

Appendix A

Notice of Preparation

NOTICE OF PREPARATION
MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
MOUNT UMUNHUM PROPOSED ENVIRONMENTAL RESTORATION AND PUBLIC ACCESS PLAN
SANTA CLARA COUNTY, CALIFORNIA

Introduction

Midpeninsula Regional Open Space District (District) is issuing this Notice of Preparation (NOP) to announce that the District is preparing an Environmental Impact Report (EIR) for the Mount Umunhum Environmental Restoration and Public Access Project. The District is currently in the process of gathering public input regarding the scope of the EIR. A public scoping meeting was held on December 9, 2010. Invitations to the scoping meeting were sent to all recipients of this NOP.

The purpose of an NOP is to solicit your input on issues and alternatives that should be addressed in the EIR. The District appreciates scoping input from public agencies and individuals in response to this NOP and to the prior scoping meeting. The project location and information, as well as the District contact name and address are provided below.

General Information

Project Title: Mount Umunhum Environmental Restoration and Public Access Project



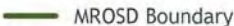

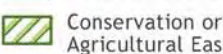

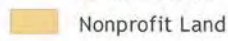
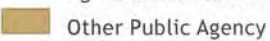
Lead Agency: Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
Contact: Meredith Manning, Senior Planner
(650) 691-1200

Project Location: The project site is located within the Sierra Azul Open Space Preserve on the summits of Mount Umunhum and Mount Thayer, in the southern Santa Cruz Mountains, about 13 miles south of San Jose and three miles southeast of Los Gatos (see Exhibit 1, Site Map). The project site, originally owned and operated by the federal government as the Almaden Air Force Station (AFS) is part of the District's 18,000-acre Sierra Azul Open Space Preserve. The project site, which is owned by the District, is accessed by Mt. Umunhum Road, portions of which are under private ownership. The last two miles of the road are currently closed to the public and would require an access easement to permit public access to the site. Although the entire former AFS consists of 43.72 acres, the project site is limited to approximately 22.8 acres (refer to Exhibit 2, Project Area). The project site is located on the following Assessor's Parcel Numbers: 562-08-003, -004, and 562-09-050.

CEQA Requirement: This NOP is intended to satisfy the requirements of the California Environmental Quality Act (CEQA), (Public Resources code, Division 13, Section 21000–21177), and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000–15387).

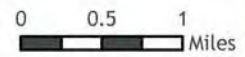


Exhibit 1: Regional Map

- | | | |
|---|---|--|
|  MROSD |  Watershed Land |  MROSD Boundary |
|  Other Protected Open Space or Park Lands |  Conservation or Agricultural Easement |  MROSD Sphere of Influence |
|  Nonprofit Land |  Other Public Agency | |

Midpeninsula Regional
Open Space District

December 2010



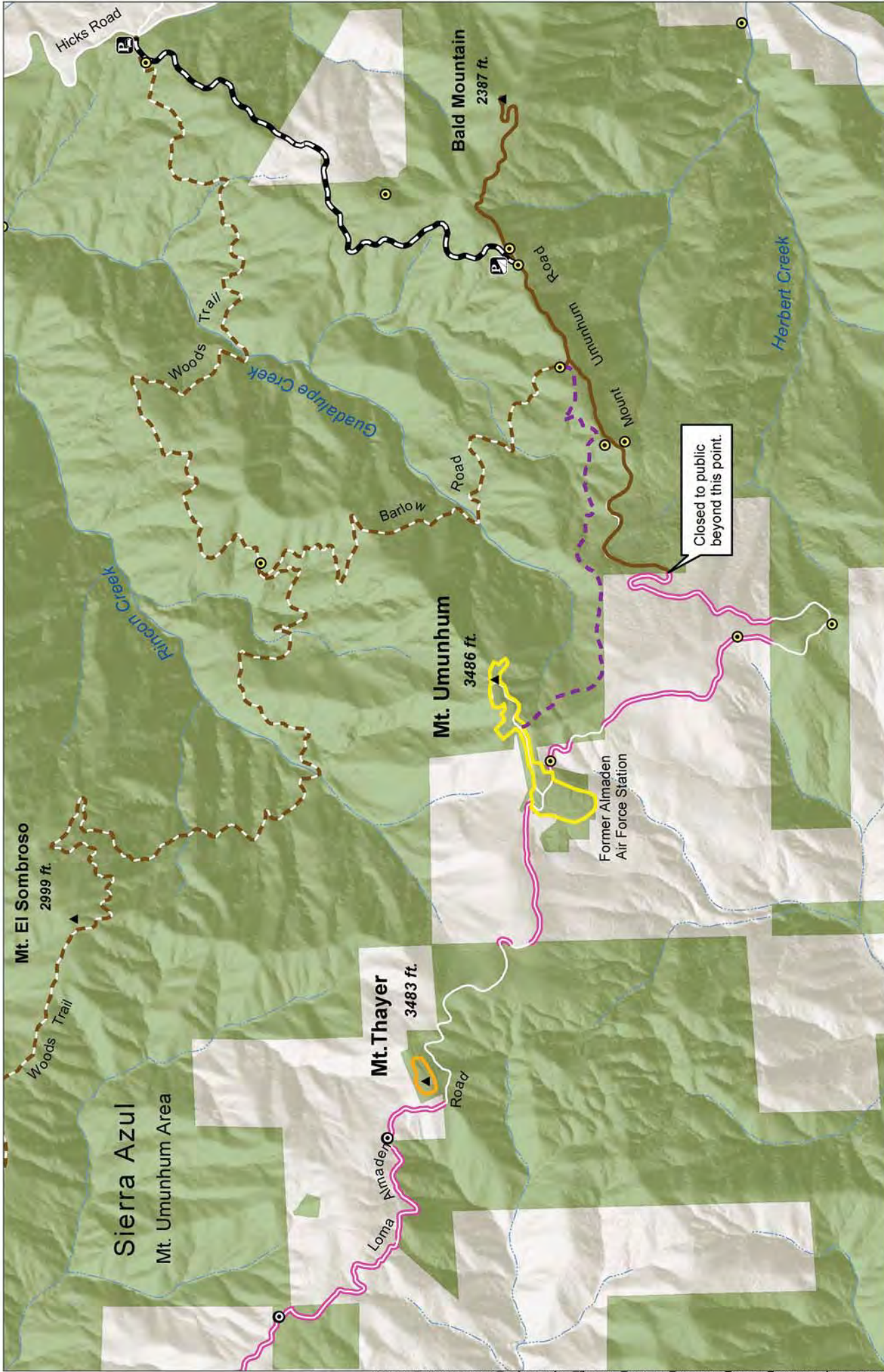


Exhibit 2: Project Area

Project Area

- Mt. Thayer (2.86 acres)
- Mt. Umunhum (19.89 acres)
- Proposed Trail Connection

Land Ownership

- MROSD
- Private Land: Public Access
- Easement Required

Current Public Access

- Gate
- Private Property Gate
- Hiking, Bicycling, Equestrian
- Hiking, Bicycling, Vehicle Access
- Hiking, Bicycling, Private Road

Midpeninsula Regional Open Space District

December 2010

0 0.125 0.25 0.5 Miles

Potential Permits and Approvals Required:

- ▲ MROSD Board of Directors: overall project approval
- ▲ Regional Water Quality Control Board: general construction permit
- ▲ Santa Clara County: demolition, grading, and building permits
- ▲ Bay Area Air Quality Management District: register all portable equipment permits with BAAQMD; notify BAAQMD of all demolition activities 10 days prior to occurrence of activity.

Project Background

Mount Umunhum and the mountainous terrain that surrounds it have a long history of human use. Although early-history references to the specific site have not been found, it is well documented that the Mount Umunhum area figured strongly in the lives of the indigenous peoples who resided in the region. Mount Umunhum has most likely been part of the world view of many generations of ancestral Native Americans, as reflected in the name of the mountain: the word *Ummun* in the Ohlone dialect translates to "hummingbird," a creature that figured in their creation story that took place on a mountain top. Historic settlements in the Austrian Gulch area, just west of Mount Umunhum, are also well documented.

In the late 1950s, the United States government procured Mount Umunhum to build the Almaden AFS, a US Air Force early warning radar base that operated from 1958 to 1980. The base was constructed as part of the North American Aerospace Defense Command to keep watch over northern California's airspace during the Cold War. With the end of the Cold War, and as a result of advancements in satellite technology, this and other radar base sites became obsolete. The official "inactivation" date of the facility was June 30, 1980. In June 1982, control of the property and improvements was transferred to the General Services Administration (GSA). The District purchased the 44-acre base in April 1986 from the GSA for then fair market value of \$260,000.

The District acquired the former Almaden AFS and all remaining facilities at the site with the ultimate intent to restore the area to a natural condition and provide public access. While a portion of hazardous materials was cleaned up by the federal government, other materials, particularly lead-based paint and asbestos containing material used on buildings, fell outside the original federal cleanup program in which it was placed. The District has recently been working with community, state, and federal leaders to obtain federal funding to complete the cleanup, and federal funds were committed this past year (2010) toward clean up of remaining hazardous materials. The District approved the structure abatement project in August 2010, which is scheduled to be complete by summer 2011.

