe. Until the CC-130J Flight Simulator is constructed, aircrews will be trained in Little Rock, Arkansas.

Project 4 – CC-130J One-Bay Hangar

This project, funded for FY 07, consists of a 29,000 square-foot single-bay hangar to be constructed in place of Nose Dock #6. The existing nose docks are undersized to handle the new J model; renovation and expansion would not be cost effective due to the age and condition of the nose docks and cost of modification.

Table 3 – Capital Improvements Plan Projects

	Base Priority	Item	Fiscal Year	Project Scope (SF)	Cost ($000)	Status
1	1	Aerospace Ground Equipment Facility	05	30,139	$6,400	Unfunded
2	N/A	Two-Bay Hangar (Fuel Cell Maintenance)	04	57,996	$15,500	Funded
3	N/A	CC-130J Flight Simulator	07	13,595	$5,200	Funded
4	N/A	CC-130J One-Bay Hangar	07	28,998	$8,300	Funded
5	N/A	Hangar 6 Renovation	04	N/A	$2,700	Funded
6	N/A	43 AW Consolidated Maintenance Facility	05	104,830	$16,500	Unfunded
7	4	A-10 ECM Consolidated Maintenance Facility	04	27,986	$5,400	Unfunded
8	7	23 FG Consolidated Maintenance Facility	05	23,681	$5,000	Unfunded
9	N/A	CC-130J Fuselage Trainer	04	5,048	$970	Unfunded
10	N/A	Parking Ramp Upgrade	04	N/A	$1,200	Funded
11	N/A	Base Operations Facility	12	23,250	$6,300	Unfunded
12	N/A	Central Deployment Center	04	43,056	$6,900	Unfunded
13	8	23 FG Headquarters	04	19,203	$3,600	Unfunded
14	6	682 ASOS	04	29,009	$7,400	Unfunded
15	N/A	14 ASOS	05	17,050	$4,125	Unfunded
16	N/A	Repair Blue Ramp Storm Drain	05	TBD	$6,800	Unfunded
17	N/A	Repair Taxiway Alpha	TBD	TBD	$9,800	Unfunded
18	N/A	Repair Blue Ramp, Phase 1	04	TBD	$2,800	Funded
19	N/A	Repair Blue Ramp, Remaining Phases	TBD	TBD	$27,200	Unfunded
20	N/A	Infrastructure	05	N/A	$16,000	Unfunded

Sources: 1. Pope Beddown Briefing to Pope MX Community dated 100802 (CMSgt Cooks).
2. DD1391s provided by Pope AFB, October 2002.
3. Base priorities based upon Facilities Board, December 2002.
4. Beddown projects have not been prioritized by 43 AW.

Project 5 – Hangar 6 Renovation

This project addresses fire safety and electrical deficiencies, and will replace the overhead cranes and mezzanine offices in Hangar 6 (Building 712) in support of the CC-130J beddown. Construction efforts will not alter the exterior square footage of the facility, and should have no substantial change in parking or traffic circulation. This project is funded for FY 04.

Project 6 – 43d Maintenance Squadron (MXS) Consolidated Maintenance Facility

This facility, conceptually, would house the majority of the 43d MXS maintenance back-shop functions, eliminating concerns about functional relationships within the 43d MXG. The primary concern is the operation of numerous maintenance functions that are negatively impacted due to physical separation along the entire length of the north side of the airfield.

One consolidated facility capitalizes on economies of scale with single utility runs and lower heating and cooling costs. Additionally, consolidated maintenance operations can facilitate improved performance and efficiencies by providing increased span of control issues (unity of command).

Project 9 – CC-130J Fuselage Training Facility

This project proposes the construction of a 5,048 square foot facility to house a CC-130J fuselage trainer, which is 15 feet longer than the C-130E and cannot be accommodated in the existing facility. The facility is proposed as an addition to the existing E-model facility as the same staff will train in both models. The current E–model fuselage trainer will continue to be used for training on all standard length C-130 aircraft. The Air Force, Army, and Special Operations communities will also use this facility.

Project 10 – Parking Ramp Upgrade

This project addresses increased ramp space requirements to accommodate the CC-130J's additional 15 feet of fuselage length. Ramp upgrades include paving two grass ovals located between Blue Ramp and Taxiway A, restriping taxiways and parking spots, and installing new aircraft tie downs configured for the CC-130J. The project enables rearrangement of aircraft parking spaces to provide sufficient taxi and parking space for the new aircraft. No buildings or other structures are impacted by this project.

North Sub-Area

Project 7 – A-10 ECM Consolidated Maintenance Facility

This project constructs a facility to accommodate avionics, electronic countermeasures (ECM) pod, electronic warfare Pave Penny pod, and AVRT/CTVS systems operations for A-10 and C-130 aircraft. It will provide adequate security and covered storage for sensitive equipment associated with the Countermeasure, Sensors, and Conventional Avionics function. These functions are currently located in three separate inadequate, substandard locations.

Project 8 – 23 FG Consolidated Maintenance Facility

Maintenance operations are currently performed in five separate, inadequate facilities, some nearly 70 years old. This project increases maintenance efficiency and performance by consolidating the many maintenance shops of the 23d Fighter Group into a single state-of-the-

art facility with improved security. The project addresses the problems associated with geographic dispersion between maintenance operations and maintenance administration. The 23 FG Consolidated Maintenance Facility will be located on Surveyor Street, across from Building 708.

Project 11 – Base Operations Facility

This project proposes construction of a 23,250 square foot facility to house all of the Operations Support Squadron (OSS) functions in a single facility. Some of the OSS functions are currently housed in building 708, which needs a total interior renovation. The new facility will require ready access to the flightline, and will still be convenient to POV parking. Functions of the 145 personnel who will occupy the new facility include: the command section, airfield management, weather, intelligence, current operations, combat plans, training and readiness, the orderly room, transient alert, and the Distinguished Visitors Lounge. The proposed location for this facility is an addition/renovation of the PAX terminal.

Project 12 – Central Deployment Center

The Central Deployment Center is required to facilitate rapid global mobility and, based on a requirement to deploy approximately 2,500 personnel, a 43,056 square-foot facility is authorized. This facility should be accessible to the ramp and aircraft, with proximity to long-term POV parking. The Center will be capable of mobility processing, personnel deployment, cargo deployment, and will include associated support areas and function. Consolidation of this function with Base Operations and Passenger Terminal would maximize efficiencies and would avoid splitting PAX terminal personnel for deployment processing.

Project 13 – 23d Fighter Group Headquarters

This project will consolidate the currently dispersed command and execution functions of the 23d Fighter Group (23 FG), which is significantly degrading the unit's ability to function optimally. This facility will provide space for the Group Commander, Group deputies, Executive Officer, administrative section, aircraft quality assurance, standardization and evaluation, financial management, and the Operations Support Squadron functions and personnel. Centralizing the Group's physical location serves to increase command and control, improve communication flow, and enhance mission performance. The 23 FG Headquarters will be located in the area north of Building 708.

Project 14 – 682 ASOS

This project constructs a new facility to support the 682d Air Support Operations Squadron (ASOS), currently located at Shaw AFB, South Carolina. The facility will provide space for administration, training, vehicle parking and maintenance, equipment maintenance, and storage. Completion of this project will greatly enhance both the command and control relationship between the 18 ASOG and the 682 ASOS and the support relationship with the XVIII Airborne Corps (Army) units the 682 ASOS supports. The 682 ASOS facility will be located in the general location of Buildings 513 and 519. As the Readiness function of Building 519 serves the entire population of Pope AFB, it will relocate to Main Base. Bioenvironmental functions also will relocate to Main Base to better serve their customers.