Site Description

The project site consists of a complex of former military buildings and associated facilities (including driveways, parking lots, storage buildings, as well as other base structures and technical facilities). Among these is a large, five-story high, massive concrete structure, formerly used as a podium supporting an 85-ton radar dish. The dish was removed before the District purchased the property. The buildings have been abandoned for 30 years, and due to the passage of time, vandalism, and extreme weather conditions, the structures are severely dilapidated. Ornamental landscaping species have become established and the main access road, interior roads, parking lots and infrastructure have deteriorated. The main site access road, Mt. Umunhum Road, begins at Hicks Road and continues for approximately five miles to the entrance of the former Almaden AFS near the summit. The road is held in various ownerships and its physical condition varies. Obtaining public easement rights or ownership of the road is needed to allow full public access, including the ability to drive, to the summit. Potential new trail connections could link existing Preserve trails to the summit and are part of the proposed plan for public access.

Description of Proposed Project

Project Elements

The facilities, trails, and access features proposed for Mount Umunhum were designed to promote memorable, meaningful experiences for people of all abilities and, where possible, provide ADA accessibility. Proposed site elements, shown in Exhibit 3, will accommodate hikers, equestrians, bicyclists, hang gliders, and vehicles at or near the summit. The District is considering potential off-site landing locations for hang gliders. Paved roads, unpaved trails, and viewpoints would provide diverse destination points for social interactions and quiet solitude. Interpretation of recent and historic cultural activity and ecology would be emphasized via self-guided interpretive trails, signs, and/or cellular phone audio tours. Special permitted activities (such as geocaching, and night activities such as astronomy) and docent-led tours would be offered similar to those at other Open Space Preserves, and would be phased in as funding allows.

Note that while the full range of the opportunities for public enjoyment at Mount Umunhum are described, individual components may be phased in as funding, property ownership and other constraints allow. Also, the project is expected to be further refined based on the findings of the environmental review and as new data is collected, and yet remain within the range of opportunities described in this document.

The proposed project would restore the elevational summit of Mount Umunhum as close as practical to original, pre-construction topography and improve the habitat with native plants. Seating would be included among this habitat restoration and would be oriented to views. A ceremonial space marked with the four cardinal directions would provide a peaceful place for contemplation. Adjacent to the peak, a summit court is expected to provide paved passenger and emergency vehicle turnaround, ADA-accessible parking and seating. A short, ADA-accessible interpretive trail and second viewpoint/ceremonial space would emphasize views, as well as the site's natural, Native American, and military cultural history. A trail network would guide visitors around the site separately from vehicles and connect to regional trails. A stairway would connect the upper parking area to the restored summit.

Potential minimal amenities includes two paved-surface and one gravel-surfaced overflow parking areas, benches, picnic tables, vault toilets, a dedicated 911 callbox, hitching posts, bicycle storage, and non-potable water, for horses and fire protection, contained in an onsite large-capacity water tank. Additional amenities such as wind and shade protection, easy-access rustic campsites with non-potable water, a visitor center, and increased trail connections, towards the Lexington Basin, and connection to the existing Woods Trail (part of the Bay Area Ridge Trail) may be phased in over time as funding, property ownership and other constraints allow. An access and loop trail at Mount Thayer may be added if a public access easement on intervening private land is acquired, and would be designed to minimize impacts on neighboring landowners. Finally, the feasibility of shuttle service to the summit will be evaluated, including a potential expanded staging area in the vicinity of Jacques Ridge.

Three options are currently being considered for the former radar tower near the summit of Mount Umunhum: 1) the concrete structure would (once structurally repaired and sealed to prevent public access inside) remain in its current configuration on the project site; 2) the tower structure would be mostly removed, leaving the foundation of the former tower as a monument (walls would be neatly saw cut); or 3) the tower structure would be removed entirely, leaving only the subsurface foundation, and the original elevations would be restored and habitat improved with native plants. The DEIR will analyze all three of these options at an equal level of analysis.

MOUNT UMUNHUM ENVIRONMENTAL RESTORATION AND PUBLIC ACCESS PLAN

Midpeninsula Regional Open Space District

Concept Plan

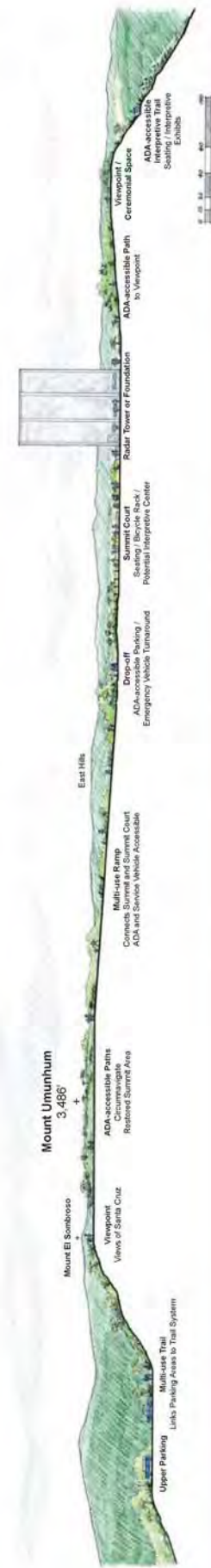


Exhibit 3: Concept Plan

The five miles of Mt. Umunhum Road that provide access to the site from Hicks Road require minor repairs and safety upgrades including resurfacing, replacement of existing guard rails, and cleaning of drainage features. Once repaired, Mt. Umunhum Road would provide paved, two-lane vehicular access from the intersection of Hicks Road at the Jacques Ridge parking lot. An electric gate would be installed at Jacques Ridge and an “iron ranger” fee collection system may be located either at this gate or at the summit parking area. Off-site environmental impacts associated with the roadway repairs and safety upgrades will be evaluated in the DEIR.

Public Access Phasing

Public access to Mount Umunhum may be phased in conjunction with individual site elements. This phasing scheme was developed in response to stakeholder, staff, and general public input, and refined by the District’s Ad Hoc Committee, and provides access to the summit as quickly as possible while simultaneously allowing deliberative planning and sustainable site development.

Special docent-led shuttle tours may bring participants to the summit in passenger vehicles following remediation of hazardous materials; hiking, biking, equestrian use, hang gliding and permit parking may begin following safety upgrades to Mt. Umunhum Road, the main access to the summit; full vehicle access may begin following resurfacing of Mt. Umunhum Road.

Staffing

The plan will allow phasing of design elements as funding and staffing allows and will likely require additional staff to carry out the design elements as described. One additional administrative staff is estimated to be necessary to perform increased workload to manage docents, permitting, and volunteer activities, and two additional ranger and one maintenance field staff are estimated to be necessary to add patrol and maintenance needs for this site to the existing requirements of the surrounding preserve.

Construction

Project construction will be implemented in several phases. Phase I, anticipated to begin in Fall 2011, includes above- and below-ground structural demolition on Mount Thayer and the summit area of Mount Umunhum, and aboveground demolition of all structures in the former housing area of Mount Umunhum. Demolition is anticipated to take approximately 6-12 months to complete with a maximum on site presence of a 50-worker demolition crew. Safety and structural upgrades to the radar tower, if it remains, would also take place during Phase I. These upgrades would involve a 10-worker crew for up to three months.

Phase II of the Project, with an anticipated start date of Fall 2013 (if adequate funding is secured), includes landform and habitat restoration and construction of minimal visitor amenities on the Mount Umunhum summit area, construction of a connector trail to the existing trail network, as well as safety upgrades to and resurfacing of Mt. Umunhum Road. Restoration and construction on the summit area is anticipated to span two to three years and will involve heavy earth-moving equipment and ground disturbance throughout the project area footprint, all of which is currently developed or severely disturbed. It is anticipated that this work would be completed by small crew of District staff, as well as volunteers. Construction of the 1.2-mile long, five-foot wide connector trail segment would occur entirely within undisturbed chaparral and would involve a small crew of District staff for up to three months. Finally, off-site safety upgrades and resurfacing Mt. Umunhum Road would likely involve a small crew for up to three months.

Phase III of the Project may start in 2017 if adequate funding is secured and involves construction of two paved parking lots, installation of a multi-use trail, and below-ground demolition and restoration of the former housing area.

Goals and Objectives

The goal of the project is to establish a fiscally sustainable visitor destination that aligns with the District’s mission by balancing public access, enjoyment, and education with environmental restoration. This goal will be achieved through the following objectives:

- Create a destination that is accessible to and accommodates a broad range of user groups and introduces new visitors to open space.
- Remove or permanently cap physical hazards and restore the native landscape and habitat for wildlife as much as possible.
- Provide minimal visitor amenities that complement and highlight the world-class views and open space experience.
- Provide ample, rich, and diverse trail experiences for hikers, bicyclists, and equestrians.
- Highlight the rich natural and cultural history of the site through self-discovery and focused interpretive and educational opportunities.

Potential Environmental Effects

The EIR will evaluate the potential direct and cumulative environmental impacts associated with construction and implementation of the proposed Mount Umunhum Environmental Restoration and Public Access Plan. The DEIR will evaluate specific environmental issues among this list of potential environmental issues:

- | | | |
|--|----------------------------------|------------------------------|
| ▲ Geology and Soils | ▲ Hydrology and Water Quality | ▲ Traffic and Transportation |
| ▲ Hazards and Hazardous Materials | ▲ Visual Resources | ▲ Air Quality |
| ▲ Agricultural and Mineral Resources | ▲ Land Use | ▲ Climate Change and Energy |
| ▲ Cultural and Paleontological Resources | ▲ Population and Housing | ▲ Noise |
| ▲ Biological Resources | ▲ Public Services and Recreation | ▲ Growth Inducement |
| | ▲ Utilities | ▲ Cumulative Impacts |

Alternatives to be Evaluated in the EIR

In accordance with the CEQA Guidelines Section 15126.6, the EIR will describe a reasonable range of alternatives to both of the proposed projects that are capable of meeting most of the projects’ objectives, but would avoid or substantially lessen any of the significant effects of the projects. The EIR will also identify any alternatives that were considered but rejected by the lead agency as infeasible and briefly explain the reasons why. The EIR will also provide an analysis of the No Project Alternative.

Opportunity for Public Comment

Interested individuals, groups, and agencies may provide the District with written comments on topics to be addressed in the EIR for the project. Because of time limits mandated by state law, comments should be provided no later than 5:00 p.m. on **January 12, 2011**.

Agencies that will need to use the EIR when considering permits or other approvals for the proposed project should provide the District with the name of a staff contact person. Please send all comments to:

Meredith Manning, Senior Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
(650) 691-1200
Email: mt.um@openspace.org

**MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
SPECIAL MEETING**

Mount Umunhum Environmental Restoration and Public Access Plan
Environmental Impact Report
Public Comments from the Scoping Meeting – December 9, 2009

	Commenter	Summary of Comments
A.	Board Questions	
A1		Why is on-leash dog use not recommended to be included in the plan by the committee? A: Concerns exist about the small area of the summit, number and variety of users, and history of problems with off-leash dogs and dog waste at other MROSD properties.
A2		Would the shuttle consist of a caravan of cars led by a docent or a shuttle vehicle with a driver? A: This is the discretion of the board. (At the end of the meeting, Board decided to include the shuttle concept in the project description.)
A3		Did the public have the information about relative cost of options at the last public meetings? A: No
A4		What are the plans for distributing the DEIR, including paper copies, CD or other means? A: Variety of ways, still being determined.
A5		Is size of parking areas too preliminary to estimate at this time? A: Yes, the precise size of the parking lots has not been determined.
B	Public Comments	
B1	Thomas Lowe	Sky Riders hang-gliding club. Expressed interest in establishing a launch site on Mount Umunhum and three landing sites nearby. The club provides insurance, rating of pilots.
B2	Charles Nelson	Agreed with Thomas Lowe
B3	Tony Stevor	Hiker and backpacker. History of the peak related to national defense is very important. Would like to maintain as many buildings as possible. Many people have not taken advantage of outdoor areas. This peak provides the opportunity for outdoor education, use by school groups. Provide early access at a lower elevation for hikers.
B4	Andrew Gear	San Jose Water Company. Largest neighbor of Mount Umunhum. The mountain is part of the water supply reservoir watershed. Wildland fire and introduction of pathogens are the two biggest threats to quality of water supply. Provide mitigation to wildfire risk and fire response access. Backpack camp creates fire risk, which is too high to be acceptable. Pathogens are transmitted by dogs and horses, so there is concern

	Commenter	Summary of Comments
		about introduction by visitors.
B5	Jean Michelle Salander	Santa Clara Valley Audubon Society and Earth Medicine Alliance. To ensure protection of wildlife, native plants should be used to create suitable habitat. EMA mission is to heal our relationship with the natural world. Ceremonial space is very appropriate at the summit. Ohlone representatives should be included as stakeholders for all interpretive features, because they are First People for the area.
B6	Jack Nadow	Resident of San Jose. Visual resources are very important, including for thousands of people looking at the mountain top from the valley. The cube is a blight at the top of the mountain and should be removed. To respect the history of the site, turn one of the buildings into a museum with a scale model of the cube and radar.
B7	Sam Drake	Volunteer docent with Geocachers of the Bay Area. Excited about potential for regional trail connections in the future. Large-scale connectivity of trails in the region is very important, including the Umunhum to the Sea trail. The summit can serve as a hub of regional trail connections. The backpackers camp is an important component.
B8	Joshua Hudd	(No representation.) This project could consume too much budget from the District. What will be sacrificed because of the choices made at Mount Umunhum? The public needs to know the trade-offs, because the cost is substantial. Great opportunity to reach out to other, non-traditional constituencies, such as urban school children. Be as open as possible.
B9	Marty Rossen	Santa Clara Valley resident. Supports electric shuttle buses or other low-impact shuttle buses. If there is a parking fee, people may park on the road on the way up. Supports a Mount Umunhum fun run. Include landscape maintenance so overgrown vegetation does not interrupt views.
B10	Robert Gardener	Hiker. Peak climber. Resident with daily views of the mountain. Look forward to a pristine state of the summit, with the box removed. The mountain has not had the box on the summit for many years, compared to the total history of the peak.
B11	Lars Thomason	Cyclist. Mountain biker. Grew up in Los Gatos. Potential to connect to Loma Prieta is exciting with dirt mountain bike trails. The box should be removed.
B12	Chris Valley	Hang glider pilot. Wind Hill Skyriders. Hang gliders are a low maintenance group.

	Commenter	Summary of Comments
		Responsible open space users. We will develop site use guidelines. Appreciate consideration of hang gliding facilities.
B13	Basem	Coordinator of people who served at Almaden AFS. Cold war role of the station was very important. Mount Umunhum has history, not just a view. Not supporting or opposing retention of the radar foundation. Sustainability of the structure needs to be weighed. Interpretive displays, museum, visitor center would be important. Be sure the story is told right.
B14	Carron Com	(No representation.) Open the summit as a cold war base, showing how the base worked. Turn the site into a living museum. Make it fully functional
B15	J. D. Whittaker	(No representation.) Alamaden AFS had casualties. Memorial markers were lost. A role as a memorial should be considered.
B16	Dan Zurris	Group 70. (70-inch telescope project) Would like to site the telescope at Mount Umunhum for public use.
B17	Carintha Hobbs	Outdoor adventure company owner. Father served on the base. The foundation is a directional landmark, not an eyesore
B18	Thomas Cook	(No representation.) Camping site close to the road. Consider more remote camping. Supports hang gliding facilities. Open it up as soon as possible.
B19	Bryce ?	(No representation.) The foundation should stay if possible, but recognizes it may have to be removed for sustainability or financial reasons. Is there documentation of the buildings and equipment on the mountain for historical significance? We should get as much as possible.
C	Board Discussion	
C1		What is the status of the hang gliding facilities? A: The original draft had a launching pad in a less than optimal location. While it is not shown on the plan now, it will be part of the project description for the EIR.
C2		Have we considered hang glider landing sites? A: The clubs have offered Bald Mountain, within Sierra Azul area near Almaden Reservoir, and a closed area of Rancho Guadalupe. The EIR will consider these sites.
C3		Are we considering an interpretive center, access for school groups, and demand for number of parking spaces? A: A traffic study will consider the number of parking spaces needed based on uses expected and analogous summit parks. Yes, the school groups and interpretive center will be considered in the EIR.
C4		Will open fire policies be considered?

	Commenter	Summary of Comments
		A: The sense of the committee was to allow only stoves, without open fires.
C5		Equestrians have not provided much input yet. Where will horse trailer rigs be parked? A: Committee has recommended that horse trailers are not appropriate for the summit. Horse access would be to Woods Trail.
C6		What will need to be improved on the 5 miles of access road to the summit? A: Safety upgrades are needed, including removal of accumulated gravel, safety turnouts, upgraded guardrail (up to code), patching of larger potholes after remediation but before demolition. After demolition, the road would be completely resurfaced. Regular road maintenance will be important because of the exposure to weather. The plan is to use the existing alignment, as is.
C7		Should a different type of surface to used to slow down vehicles? A: A double-chip seal is recommended, which can help control speeds, along with signage, and potentially speed bumps. The road improvements cost over \$3MM.
C8		Have staging areas at the gate, lower on the mountain, been considered to take the car traffic off the access road (using a sponsored shuttle to defray costs)? A: Limited availability of a suitable staging area along the road has reduced the appeal of that concept. The EIR can look at the concept, if the Board desires. The Board voted to add this to the EIR evaluation.
C9		Has a gondola been considered? A: Yes, but the committee felt it did not fit the mission of the peak as a low-impact development. It was felt the gondola would also not be feasible for just open space access.
C10		Motion that dogs on leash should be included in the concept? A: Board vote did not approve this request, 3-4.