Project 15 – 14 ASOS

This project provides a new facility to house the 14th Air Support Operations Squadron, currently located adjacent to the Joint Special Operations Command (JSOC). The JSOC wants to enhance their force protection standoff distance by extending the JSOC facility's perimeter fence. This standoff distance extension will displace the 14 ASOS. The facility will be larger than the existing 14 ASOS facility and will provide space for five operational flights, vehicles, washrack, Hazardous Material (HAZMAT) storage, and POV parking. The 14 ASOS facility will be located in the vicinity of the former Civil Engineer's materials storage yard, south of the 18 Air Support Operations Group (Building 539).

ALTERNATIVES DEVELOPMENT

South Sub-Area

43 MXS Consolidated Maintenance Facility

As described previously, this facility could house the majority of the 43 AW maintenance back-shop functions, eliminating concerns about functional relationships within the 43d MXG. A single consolidated facility would capitalize on economies of scale and facilitate improved performance and efficiencies.

The concentration of functions in a single large maintenance complex of this type increases the density of occupying personnel. Increased occupants and occupant density, according to force protection guidelines, results in this facility's classification as a primary gathering building and requires increased force protection measures. Consequently, stricter setbacks and standoff distances must be observed to comply with force protection guidelines.

Issues considered for siting the 43d MXS Consolidated Maintenance Facility include:

- programmatic constraints due to varying needs for outdoor access
- loading dock and bay door requirements
- overhead space/hoist requirements
- vehicle circulation requirements in and around the facility
- traffic congestion
- distances to customers on the flightline
- ventilation/vapor recovery
- aesthetic consistency with other buildings

The proposed site for the 43d MXS Consolidated Maintenance Facility is on the present location of the Prop Shop (Building 715) (see Figure 14, South Sub-Area Land Use). . While this location utilizes valuable flightline frontage, it was determined that proximity to customers and the ability to construct in a single phase made this the preferred site. Parking will be provided within a 5-minute walk of the proposed facility in lots located to the north and west. Construction of the consolidated facility makes land available where the some of the existing maintenance functions are located (Buildings 731 and 733).

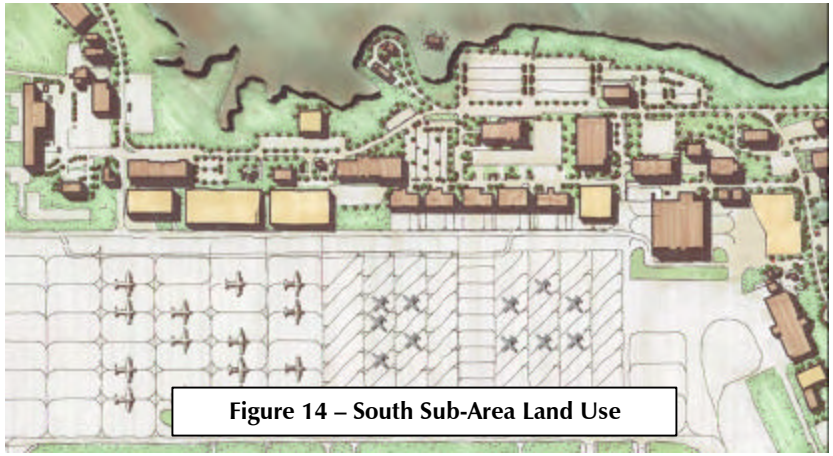


Figure 14 – South Sub-Area Land Use

Ideally, a new consolidated facility could be built in place of the existing facilities mentioned above, however issues of phasing, swing space, requirements for continuous operations, and funding constraints took precedence over the location closest to the aircraft hangars and parking ramp.

Construction of a consolidated facility allows for the demolition of several old and inadequate facilities in the area. In addition to Buildings 731 and 733, four facilities west of Surveyor Street (Buildings 719, 729, 739, and 779) would also be demolished with their functions relocated to the consolidated facility. The area vacated by the demolished buildings facilitates parking expansion and availability.

A by-pass road was considered for decongestion of through traffic and enhancement of pedestrian safety, however other traffic-calming tools such as textured pedestrian crossings would provide the same effect at a much lower cost.

North Sub-Area

Development of the North Sub-Area presents several challenges. The wetland area to the south of Reilly Road poses a physical and visual barrier. Most of the development along Booster Street has been demolished, leaving a road that provides little service to existing facilities and arbitrarily subdivides and limits the developable landmass (see Figure 15, North Sub-Area Land Use).

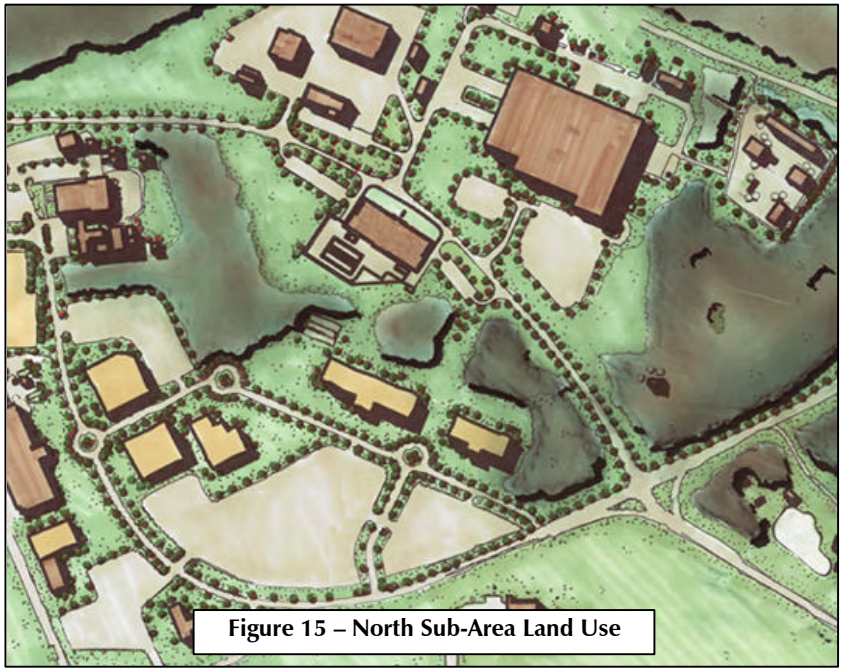


Figure 15 – North Sub-Area Land Use

Study of the PAT concept plan proposal reveals certain inefficiencies in terms of functional relationships and land utilization. While a campus effect was achieved to some extent, it does not respond well

to the opportunities and constraints presented by the natural environment.

As an alternative to the PAT concept plan, this study presents a conceptual layout that seeks to:

- minimize impact on the natural habitat and costs associated with wetlands mitigation
- mass parking to avoid redundant setbacks
- create physical and visual connections
- incorporate existing facilities where appropriate
- provide area for future development

The alternative plan begins by eliminating Booster Street and re-aligning Surveyor Street in the area of Building 708 to transition into Manchester Street. These actions maximize the buildable area and eliminate frontage along an unneeded street that would otherwise require additional force protection setbacks.

The proposed realignment of Surveyor Street allows the bend in Taxiway Alpha to be relaxed at the intersection with Taxiway Delta. This improves airfield circulation while minimizing the impact of imaginary surfaces on developable land.