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

MM

Midpeninsula Regional Open Space District

Comments may be submitted via email
at: mt.um@openspace.org,
dropped in the Comments Box, or
mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: JULIE BARNEY
Address: _____
Phone: [REDACTED]
E-mail: _____

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

I don't feel that there will be that
~~much~~ many people accessing the top
of Mt Umunhum. It's too far to drive.
Other than your school groups, there will
be few visitors during the week.

I am against dogs being allowed there.
Dogs don't care about views, so keep them
on the flatlands

I think the history of the mountain
should be primarily acknowledge the native
Americans & how they used Mt. Umunhum.



MT. UMUNHUM PUBLIC HEARING & CEQA SCOPING MEETING
DECEMBER 9, 2010

✓ Jeannie please add to list + return to me.

M.

Midpeninsula Regional Open Space District

Comments may be submitted via email at: mt.um@openspace.org, dropped in the Comments Box, or mailed to: Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: Victoria Knight
Address: [Redacted]
Albany, CA 94706
Phone: [Redacted]
E-mail: [Redacted]

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Vote JB 12/28

Comments:

Thank you for this opportunity to express an opinion in the use of this space. For the sake of ^{time} space, I will keep my comments brief on this form and send a more detailed letter at a later time.

I am writing to ask that hang gliding activities be allowed and included in the allocation of the Mt. Umunhum Park Project.

Main reasons:

- 1. Hang glider pilots are great stewards of the earth/open space.
 - we are ~~very~~ active in maintaining many HG sites all through California and do so with consideration of the natural biodiversity and surrounding communities.
 - we are also self-governing with a rating and standards system set-up by USTHA, mostly focused on respect and safety.

over ->

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022



Place
Stamp
Here

2. Hang gliding generates revenue

- pilots like to fly all week, every weekend to the point of obsession.

- pilots bring family and friends as it is fun and also discouraged for a pilot to fly alone. In other words it really is an individual group sport.

* Hang gliding also increases revenue from spectators. In this time of budgetary constraints, this revenue could be instrumental towards the operation of the park.

Thank you so much for your consideration.

Sincerely,



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

Midpeninsula Regional Open Space District

JM

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at: mt.um@openspace.org,
dropped in the Comments Box, or
mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: CHARLES NELSON
Address: [REDACTED]
REDWOOD CITY CA
Phone: [REDACTED]
E-mail: [REDACTED]

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

Dear MROSD: thank you for this opportunity to comment on the Mt. Um project. As a member of the Wings of Rogallo hang gliding club, as well as the Windy Hill Hang gliding Association (WINDY HILL SKY RIDERS) I would like to point out the enormous potential of Mt Um as a launch point. This mountain lies at a crossroads in the Bay Area sky, which is made obvious by the large cloud formations which gather there regularly.

Please include hang gliding in the preliminary EIR report portion of the CEQA. Mt. Um. is an excellent place to soar (over)

power-free aircraft WOR Hang gliding
Club is the largest club in the U.S.
in numbers of members who live here
in the Bay Area.

Place
Stamp
Here



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MT. UMUNHUM PUBLIC HEARING & CEQA SCOPING MEETING
DECEMBER 9, 2010

✓ JB

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mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: Nina M [circled]
Address: _____
Phone: _____
E-mail: _____

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

I am very disappointed to see/hear that practically the access to the site will be in whole 6 yrs (2016). From previous meeting in November I got impression Mt. Umunhum will be open for public after June 2011 reunion of former service members - - - at least for hiking (even with permit) like Bear Creek or La Honda



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

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Name: Zarim ZHAY
Address: [REDACTED]
Phone: [REDACTED]
E-mail: [REDACTED] *W/A*

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

A lot of us in school fought about the cold war mostly know that they won. My idea is to restore the entire base into fully functional order. Including the bowling alley and swimming pool. As for the radar tower, turn it into a ~~new~~ fully working radar station using the equipment that was used when it was operational. Have the site open to the public as a cold war museum. A fine example of what it was like working in such a place. without going all the way to Arizona.

Place
Stamp
Here



Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

Midpeninsula Regional Open Space District

✓
JLB

Comments may be submitted via email
at: mt.um@openspace.org,
dropped in the Comments Box, or
mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: LORI LOGAN

Address: [REDACTED]

SAN JOSE, CA 95118

Phone: [REDACTED]

E-mail: [REDACTED]

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

When considering a shuttle bus option to the top, investigate using the larger ~~existing~~ parking lot ~~adjacent~~ to the Almaden Quicksilver Park (county owned lot) under some kind of cooperation agreement.

Place
Stamp
Here



Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

V JB

Midpeninsula Regional Open Space District

Comments may be submitted via email
at: mt.um@openspace.org,
dropped in the Comments Box, or
mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: Karl Allmendinger
Address: [REDACTED]
Milpitas, CA 95035-6010
Phone: [REDACTED]
E-mail: [REDACTED]

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:

As an advanced rated hang glider pilot I would like very much to fly Mt. Umunhum. I have been in aviation and aerospace all my life, starting with model airplanes as a kid, flying sailplanes and airplanes, building satellites including the Hubble Space Telescope at Lockheed and I know Mt. Umunhum can be flown safely with minimal impact.

I was very impressed with several of the proposals presented at the meeting December 9th.

The first is the ceremonial space on the summit. It should be Ohlone in character as well as including the cardinal directions as well as magnetic north and the directions to sunrise and sunset at the equinoxes and solstices.

The second is the radar tower. While it is an ~~eyesore~~ eyesore it is also a part of history and I am in favor of preserving it. I was just starting high school, old enough to know what was at stake, when the Cuban Missile Crisis happened and I believe some effort should be made, including school field trips to the radar tower, to educate young people about the cold war.

Third, the backpacking camp near the summit sounds like a good idea to me.

Fourth, as an amateur astronomer I am in favor of having a telescope on top of Mt. Lemaire.

Place
Stamp
Here

thanks

Karl



Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022



MT. UMUNHUM PUBLIC ACCESS WORKSHOP

DECEMBER 9, 2010

Midpeninsula Regional Open Space District

✓ JP

Comments may be submitted via email
at: mt.um@openspace.org,
dropped in the Comments Box, or
mailed to:

Meredith Manning, Project Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Name: RYAN GOEBEL

Address: [REDACTED] SANTA CRUZ

Phone: [REDACTED]

E-mail: [REDACTED] *ok*

Wish to be added to this email list? Or mailing list? I'm already on it

How did you learn about this meeting? Newspaper Mail Email Other

Comments:
I am here tonight to show my support for the effort to open Mt Umunhum to hang-gliding activities. I am an advance rated pilot, USHPA (our national org) Observer and Mentor. I am very familiar with the site and am excited about the potential opportunity to participate in the careful planning that will lead to safe and regular use of this site by our members.

*Thank you for your consideration,
Sincerely,
Ryan Goebel*

Hi Meredith,

We learned of your attached response, for which many thanks. We wanted to add our thoughts to our neighbors' request.

As neighboring property owners, we recognize the pressure on the District to open its lands to the public, but rely on your policy of no access over private lands. So we too were disturbed to see that the "Exhibit 2 - Amended: Project Area" map shows private roads and driveways to our residence, without adequately distinguishing them from public roads.

We earnestly request that the District adopt a formal policy of showing only those roads, driveways and trails that are in fact open to the public. In particular, please also remove from your maps the private driveways on the our property, and note our locked gates.

We realize that private roads and driveways are visible on satellite photographs. But including them on official MROSD maps carries the additional unavoidable implication that they are available for the public to pass over, or that the District would wink at trespass. We believe this fosters inappropriate expectations and exposes your neighboring property owners further to the trespassers who are emboldened by the District's seeming approval. The cited text with photos, <http://zp-rides.blogspot.com/> bears careful reading as only one example of how the public has derived that feeling of entitlement.

The concerns we've expressed about the trespass issue continue. It exposes us to wildfire and vandalism, and now seems also to be unduly burdening public safety officers in the citation process. It appears that the District's Umunhum property may currently fall under the definition of an attractive nuisance. We too will appreciate more concerted efforts (publicity and signage) to preclude trespass over private property to access your lands.

On a separate note, your presentation last evening was well received.

Focus on potential costs, especially of road improvement and maintenance, is well-taken. It may be that the District will benefit from some "Plan B," a minimum cost approach to providing the earliest possible access to the Umunhum view. Surely the view and ambience represent the main differentiation between Umunhum and other district properties that already provide for dogs, horses, hang gliding, camping and other recreation. We respectfully suggest that, following the removal of environmental hazards, the best approach would be to draw a firm line between your traditional open space stewardship mission and the much more expensive move into the role of a park district. In today's economy, donated funds are increasingly scarce, and competition for them is heavy.