Strong links (functional, visual, and pedestrian) unify the entire area. Constructing wooden pathways and bridging the walkways in and around wetlands behind the 18 ASOG provides pedestrian access to like functions. Limited vegetation removal opens view-sheds across the area. Centralized parking serves many buildings, minimizing the impact of force protection standoff distances. Creation of a focal point to the east of the 18 ASOG serves as a unifying element that ties three separate functional areas together.

Elimination of Booster Street creates a larger site to accommodate the ECM Pod Shop without having to fill the ravine across from Building 715 where the current drainage pond is constructed. The 23 FG Consolidated Maintenance Facility, the ECM Pod Shop, and the 23 FG headquarters building would front a pedestrian corridor, creating a campus effect for the 23 FG that incorporates Building 708. The proximity of these buildings creates a more personal and pedestrian-friendly setting, yet allows for good circulation and nearby parking.

The addition of Base Operations to the PAX Terminal (Building 704) maximizes flightline efficiency. A Consolidated Deployment Center may be sited adjacent to the PAX Terminal, but would optimally be part of the Base Ops addition.

Building 708

Building 708 occupies valuable frontage on the ramp and presents a unique constraint. Designated as a Historic Building, demolition is discouraged and exterior alterations and some interior alterations of original features are firmly restricted. The 23 FG currently occupies the facility's two hangars (4 and 5) and is engaged in repairing Hangar 5. Other occupants include Base Operations, Weather Flight, Transient Alert, and Airfield Management.

This facility's access to the ramp, layout, and abundance of natural lighting are unique features that should drive reconsideration of its future use.

Air Support Operations Squadron (ASOS) Facilities

Two ASOS buildings are proposed in the area north of Booster Street, south of the recently constructed ASOG building. The proposed locations of these two facilities consider their functional relationship with the ASOG and their minimal interaction with the balance of the project area. Strengths of the site include the availability of good natural concealment from direct visual observation, as well as ample space for associated motor pool and maintenance functions. The natural constraints posed by slope and wetlands impede an optimal relationship with the ASOG facility.

GENERAL DEVELOPMENT RECOMMENDATIONS

The following are major development recommendations for the South and North Sub-Areas.

Land Sizing – Look at the available land in terms of buildable "parcels" rather than vast open spaces. As developable land is limited within the study area and the Base, establishing smaller parcel sizes and/or basing parcel sizes on natural breaks can maximize land capabilities and result in increased development efficiencies.

Lot Orientation – Whenever possible, parking lots should be oriented to minimize the impacts of force protection setbacks. This may be accomplished by locating parking areas within designated roadway setbacks, thus reducing the cumulative setback distance. Similarly, depending upon the size and location of available developable land, parking lots should maximize frontage along roadways and minimize depth. Also, to maximize parking spaces in an industrial area, parking aisles should run parallel to the longest side of the parking lot.

Parking Consolidation – To maximize space utilization, parking areas within the study area should be consolidated to serve multiple users/buildings. This will help reduce the impacts of force protection setbacks applied to all parking areas, making the land available for other uses.

Parking/Walking Distance – Although Pope AFB maintains a deployable military force, parking design must take into account the total employee population (military and civilian). To encourage walking within the study area, the maximum distance from parking to door should not exceed 1,000 feet. Increased pedestrian traffic will reduce the volume of short-distance vehicular traffic and ultimately increase safety throughout the study area.

Structural Hardening – In some cases, buildings will be located within the prescribed standoff distance. Where close proximity is inevitable, structural hardening should be considered to mitigate security concerns.

Demolition Planning – Prior to designating a facility for demolition, the impacts of current force protection requirements and site reuse should be addressed. A detailed comparison should be made between the costs of renovating existing facilities and the costs of new construction before any demolition decisions are finalized. At a minimum, overall costs should include monetary, land expenditures (loss/gain), and impacts to functional relationships.

Airfield Frontage – Manchester Road remains the only remaining developable land in the study area with airfield frontage. As a result, this land is extremely valuable. Efforts should be made to preserve this land for future uses requiring flightline access. Additional development considerations include constraints associated with primary surface and 7:1 slope.

Force Protection

Developed portions of the study area enjoy close proximity to the flightline, which allows a natural flow of work between shops and hangars. However, pedestrian traffic along Fortress Street is heavy due to spatial separation between maintenance functions and tool storage, corresponding administrative areas, and supervision. The current volume of pedestrian and vehicular traffic, along with irregular building setbacks, causes congestion and an unsafe environment.
It is recommended that Fortress Street be restricted to Government Owned Vehicles (GOV) only. This action:

FP Barriers at Intersection of Surveyor/Reilly

- has minimal impact given the limited amount of privately owned vehicle (POV) parking along Fortress Street
- addresses new force protection requirements for standoff distances between buildings and roads
- creates a safer pedestrian environment
- creates a buffer between flightline facilities and second-tier facilities
- facilitates control of the flightline restricted area

It is further suggested that areas between buildings fronting the flightline be fenced to restrict access to specific entry control points (ECP). Actual design of entry control points should:

- minimize the number entry points
- consider increased volume
- maximize security through visibility
- retain flexibility to accommodate necessary traffic

Appendix 1 - List of Acronyms

ADP	Area Development Plan
ADSL	Average Daily Student Load
AF	Air Force
AFB	Air Force Base
AGE	Aerospace Ground Equipment
AHA	Ammunition Holding Areas
AMXS	Aircraft Maintenance Squadron
AS	Airlift Squadron
ASOG	Air Support Operations Group
ASOS	Air Support Operations Squadron
AW	Airlift Wing
BCE	Base Civil Engineer
CES	Civil Engineer Squadron
ECM	Electronic Countermeasures
ECP	Entry Control Points
ESQD	Explosive Safety Quantity Distance
FG	Fighter Group
FS	Fighter Squadron
FTD	Field Training Detachment
GIS	Geographic Information System
GOV	Government Owned Vehicles
HAZMAT	Hazardous Material
HQ	Headquarters
ICP	Institutional Control Plan
IRP	Installation Restoration Program
JSOC	Joint Special Operations Command
LOX	Liquid Oxygen
MILCON	Military Construction
MOS	Maintenance Operations Squadron
MSG	Mission Support Group
MTMC	Military Traffic Management Command
MX	Maintenance
MXG	Maintenance Group
MXS	Maintenance Squadron
OSS	Operations Support Squadron
PAT	Planning Assistance Team
PAX	Passenger Terminal
POV	Personally Owned Vehicle
PTEC	Pope Technical Education Center
RCW	Red Cockaded Woodpecker
SHPO	State Historic Preservation Office
UFC	Unified Facilities Criteria

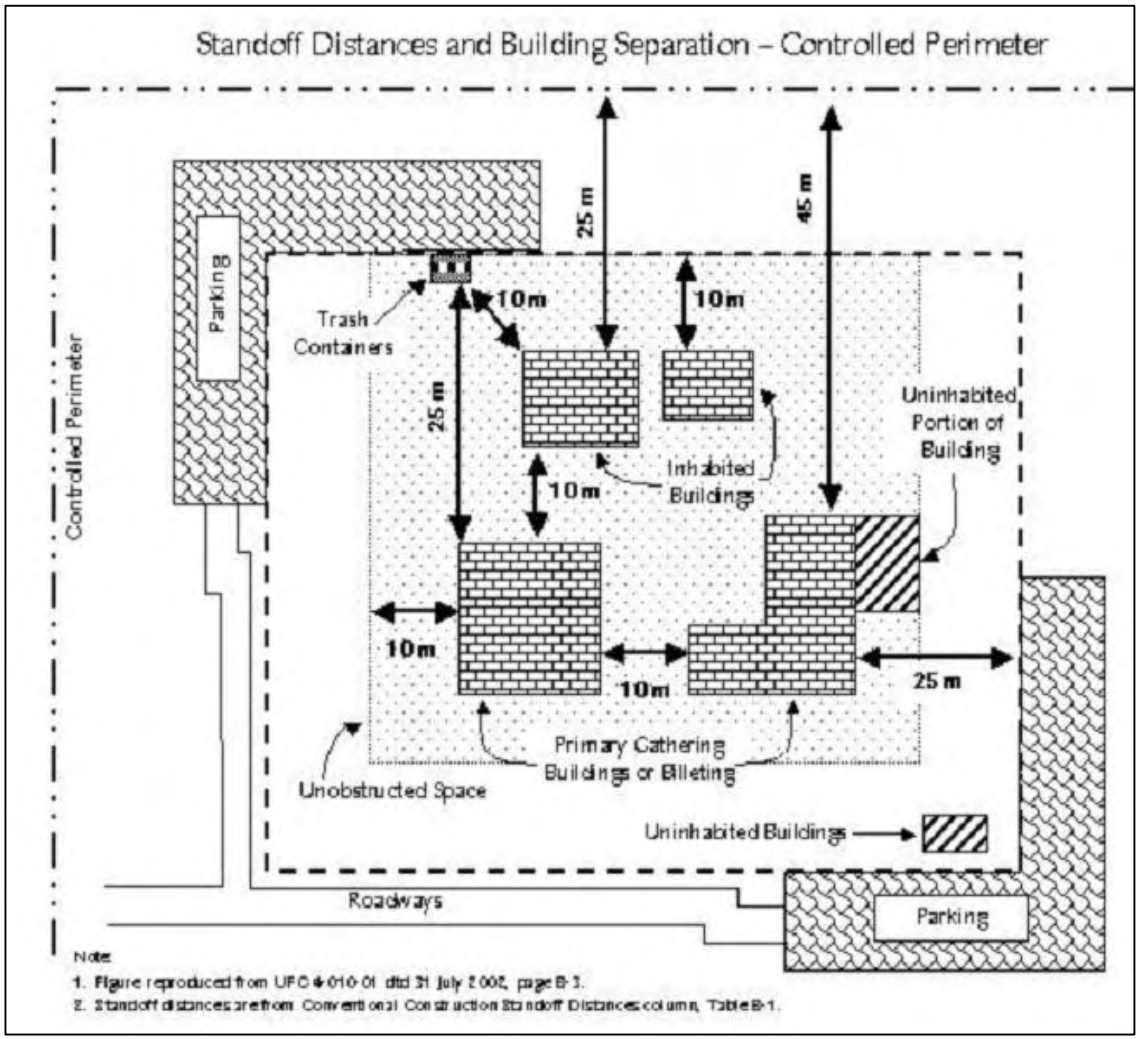
Appendix 2 - Force Protection Standards

Minimum Standoff Distances and Separation for New and Existing Buildings
Conventional Construction Standoff Distance

Location	Building Category	Primary Gathering Building or Billeting	Inhabited Building	Detached Uninhabited Building
Parking and Roadways *within* a Controlled Perimeter	Primary Gathering Building or Billeting	10 m / 33 ft	10 m / 33 ft	Over 10 m / 33 ft
	Inhabited Building	10 m / 33 ft	No Minimum	Over 10 m / 33 ft
	Detached Uninhabited Building	Over 10 m / 33 ft	No Minimum	No Minimum
	Trash Containers	25 m / 82 ft	10 m / 33 ft	No Minimum
	Controlled Perimeter	45 m / 148 ft	25 m / 82 ft	No Minimum
	Interior Roadways	25 m / 82 ft	10 m / 33 ft	No Minimum
	Parking	25 m / 82 ft	10 m / 33 ft	No Minimum
	Unobstructed Space	10 m / 33 ft	10 m / 33 ft	No Minimum

Source: UFC 4-010-01 dtd 31 July 2002

1. Page B-2, Table B-1
2. Page B-3, Figure B-1


Standoff Distances and Building Separation – Controlled Perimeter
Controlled Perimeter
Parking
Trash Containers
25 m
45 m
10m
10m
25 m
10m
Inhabited Buildings
Uninhabited Portion of Building
10m
10m
25 m
Primary Gathering Buildings or Billeting
Unobstructed Space
Uninhabited Buildings
Roadways
Parking
Note:
1. Figure reproduced from UFC 4-010-01 dtd 31 July 2002, page B-3.
2. Standoff distances are from Conventional Construction Standoff Distances column, Table B-1.

Appendix 3 - Facility Disposition

Facility	Occupant	Facility Function	Facility Future Use
513	43 MDG	Bioenvironmental	Demolished
519	CES/CEX	Readiness	Demolished
521			Demolished
525	CES	Lift Station	No Change
530	23 FG	EOR Shed	No Change
532	23 FG	Hush House	No Change
539	18 ASOG	Admin/MX	No Change
550	43 MSG	Admin	No Change
554	43 MSG	43 LRS (Trans) MX	No Change
555	43 MSG	Wash Rack	No Change
558	43 MSG	Vehicle MX	No Change
560	43 MSG	Multiple Functions	No Change
	43 MOS	Command, Analysis, Scheduling	No Change
	43 MXG Staff	43 MXG Staff	No Change
	Lognet	Computer Offices	No Change
562	23 FG	Storage	No Change
564	23 FG	Hazardous Material Storage	No Change
568	23 FG	Munitions Control	No Change
570	23 FG	Munitions Storage	No Change
572	23 FG	Munitions Storage	No Change
574	23 FG	Munitions Storage	No Change
576	23 FG	Munitions Storage	No Change
578	23 FG	Munitions Storage	No Change
610	CES/CEV	Environmental	No Change
614	CE	HAZMART	No Change
617	43 MOS	Pope Education Training Center	Move to 560/MTF
	23 FG	Training	No Change
618	CE	HAZMART	No Change
619	CE	Storage	No Change
623	CE	Storage	No Change
625	CES	Pavement/Grounds Facility	Demolish
636	23 FG	ECM Pod Shop	Demolish Compound
637	CE	Warehouse Supply/Equipment	Demolish

Facility	Occupant	Facility Function	Facility Future Use
640	43 MSG/SFS	CATM Admin/MX/ Classroom/SFS Training Flight	No Change
641	43 MSG/SFS	Support Structures	No Change
642	43 MSG/SFS	SF Operations	No Change
643	43 MSG/SFS	CATM MX Facility	No Change
644			Demolished
650	43 OG/AES	43 AES (Air Evacuation Squadron)	No Change
652	43 OG/AES	Aircrew Training Flight	No Change
653	43 OG/AES	Admin Flight	No Change
654	43 OG/AES	Communications Flight	No Change
700	43 MXS	Storage (Propeller Shop)	Demo w/ 731
704	43 MSG/3 APS	PAX Terminal (3 APS)	Add Base Operations Function
706	43 OSS & 23 OSS	Flight Simulators (C-130 & A-10)	No Change
707	43 CE	Utility sheds	No Change
708	23 FG	MX	No Change
	743 AMXS	Transient Alert (743 AMXS)	No Change
	43 OSS	Base Operations	No Change
709	43 CS	Weather Station	No Change
710	3 APS	Utility sheds	No Change
711	43 CS	Shredder	No Change
712	43 MXS	MX	No Change
	23 FG	Egress shop	No Change
715	43 MXS	Propeller Shop	Demo w/ 731
	23 FG	Armament shop	Demo w/ 731
716	JPRA	Special Operations	No Change
717	43 SVS	Dining facility	No Change
	43 OSS	Flight Records	No Change
718	23 FG	75 FS Squadron Operations	No Change
	23 FG	75 FS AMU	No Change
719	43 MXS	Survival Equipment Shop	Demo w/ 731