One thing we'd reinforce is that Umunhum is somewhat hallowed ground, and just noisily playing around there may not adequately respect what it represents. We think the airbase vets have a much more compelling message (as do the Native Americans) than the folks who just want to have fun and games on the mountain top. In that regard we might mention that Umunhum was also the site of a fatal military airplane crash, as well. Separately, we don't think there's enough recognition of the very real weather issues (we had a serious lightning strike the day the biker was up here, and he's fortunate he didn't get lightning with his freezing hail).

Here's are some thoughts for a Plan B that could be the least costly way to provide the earliest possible public access to Umunhum: The District could fence and sign all the dangerous areas, and with minimum landscaping could prepare a suitable view circle with berms and "ha-ha"

fending. In good weather you could open the top on certain weekend days to members of the public, who would execute a liability waiver and pay a nominal fee for busing and ranger service. ADA requirements could be respected as part of the package.

That way you would get a real picture of how much interest there really is. We believe most people will want to "see the elephant" once or twice, and then would find the trip too arduous after they had their photos. Long-term visitor data from Mt. Tam, Diablo and Hamilton might be helpful here. Since the view is the main attraction, other patrol- and transportation-intensive activities could go elsewhere, greatly reducing the load on the staff, the road and the property.

A last suggestion: Placing a few District webcams on top might take off some of the access pressure, and at the same time could help mitigate the trespassing. We believe Scott and Basim can be a resource for this. If the public could see the view from their computers, laptops and even cellphones, that might relieve some impatience.

Thanks for your continuing response to our concerns, and best wishes in your project. We are available as you require to assist or review your efforts. At your convenience, we and neighboring property owners would like to meet with staff to discuss the range of our experiences and issues.

Best regards,

Dave and Barb Leeson

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390



January 6, 2011

Meredith Manning
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

RE: SCH# 2010122037 – Mount Umunhum Environmental Restoration and Public Access Project; Los Altos, Santa Clara County

Dear Ms. Manning:

The Native American Heritage Commission has reviewed the NOP referenced above. To adequately assess and mitigate project-related impacts on archaeological resources, the Commission recommends the following actions be required:

1. Contact the appropriate Information Center for a record search. The record search will determine:
 - If a part or all of the area of project effect (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and any associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
3. Contact the Native American Heritage Commission for:
 - A Sacred Lands File Check. Requests must be made in writing with the County, Quad map name, township, range and section.
 - A list of appropriate Native American Contacts for consultation concerning the project site and to assist in the development of mitigation measures.
4. Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5(f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
 - Lead agencies should include provisions for discovery of Native American human remains in their mitigation plan. Health and Safety Code §7050.5, CEQA §15064.5 (e), and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

If you have any questions, please contact me at (916) 651-1490 or by email at rw_nahc@pacbell.net.

Sincerely,

A handwritten signature in black ink that reads "Rob Wood".

Rob Wood
Associate Government Program Analyst

CC: State Clearinghouse



110 W. Taylor St.
San Jose, CA 95196-0001

Water Quality Department
Writer's Direct Line: (408) 279-7815
Fax No.: (408) 292-5812

January 10, 2011

Meredith Manning
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
(650) 691-1200

Re: Mt. Umunhum Proposed Environmental Restoration and Public Access Plan

Dear Ms. Manning:

San Jose Water Company (SJWC) appreciates the opportunity to provide comments on the Proposed Environmental Restoration and Public Access Plan for Mt. Umunhum and the Sierra Azul Open Space. SJWC is pleased to support the remediation aspect of this project, and the opening of this land for public enjoyment. With regard to the Environmental Impact report being prepared, there are two issues that San Jose Water Company would like to comment on relating to Water Quality and the health of the Lake Elsman watershed.

1- Introduction of pathogens

Any feces of horses or other animals washed into stream channels may be washed into lake Elsman, and the potable water supply. These fecal materials contain pathogens which pose a risk to the public water supply. SJWC requests limiting frequency of equestrian use and prohibiting equestrian access to trails on open space areas that drain into Lake Elsman or Los Gatos Creek.

2- Increased risk of fires

The Los Gatos Creek watershed has a history of catastrophic wildfires, including the Austrian Gulch Fire, which burned 8,000 acres in 1961, and the Lexington Fire, which burned 13,000 acres in 1985. Both of these fires had detrimental effects on the water supply, were human caused, and are proximate to the project area. The recently completed Lexington Hills Community Wildfire Protection Plan characterized the Fire Hazard Rating in the project area as Very High. Wildfires within watersheds of potable water supplies have been shown to cause dramatic increases in turbidity and organic carbon (precursors to disinfectant byproducts) in raw water. In addition, sediment and ash often render a water supply untreatable for many months following a wildfire. It is also known that the majority of fires within Wildland Urban Interface (WUI) are anthropogenic in nature. By extending use of the open space for camping, MRSOD is extending the frontier of the WUI, and increasing risk of wildfire within the Los Gatos Creek and Lake Elsman Watershed. SJWC believes this risk is unacceptable, and is opposed to campsites being included in the Master Plan for this open space facility.

SJWC does not support or condone open space uses or activities that may put at risk the potable water supply of its customers. Thank you for your consideration of these concerns within both this EIR and the subsequent Master Plan. SJWC looks forward to a continued partnership with MRSOD in our joint responsibility managing the Los Gatos Creek watershed.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew R. Gere". The signature is written in a cursive style with a large initial "A" and a long, sweeping tail.

Andrew R. Gere, P.E.
Chief of Operations

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org



January 14, 2011

Attn: Meredith Manning, Senior Planner
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

SUBJECT: Notice of Preparation for an Environmental Impact Report for the Mount Umunhum Environmental Restoration and Public Access Project

Dear Ms Manning:

The County of Santa Parks and Recreation Department ("County Parks Department") is in receipt of a Notice of Preparation for an Environmental Impact Report (EIR) for the Mount Umunhum Environmental Restoration and Public Access Project.

The County Parks Department's comments are primarily focused on potential impacts related to the *Santa Clara County Countywide Trails Master Plan Update* ("Countywide Trails Master Plan"), an element of the Parks and Recreation Section of the County General Plan that the Board of Supervisors adopted on November 14, 1995, relative to countywide trail routes, public access and regional parks.

Public Services and Recreation

The EIR should include a discussion related to the *Santa Clara County Countywide Trails Master Plan Update* ("*Countywide Trails Master Plan Update*"), an element of the Parks and Recreation Section of the County General Plan that the County of Santa Clara Board of Supervisors adopted on November 14, 1995.

County Parks, in partnership with other public agencies, is charged with furthering the implementation of the *Countywide Trails Master Plan*. The EIR should describe the following proposed countywide trail routes, which offer opportunities for non-motorized transportation connections to the surrounding neighborhoods, parks, trails, and open space areas.

- **Juan Bautista de Anza National Historic Trail** (Routes R1-A) - designated as a trail route within other public lands for hiking, off-road cycling and equestrian use.
- **Bay Area Ridge Trail: El Sombroso-Penitencia** (Route R5-C) and **Bay Area Ridge Trail: Santa Cruz Mountains** (R5-A) - designated as a trail route within other public lands for hiking, off-road cycling and equestrian use.

The EIR should also discuss the locations of the potential off-site landing areas for future hang gliders and the potential impacts of each location.

The EIR should also discuss the potential rustic backcountry campsites and evaluate that related to public access and how that would affect Almaden Quicksilver County Park.

Hazards and Hazardous Materials

The EIR should include a discussion on the remediation work for the hazardous materials. The EIR should also discuss if Midpeninsula Regional Open Space District would use Wood Road or Hicks Road to access Mt. Umunum Road for project activities.

Thank you for the opportunity to comment on the NOP for the EIR for the Mount Umunhum Environmental Restoration and Public Access Project. We look forward to reviewing the EIR when it becomes available. If you have any questions regarding these comments, please feel free to contact me at (408) 355-2230 or via email at Kimberly.Brosseau@prk.sccgov.org.

Sincerely,



Kimberly Brosseau
Park Planner II

cc: Jane Mark, AICP, Senior Planner

From: Gina Coony

Sent: Monday, January 10, 2011 3:14 PM

To: MROSD - Mt. Um

Subject: Comments from Ann Mayer Sayers of Indian Canyon

NOP Comments from Ann Marie Sayers:

- If MROSD comes across any cultural materials what would we do?
- AMS requested we have Educational cultural / interpretive opportunities – if something was found, to have it displayed at visitor center (if one was built)
- Come across any burials – find a location where they would never be disturbed...can be left for ever (prefer left in place)
 - Spirit will get disturbed and be roaming until formal ceremonial burial takes place

January 07, 2011

Meredith Manning, Senior Planner

Mid-peninsula Regional Open Space District

Public input on issues and alternatives for the preparation of the Environmental Impact Report on the Mt. Umunhum project.

Subject: Proposed gate at Mt. Umunhum Road and Hicks Road.

Potential Environmental Effects

Hazard and Hazardous Material/Traffic and Transportation

The placement of a new gate on Mt. Umunhum Road at Hicks Road will become a destination point for people who are prevented from accessing Mt. Umunhum Road. The gate will become an attractive nuisance at this active location. This new gate will replace an existing gate, and closes a nearly 2-mile section of roadway.