Facility	Occupant	Facility Function	Facility Future Use
720	43 LRS	Supply Warehouse/Admin (Aircraft Parts)	Same, Increase Aircraft Part Reception Capabilities
721	43 OSS	Life Support	No Change
722	23 FG	Admin	Demo for New 1-bay Hangar
	43 MXS	MX (Share Hangar w/ 23 FG On An 'As Needed' Basis)	Demo for New 1-bay Hangar
723	43 MXS	Current AGE Backshop/Heavy MX	Storage 43 MXG
724	23 FG	MX	No Change
726	427 SOS	Squadron Operations/AMU	No Change
729	43 MXS	Avionics Repair (Shop & Admin)	Demo w/ 731
	23 FG Gold Flag	Maintenance Contracting (AFREP Manager)	Demo w/ 731
	QA	Quality Assurance Office	Demo w/ 731
	Contractors	Admin/MX	Demo w/ 731
	AFREP	Room Functions as AFREP	Demo w/ 731
730	23 FG	74 FS AMU	No Change
	23 FG	74 FS Squadron Operations	No Change
731	43 MXS	Admin/MX	Demolish
732	43 MXS	Corrosion Control	Transferred to 23 FG
733	43 MXS	Paint Storage Shed	Demo w/ 731
734	43 MXS	Fuel Cell MX	Transferred to 23 FG
735	43 MXS	AGE Supervision	No Change
736	23 FG	Phase Dock	No Change
737	23 FG	MX Admin/Storage	Demo w/ 731
738	43 AMXS	AMU	No Change
	2 AS	Squadron Operations	No Change
739	Det 1, AMC/LSS	PMEL	Demolish
742			Demolished
745	43 MXS	Small Admin For Washrack	Demolish CCF
746	43 MXS	Washrack/Tool Storage	Demolish CCF
748	23 FG	BALO	No Change

Facility	Occupant	Facility Function	Facility Future Use
749	43 MXS	AGE Washrack	Demolish w/ 731
752	23 FG	Storage Shed	Demolish - Bay
753	41 AS	Squadron Operations	No Change
	43 AMXS	AMU/Command Section	No Change
755	43 AMXS	Storage	Demolish - CCF
756	Base Gas Station (GOV-Only)	Gas Station for GOV Vehicles	Demolish
757	43 AMXS	Storage	Demolish AGE
758	743 AMXS	Enroute MX	Same
759	43 MXS (AGE)	Flightline AGE	Demolish AGE
764	23 FG	HQ	Unknown
	43 MSG/3 APS	Parachute Rigging/ Heavy Rigging	Unknown
765			Demolished
766	43 MSG/(3APS)	Special Purpose Veh MX (Fleet Service)	No Change
768	43 LRS	Special Purpose Vehicle MX	No Change
778	43 MXS (Fuel Cell)	Tank Farm	Petroleum Operations Building
771	43 MXS	Electrical & Environmental Shop (For Aircraft)	Demolish
773	43 LRS	LOX Cart Ready Line	No Change
775	43 LRS	LOX	No Change
777	43 LRS	LOX	No Change
779	43 MXS	Avionics Storage Shed	No Change

Note:
1. Information current as of 121602.
2. Data gathered during site visits, interviews, and in cooperation with Pope AFB staff.

Appendix 4 - Planning Assistance Team Concept

Appendix 5 - Plans and Regulations

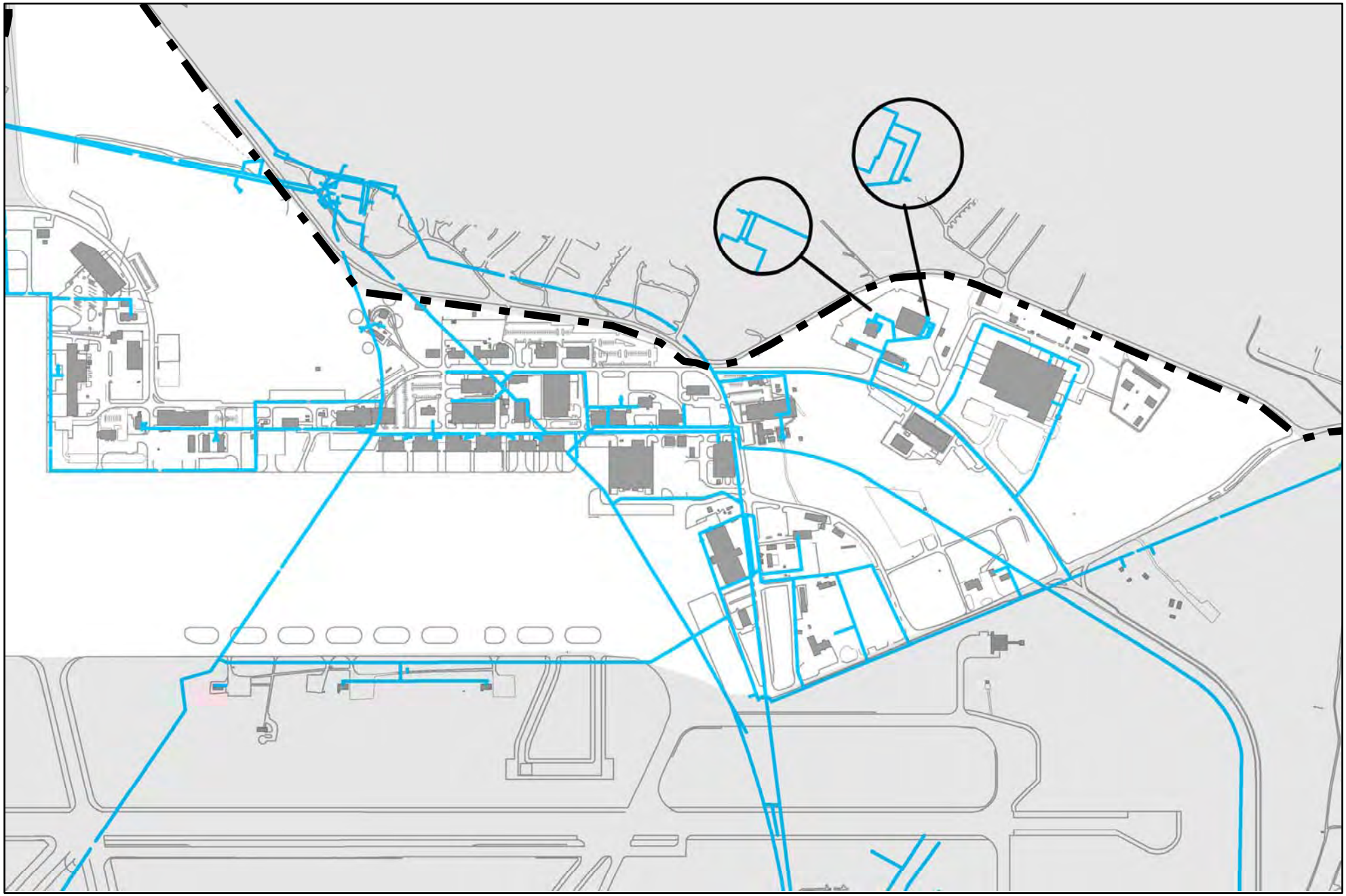
This study analyzes the proposed actions to determine the best solution for meeting the CC-130J beddown at Pope AFB. Other plans and publications pertinent to the study area have been used as planning guidance in the preparation of the Flightline Area Development Plan. They include:

- Pope Air Force Base General Plan
- Pope AFB Commander's Summary
- Pope AFB 2020 Vision
- HQ AMC SATAF I, Final Report, 43 Airlift Wing, Pope AFB, NC
- Pope AFB Industrial Area Development Plan
- Unified Facilities Criteria Manual (UFC) 4-010-01, DoD Minimum Antiterrorism Standards for Buildings

Appendix 6 - Utility Maps

The following pages contain the utility maps used in the development of alternatives for the Flightline ADP.

Figure 6-1 Water Supply
Figure 6-2 Storm Drainage
Figure 6-3 Sanitary Sewer
Figure 6-4 Natural Gas
Figure 6-5 Liquid Fuel
Figure 6-6 Electrical



Pope AFB Boundary

Water Supply

NORTH

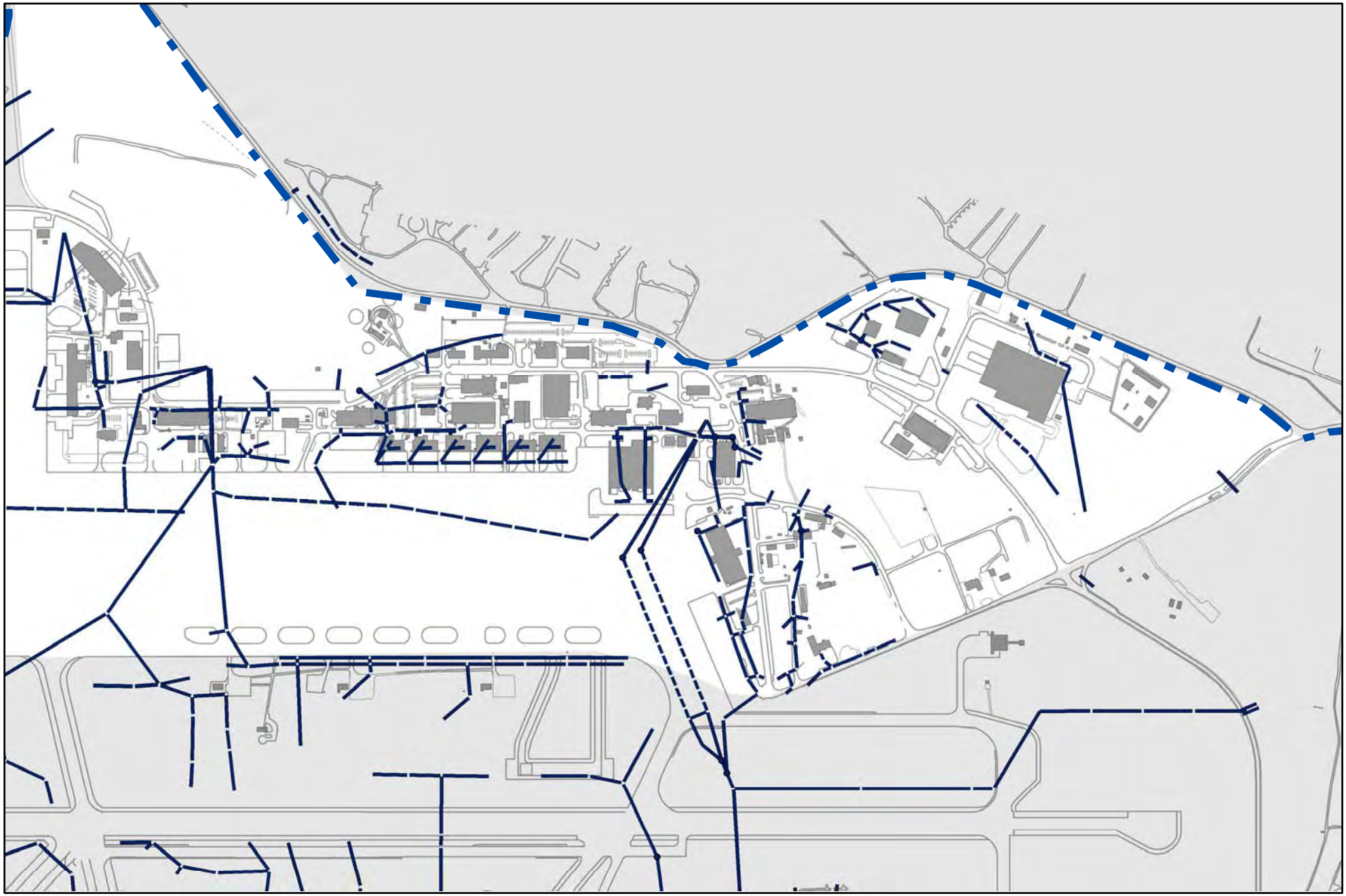
0 400 800 Feet

Appendix 6-1
Water Supply

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\WaterSupply_8.5x11_021403_mjm

24 February 2003



Pope AFB Boundary

Storm Drainage

NORTH

0 400 800 Feet

Appendix 6-2
Storm Drainage

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\Storm Drainage_8.5x11_021403_mjm

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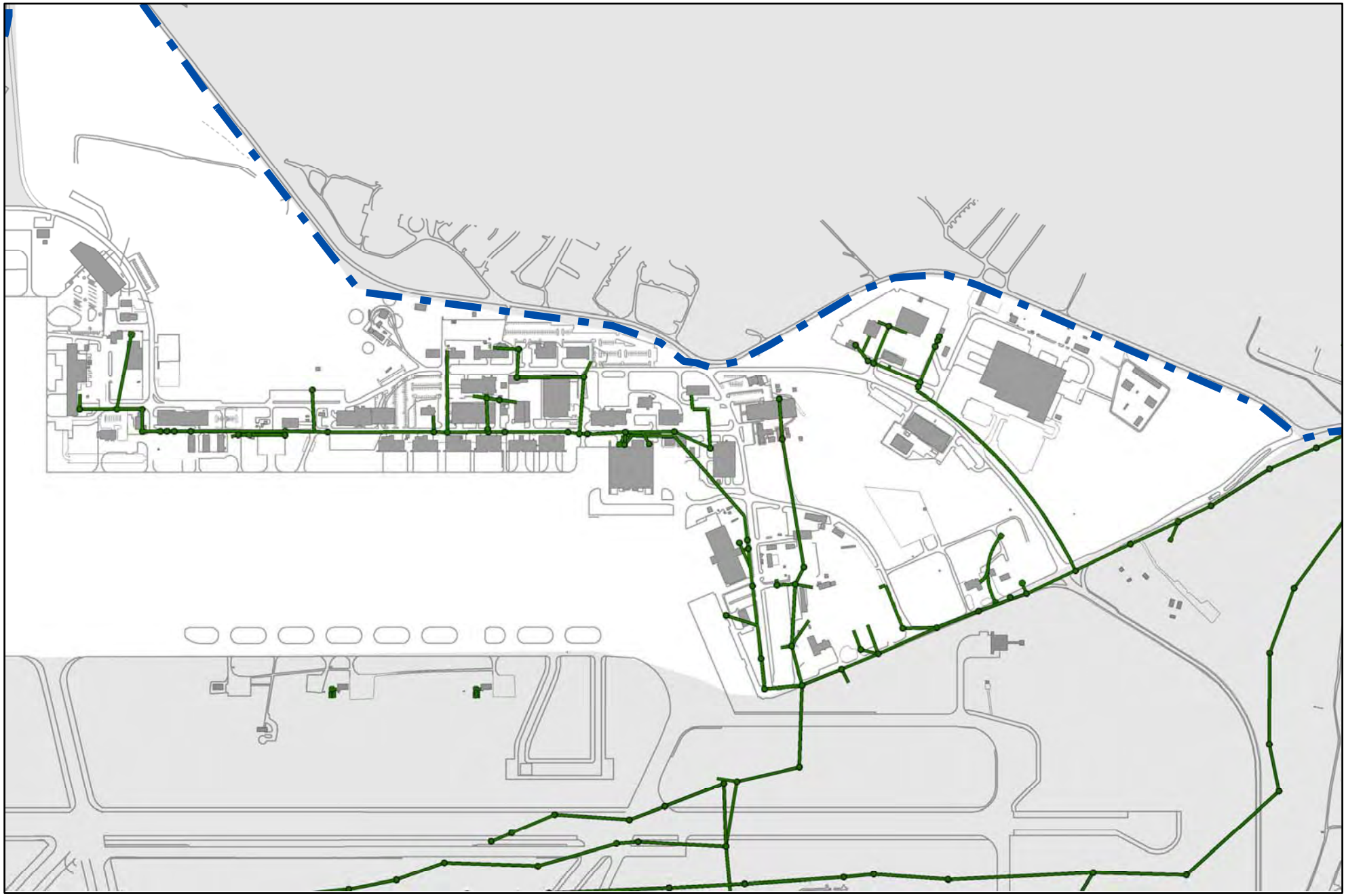

Pope AFB Boundary

Sanitary Sewer

Lift Station

NORTH

0 400 800 Feet

Appendix 6-3
Sanitary Sewer

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\SanitarySewer_8.5x11_021403_mjm

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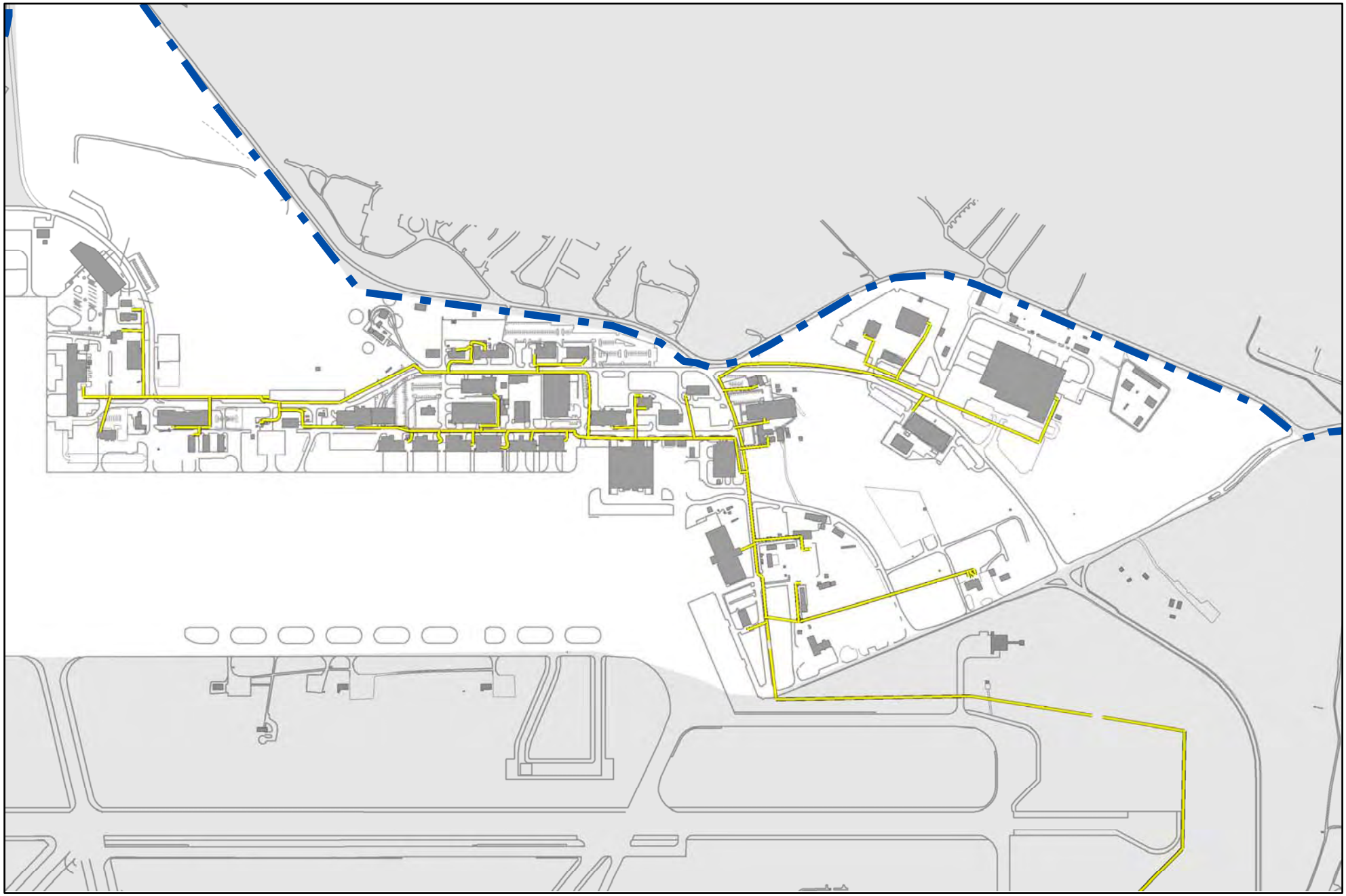