This attractive nuisance will have people blocking and vandalism the gate. This will place authorized users in a dangerous and hazard situation.

Property owners, emergency vehicle and other authorizer users will be restricted or prevented from entering when the gate is block by a parked vehicle or vandalized beyond function.

Alternative:

The better solution would be to upgrade the existing gate. This gate is out of sight and miles from Hicks Road traffic. The existing gate location near Bald Mountain places it out of reach and a burden for the casual driver. The current gate has been in place for decades with minimal problems.

Maintaining the location of the current gate would greatly lessen the nuisance and hazard potential.

Cumulative Impact /Traffic and Transportation

Unintended Consequences

Subject: California Vehicle Code Enforcement Restrictions on closed roads

California Vehicle Code 360, any roadway "not open to the use of the public for purposes of vehicular travel." is not a street or a highway. Many of the provisions of the California Vehicle Code will not be enforceable or apply to a road that is in any way gated and closed to the public. Most moving vehicle violations covered in the California Vehicle Code could not be enforced on a closed Mt. Umunhum Road, by any peace officer. This places all users (bicycles, pedestrians, vehicles) of Mt. Umunhum Road in a potential hazardous environment.

Point of Interest: New 2011 July 1 California law SB 949 may or may not relate.

SB 949 "local authorities may not enact or enforce a local ordinance on any matter covered by the California Vehicle Code"

Cumulative Impacts / Traffic and Transportation/Hazard and Hazardous Materials

Subject: Pedestrian hazard on Mt. Umunhum Road Unintended Consequences

District users who now have access to thousands of acres (Bald Mountain and Barlow Road trail) via vehicle on the currently open Mt. Umunhum road will be required to walk on the steep roadway to reach their destinations.

Mt. Umunhum road is not designed for pedestrians, bicycles, or equestrians. It is a steep narrow road with little or no shoulder. There are numerous blind curves without any pedestrian pathways. District user would be walking on the vehicle portion of the roadway to access the Bald Mountain and Barlow trails. These trail heads are currently accessible by vehicle on Mt. Umunhum Road and are heavily used. Lack of roadway design and lack of Vehicle code enforcement endangers the hiker/pedestrian. It appears ironic that the district quest to open 22.8 acres on Mt Umunhum will close current access to thousands of acres (Baldy and Barlow trail) to the less than able bodied who are unable to hike the steep grade to these current popular sites.

Population and Housing

Subject: The closing of Mt. Umunhum road will prevent, restrict or hinder access to private landowners with legal access.

Several private land owners have "deeded access" on Mt. Umunhum Road that allows them to access their property, without impediments, new restrictions, fees or conditions that place them in peril, or impede or infringe on their legal access to their property. The charging of a fee, the requirement of obtaining a permit or pass to persons with legal road access would infringe on their legal right to use Mt. Umunhum road.

Thank you for the time and effort to include the public and concern citizens in your planning process. The proposed project appears to be very profession and well thought out. I believe it is the district's goal to provide the users of this project area with a safe and meaningful experience. I hope my suggestions will help contribute to this goal.

Michael Quane

Michael J. Quane

[REDACTED]
New Almaden, CA. 95042
[REDACTED]

-----Original Message-----

From: [REDACTED]
Sent: Monday, January 10, 2011 11:07 AM
To: BOARD; Clerk; Vicky Gou; General Information
Subject: 01/10/2011 - [REDACTED] - Contact Board

First Name: Leon
Last Name: Pappanastos

[REDACTED]
Ward / Location: Los Gatos

Comments:

Dear Board,

I have attended only two meeting concerning the restoration of the Tower at Almaden Radar site. I am late to this discussion but there is one thing that I have not heard discussed at these meetings. I did attend the meeting on Dec 10 in Sunnyvale.

I was a Dental officer in the 28th Air Division and was on a mobile unit. I supported Eight different radar sites in California and Nevada, spending a month at each site. Although, many of these sites were quite remote, such as Requa, Ca Tonopah, NV and Point Arena, CA.

One thing that was missing in all of the discussion I heard was the fact that this site should be made an example of what it represented to all of our defense efforts. I have visited some of the other sites on my travels and there was little recognition of how much these men and women accomplished. You have a chance here in Santa Clara county to show the appreciation so much deserved by these troops.

You should find some way to preserve the biggest monument to these patriots the "tower", even if you have to delay its restoration for a time when there are more funds. If you destroy it you cannot get it back!

Sincerely

Leon E. Pappanastos, DMD

Meredith Manning

From: MROSD - Mt. Um
Sent: Tuesday, December 21, 2010 5:00 PM
To: Meredith Manning
Subject: FW: Dec14_NOP_Eblast

From: Stuart Langdoc [REDACTED]
Sent: Sun 12/19/2010 12:08 PM
To: MROSD - Mt. Um
Cc: Doug, Sigred Brown; [REDACTED] Miles Standish
Subject: Dec14_NOP_Eblast

MROSD Umunhum Project:

Thank you for allowing my comment on EIR issues to be covered. Your project description is very good and fairly complete, however I believe that the EIR should, as a minimum, rigorously address the following issues:

Costs aside, if the site is REALLY to be restored to a natural state, in addition to removing all of the other structures, as planned, the tower should be taken down and its foundation removed. As a result I believe that rigorous considerations for Mt environmental are the environmental impacts of:

- 1) Taking the tower down and removing the foundation; remove concrete base (and any possible substructures (piles?) if feasible).
- 2) Taking the tower down to its foundation either flat or with parts of lower walls.
- 3) Leaving the tower in place, either essentially as is or upgraded for access to its top.

In addition, the other central environmental issue is whether to permit the public private motorized vehicle access to the top of the mountain. This should be rigorously examined as private vehicle access to the top is likely to result in more and varying impacts than anything else being considered. Options examined should as a minimum be:

- 1) No private motorized vehicle access to the mountain top, only vehicle access by MROSD staff.
- 2) Docent led visits/hikes, with bus or controlled private transport to top.
- 3) Private vehicle access to top during normal hours, conditions.

From what I see of the project description (roads, parking lots etc.) the private vehicular access issue seems already to have been decided in favor of private vehicular access. I believe the project EIR will be seriously deficient unless it SERIOUSLY examines this issue as though the decision has not yet been made, or seriously examines/challenges that decision, not just contrives to support it.

Stuart Langdoc
[REDACTED]
Monte Sereno, CA 95030
[REDACTED]

12/27/2010

Meredith Manning

From: MROSD - Mt. Um
Sent: Tuesday, December 21, 2010 5:05 PM
To: Meredith Manning
Subject: FW: Feedback on radar tower restoration

From: David Kocsis [REDACTED]
Sent: Tue 12/14/2010 11:09 AM
To: MROSD - Mt. Um
Subject: Feedback on radar tower restoration

Hi,

After attending the recent BOD meeting in Sunnyvale and hearing the estimates of \$300K to demolish the radar tower or \$700K to restore and preserve it, I suggest doing neither and reducing the budget as much as possible.

I suggest removing any hazardous material from the exterior of the radar tower and performing minimal maintenance to prolong the life of the structure, such as periodically clearing roof drains and perhaps a low-cost roof treatment, such as tar and gravel or whatever roof treatment was done decades ago, and putting a fence around the structure to keep the public a safe distance away from the building. That's all.

The public doesn't need to touch the building and it's large enough to be viewed from 50 feet away, with interpretive signs on the fence. Fences are used around historic structures at Almaden County Park and there doesn't seem to be any problem.

It does not seem consistent with the District's mission to spend \$700K to restore a Cold War relic, but preserving the relic in its current state, at minimal expense, does seem consistent with the mission.

Thank you,
Dave Kocsis

12/27/2010

Meredith Manning

From: MROSD - Mt. Um
Sent: Tuesday, December 21, 2010 5:02 PM
To: Meredith Manning
Subject: FW: Mt. Umunhum individual comment

From: chris durbin [REDACTED]
Sent: Thu 12/16/2010 9:47 AM
To: MROSD - Mt. Um
Subject: Mt. Umunhum individual comment

Regarding Mt. Umunhum, I think its wonderful that this area will finally be opened to the public, but I am concerned about automobile traffic. At a certain threshold, which may or may not ever be reached, traffic would begin to impact the local area. For example, Hicks Rd. is at present a popular biking route. Much of that appeal would be gone if a lot of cars shared this access road. This would be a loss. Moreover, Hicks is a fairly risky road for bicyclists already, with all the blind curves and impatient drivers.

I think a reasonable model of Umunhum is Mt. Diablo State Park. I know for example that bikes and cars do share the summit road there, and there is a campground (Juniper) near the summit. Umunhum has the potential to be like a Mt. Diablo, which is sort of okay I guess, but I hate to think of the increased traffic in the general area of Hicks Rd. Why make Umunhum accessible to cars at all? I would favor multi-use trails only, to the summit, open to hikers, mountain bikes, and horses. At least, I support minimal development of the peak area, for a good nature experience. To compare with Mt. Diablo, that experience, at the peak, is poor, in my opinion. You have an ugly parking lot on top, with a bunch of cars in it. The best views are from the observation structure, where you are in close proximity to everyone else. There is no room for peaceful contemplation or solitude. Hopefully, on Umunhum, the MROSD would allow for a better experience. In my opinion, that means minimal asphalt, natural, gravel trail surfaces, wide open space, and minimal development. Sincerely, Chris Durbin, [REDACTED] Los Gatos 95032.

Meredith Manning

From: MROSD - Mt. Um
Sent: Tuesday, December 21, 2010 5:07 PM
To: Meredith Manning
Subject: FW: Public input re restoration of Mt. Umunhum

From: Sue Contreras [REDACTED]
Sent: Thu 12/9/2010 7:41 PM
To: MROSD - Mt. Um
Subject: Public input re restoration of Mt. Umunhum

Hi -

I am a long-time Santa Clara County resident - I have lived nearly my entire 50 years in the Bay Area, most of them in the South Bay. I would like to submit my comments regarding the renovation of the Mt. Umunhum radar base into an open space district.

Unlike most Santa Clara Valley residents who have a "distant" acquaintance with the radar station (aside from those who worked/lived up there), I feel I have a somewhat more personal connection. When I was about 9 or 10 years old, I went with my family on a tour of the Mt. Umunhum radar facility with the Santa Clara Valley Chapter of the Model A Ford Club of America.. I still remember standing with my back against the wall of "the cube" and looking up at the dizzying height of the building towering above me. It was exhilarating! Needless to say, it made a lasting impression. Though I don't really remember any thing else from that visit, I have a fond feeling of familiarity with "the cube" because of it.

I understand that public comment is being sought about whether to leave "the cube" standing or tear it down. My vote is, if possible, to leave it standing, to renovate it and have it open as an historical site. IF it must be demolished for environmental reasons, then another structure comparable in size (well, height anyway) must be constructed in its place. You see, "the cube", aside from it's actual historical relevance, is also a significant landmark from the Valley floor, comparable to Lick Observatory in the east. Without "the cube" or other similar landmark visible from the Valley floor, the top of Mt. Umunhum would be just another of the many mountain peaks in the range, indistinguishable from its neighbors. I remember being so sad when the radar dish was dismantled, but so relieved when the building was left standing. So please, leave "the cube" standing as an historical and visual point of reference.

Also, I think a restored or recreated building of one of the living quarters should also be included.

I am so excited that this area is being restored and will be available to the public. I can't wait to stand on that peak again.

Thank you for reviewing my comments.

Sincerely,

Sue Barker Contreras
[REDACTED]

12/27/2010

Meredith Manning

From: MROSD - Mt. Um
Sent: Tuesday, December 21, 2010 5:05 PM
To: Meredith Manning
Subject: FW: Mt Umunhum feedback

From: Bob Cicisly [REDACTED]
Sent: Tue 12/14/2010 11:24 AM
To: MROSD - Mt. Um
Subject: Mt Umunhum feedback

Hi,

I recommend restricting the access to the very top of Mt. Umunhum to hikers and bicycle riders only, with the exception of organized van shuttles similar to the van tours the county has at Almaden Quicksilver. I grew up around here and remember when the Almaden and Guadalupe reservoirs were open. These places were very popular destinations to go party and hang out. I also remember witnessing numerous auto accidents on Hicks Road due to reckless driving amongst other causes.

Since the 1970's when I was a teen-ager, the reservoirs closed, more people are riding their bikes up Hicks Rd. and more people are driving their cars up Hicks Rd. because there are more people living around here than there was 30 - 40 years ago. I am also an Uncle now and I'm thinking about my niece and nephews and their friends.

By opening up Mt. Umunhum to Cars, would be opening up another party destination. The Open Space district's parking permit policy would be virtually impossible to adequately enforce without staggered daily patrol routine. Unlike many of the other "permit-only" parking areas, Mt. Umunhum is special because of the scenic location. Mid-Pen is not in the road maintenance business, nor do the rangers duties include being "yard duty teachers"

Thank You, Bob

Meredith Manning

From: MROSD - Mt. Um
Sent: Wednesday, January 12, 2011 5:05 PM
To: Meredith Manning
Subject: FW: Dec14_NOP_Eblast

From: Taylor Wing [REDACTED]
Sent: Wednesday, January 12, 2011 5:04 PM
To: MROSD - Mt. Um
Subject: Dec14_NOP_Eblast

Wow! That was lucky... I've been out of the Umunhum loop and out of touch with my email for the past month or so - so I'm glad I reread the last MROSD installment about the Jan. 12, 5:00pm deadline. I guess this is cutting it a bit close!

I've been meaning to throw my comments into the forum for some time now... Here's a little of my history: I'm a lifelong Almaden resident (lately shuffling between Portland, OR for college and back home - but I'm home more permanently now) and I've always loved the iconic view of the great cube atop Mt. Umunhum (and of course, since I was a kid, dreamed of one day scaling it's forbidden peak and confronting the monolith face to face. Who grew up in this area and hasn't done that?) - actually, let me get to the more recent history since I'm rather short on time...

I've attended every public meeting since August 30, except for December 9 (family event). Here are a few of my observations/concerns (sorry for the slapdash nature of it all! I hope this is the beginning of a correspondence and not a final summation!):

- In the first few meetings, I heard things like "[the site] doesn't qualify for historical protection" - which, on a national historical scale, I'm sure it doesn't. But for us Almaden residents (and many others I'm sure - heck, it can be seen from the airport!), in the intervening 30 years since its mothballing, it's become a local landmark. So, local historical value I would say is very high. And knowing that there's a (relatively) untouched airforce community around the bend is exciting! (Like discovering a local Machu Picchu or something...) It therefore dismays me that none of your plans included preserving some of these buildings (besides the cube).

- I've heard the Operations Center and the recreation facility are still quite sound (the OC would be especially cool to keep as that's where a lot of the action happened, I'm sure!) Although the historical curator in me would like to keep them all, I think it's a reasonable compromise to keep at least two (substantial) buildings besides the cube (I'm willing to start a foundation for this purpose - to maybe raise a couple million - hey, if my middle-class neighborhood can raise \$700,000 for community pool renovation, anything's possible! - to refurbish said buildings... I'm working on the plan right now! As a first step, could we cordon off a few select buildings as "safe from demolition" from next year's planned knockdown?)

- A few other quick points (dang! I'm almost out of time!) -

- About the toxicity of the site, here's my understanding: there's friable asbestos and peeling lead paint. Asbestos is, of course, the dangerous one because, after 30 years of exposure to the elements, I'm sure it's leaking and it's nice and light... Lead is generally too heavy to get up into the lungs... The environmental hazard is no more than this, right?

- I'm a bit confused about the synthesized plan issued at the November 18 open house (Basim's slideshow was AMAZING, btw)...

- I also have some ideas about sustainability issues that I know you're concerned about...

I'd love to be more directly involved!

Thanks so much for listening!

-Taylor Wing

File: 32486
Guadalupe Creek

January 11, 2011

Ms. Meredith Manning
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

Subject: Notice of Preparation of an Environmental Impact Report for Mount Umunhum
Environmental Restoration and Public Access Project

Dear Ms. Manning:

Santa Clara Valley Water District (District) staff has reviewed the Notice of Preparation of a
Environmental Impact Report (EIR) for the Mount Umunhum Environmental Restoration and
Public Access Project, received on December 15, 2010.

The District does not have any land rights; therefore, in accordance with the District's Water
Resources Protection Ordinance, a District permit is not required for this project. Although a
District permit is not required for the work, the site is located at the headwaters of the
Guadalupe Creek and other tributaries to Guadalupe Creek and Lexington Reservoir.
Therefore, the site needs to be designed to include measures to prevent erosion, pollutants
from entering the creek, minimize increases in runoff from the site, and preserve and/or
enhance existing riparian habitat.

If you have any further questions, please contact me at (408) 265-2607, extension 2586. Please
reference District File No. 32486 on any future correspondence regarding this project.