Pope AFB Boundary

Natural Gas

Appendix 6-4
Natural Gas

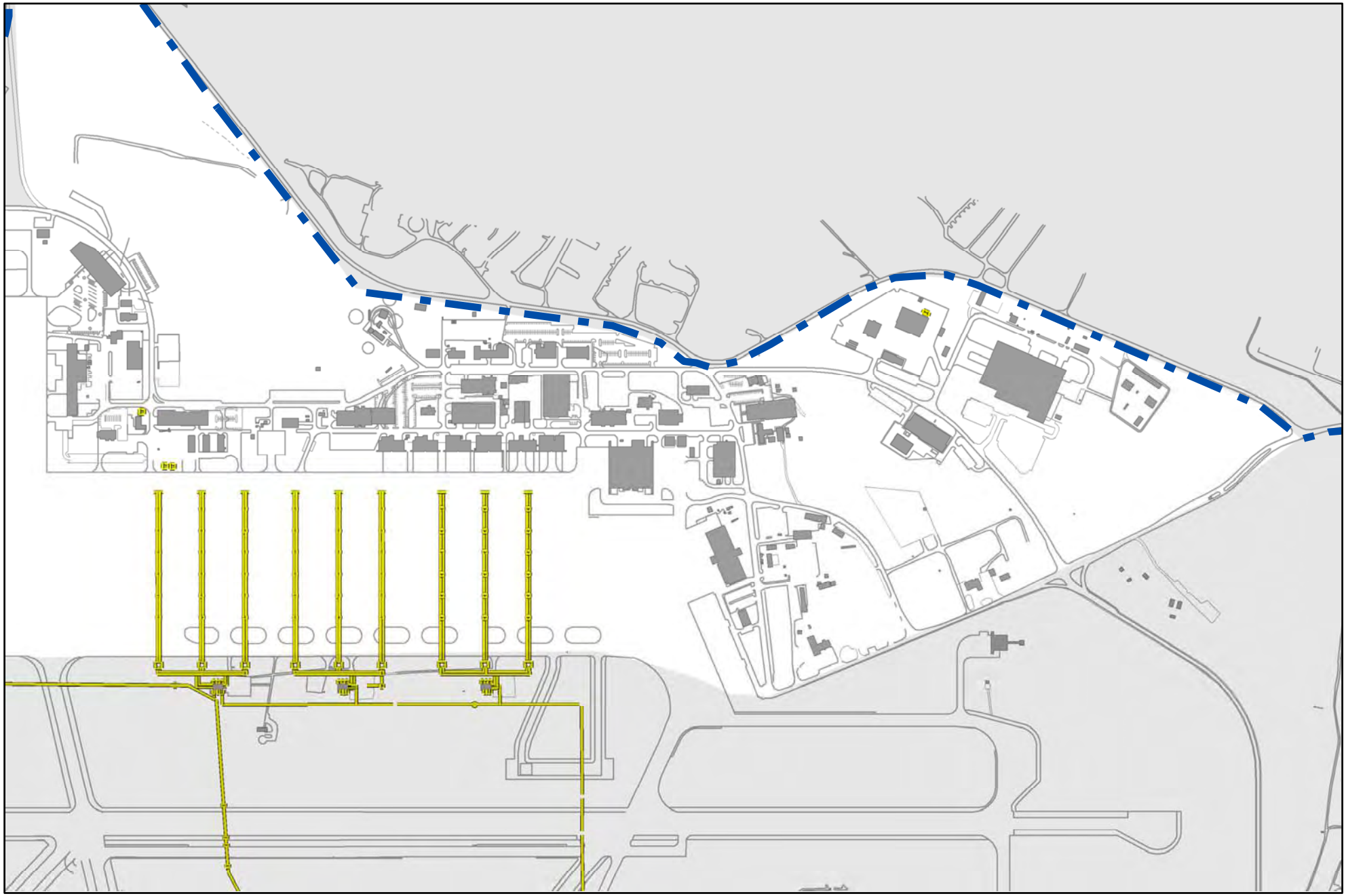
NORTH

0 400 800 Feet

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\NaturalGas_8.5x11_021403_mjm

24 February 2003



Pope AFB Boundary

Liquid Fuel

NORTH

0 400 800 Feet

Appendix 6-5
Liquid Fuel

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\LiquidFuel_8.5x11_021403_mjm

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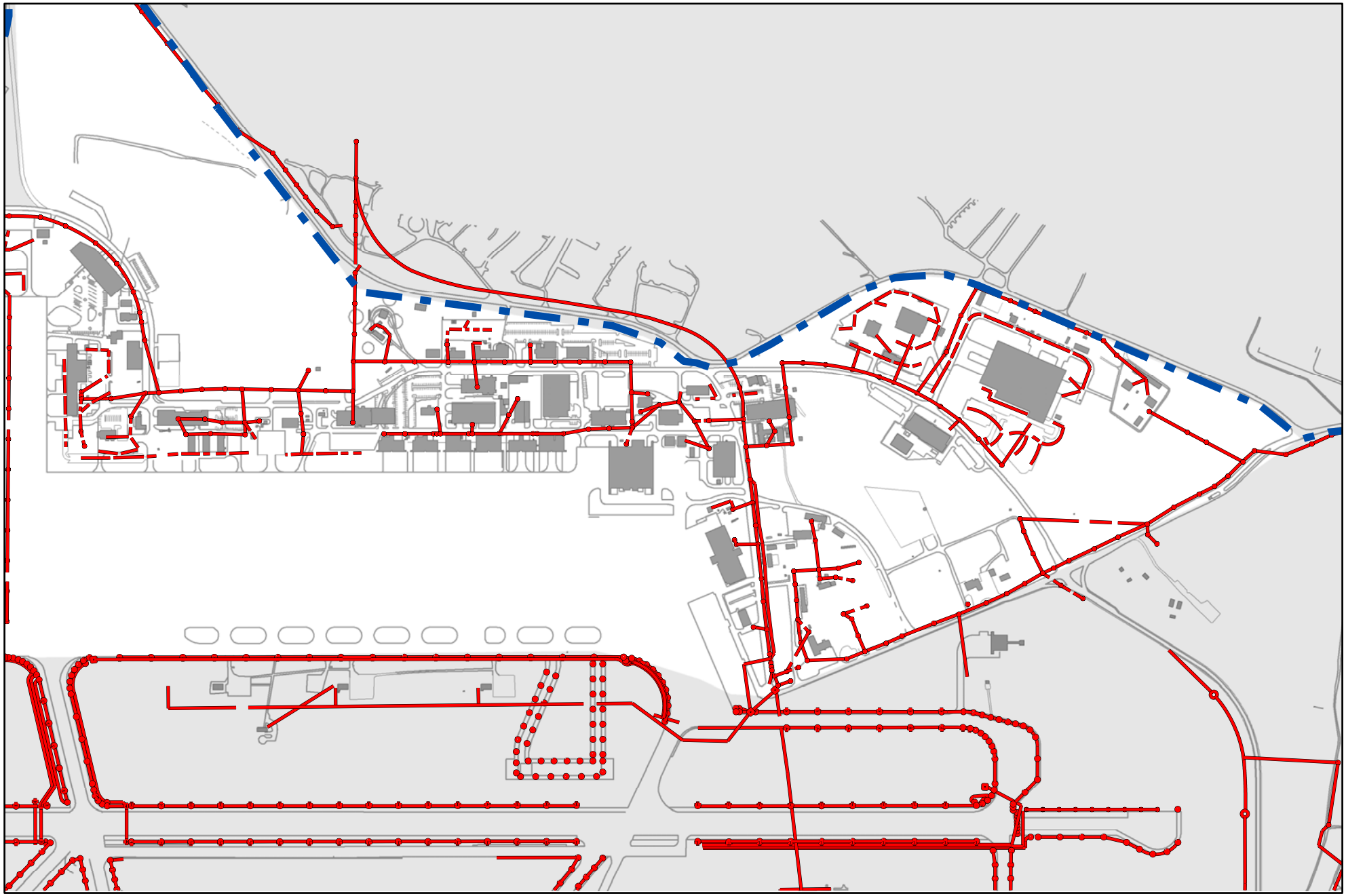

Pope AFB Boundary

Electrical

Appendix 6-6
Electrical

NORTH

0 400 800 Feet

Source: 43 CES, Pope AFB, Fort Bragg

V:\PROJECTS\POPE AFB - ADP\Site Analysis\GIS\mxd\90 Percent sub\Electrical_8.5x11_021403_mjm

24 February 2003

43D AIRLIFT WING