Sincerely,



Kathrin A. Turner
Assistant Engineer
Community Projects Review Unit

cc: S. Tippetts, C. Haggerty, K. Turner, File

32486_53783kt01-11

RECEIVED

JAN 12 2011

MIDPENINSULA REGIONAL OPEN
SPACE DISTRICT



Element	Notes
ACCESS	Limit driving on Mt. Um Rd. from SA-07 only, not from Jacques Ridge. Important for fire protection and to limit partying at the summit. If there is driving to the summit, a fee is acceptable and limited improvements to the road (no widening).
	In favor of removing pavement from summit area and in having an ADA-compliant trail at the summit, with hiking trails around the summit area.
	Access gate should be re-located from Jacques Ridge to SA07. Keeping vehicular access to SA07 is important because hikers would still like to access Bald Mt. without hiking all the way from Jacques Ridge.
PARKING	Use one parking lot as a heliport where in an emergency people will be asked to move their cars and a helicopter can land. No equestrian parking at the summit.
	Have an ADA lot at the summit. If gate is moved to SA07, improve the lot there to allow for more parking (but still keep it small).
TRAILS	Would like to see new trail construction to provide connections from nearby trails. If possible one-way loop trails.
	Would like to see an "Audubon" trail that is bird friendly, single track, hikers only, with bird friendly native landscaping and other bird amenities. Dogs on leash would not be allowed.
	Not sure of placement of trail, but situated for nature watching (birds, plants, butterflies, etc.)
BUILDINGS	Retain monolith and allow access inside or to the top, but keep it minimal and focused on interpretation.
	In favor of removing all other structures besides monolith.
	Would like the presence of a resident ranger for safety and fire protection.
INTERPRETATION	Interpretative signs only, no visitor center.
	Very important. Use to emphasize the natural history of the area.
	No concessions.
NEW SITE AMENITIES	No picnic tables & garbage service because they attract corvids and other nuisance animals. Benches are nice with minimal shaded structures.
	Minimal shaded structures that do not obstruct view.
PUBLIC USE	In favor of hiking only trails. Keep Bald Mt. hiking only.
	Would prefer not to have multi-use trails.

	No stance on geocaching - look into impacts
	Do not want dogs on leash at Mt. Um, Mt. Thayer, or connecting trails.
	Not excited about backpack camp, but if there is to be one, need residence nearby for safety reasons.
NATURE VIEWING	Would like permit access in early mornings and evenings for nature viewing.
	Would like wildlife enhancing amenities such as a bird blind, observation tower, and/or hawkwatch site for nature study and observation. Also a nesting platform for golden eagles, purple martin boxes, and bird friendly landscaping.
	Concern about increased traffic on wildlife, particularly newts. Temporary road closures for non-residents during newt migrations.

U.S. Fish & Wildlife Service

Birding in the United States: A Demographic and Economic Analysis

*Addendum to the 2006 National
Survey of Fishing, Hunting, and
Wildlife-Associated Recreation*

Report 2006-4



Birding in the United States: A Demographic and Economic Analysis

*Addendum to the 2006 National
Survey of Fishing, Hunting, and
Wildlife-Associated Recreation*

Report 2006-4



June 2009, Amended July 2009

Erin Carver
U.S. Fish and Wildlife Service
Division of Economics
Arlington VA

This report is intended to complement the National and State reports from the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The conclusions are the author's and do not represent official positions of the U.S. Fish and Wildlife Service.

The author thanks Sylvia Cabrera and Richard Aiken for their input into this report.

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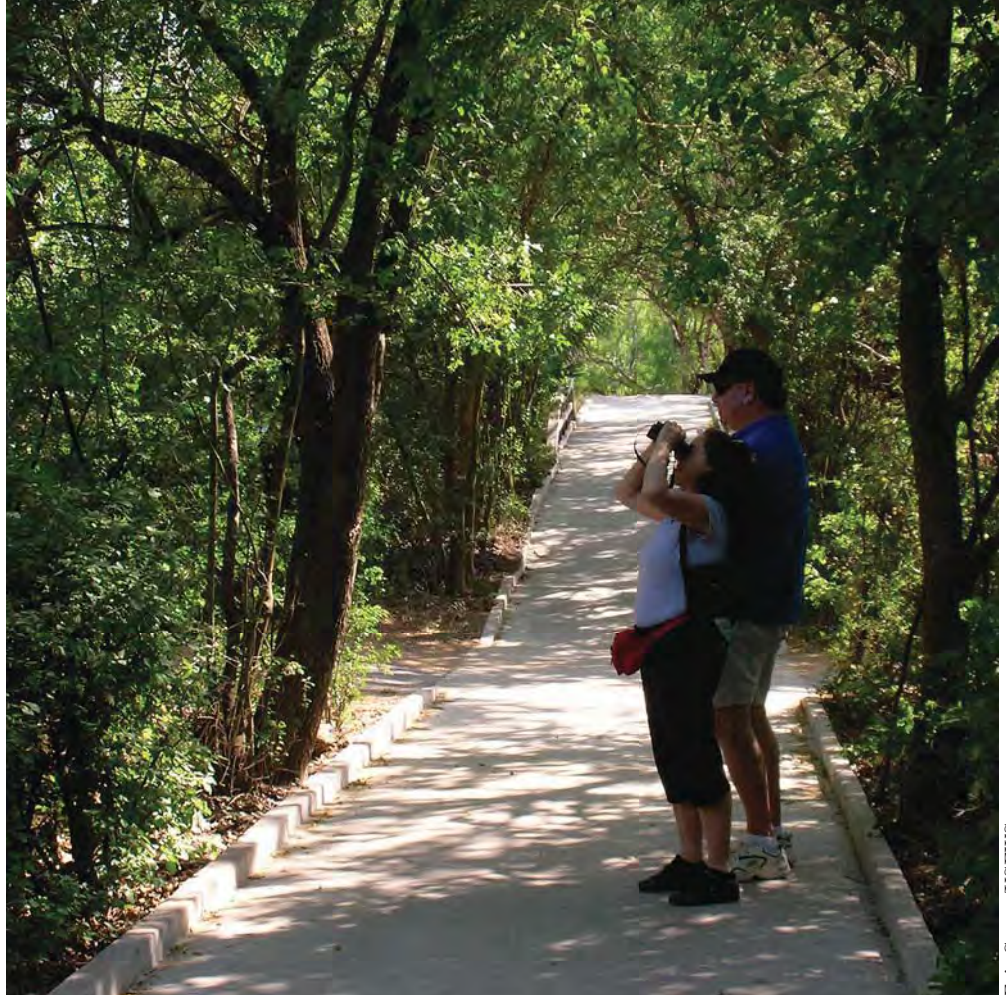
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Introduction

The following report provides up-to-date information so birders and policy makers can make informed decisions regarding the management of birds and their habitats. This report identifies who birders are, where they live, how avid they are, and what kinds of birds they watch. In addition to demographic information, this report also provides an economic measure of birding. It estimates how much birders spend on their hobby and the economic impact of these expenditures.

By understanding who birders are, they can be more easily reached and informed about pressures facing birds and bird habitats. Conversely, by knowing who is likely *not* a birder, or who is potentially a birder, information can be more effectively tailored. The economic impact estimates presented here can be used by resource managers and policy makers to demonstrate the economic might of birders and, by extension, the economic impact of birds.

All data presented here are from the wildlife-watching section of the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR). It is the most comprehensive survey of wildlife recreation in the United States. Overall, 11,300 detailed wildlife-watching interviews were completed with a response rate of 78 percent. The Survey focused on 2006 participation and expenditures by U.S. residents 16 years of age and older.



Erin Carver/USFWS

Birders

In 2006, there were 48 million birdwatchers or birders, 16 years of age and older, in the United States—about 21 percent of the population. What is a birder? The National Survey uses a conservative definition. To be counted as a birder, an individual must have either taken a trip one mile or more from home for the primary purpose of observing birds and/or closely observed or tried to identify birds around the home. Thus, people who happened to notice birds while they were mowing the lawn or picnicking at the beach were not counted as birders. Trips to zoos and observing captive birds also did not count.

Backyard birding or watching birds around the home is the most common form of bird-watching. Eighty-eight percent (42 million) of birders are backyard birders. The more active form of birding, taking trips away from home, is less common with 42 percent (20 million) of birders partaking.

The average birder is 50 years old and more than likely has a better than average income and education. She is slightly more likely to be female and highly likely to be white. There is also a good chance that this birder lives in the south in an urban area. Does this paint an accurate picture of a birder? Like all generalizations the description of an “average” birder does not reflect the variety of people who bird, with millions falling outside this box. The tables and charts show numbers and participation rates (the percentage of people who participate) of birders by various demographic breakdowns.

The tendency of birders to be middle-age or older is reflected in both the number of birders and participation rates. Looking at the different age categories in Table 1, the greatest number of birders were in the 55 plus age group. People over the age of 55 had the highest participation rates while the participation rate was particularly low for people ages 16 to 24.

Chart 1. Birders in the United States: 2006
(16 years of age and older.)

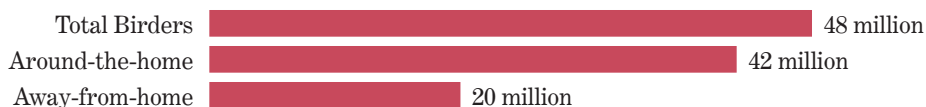
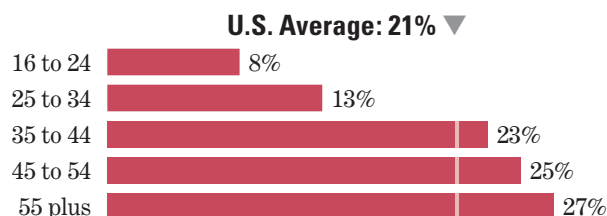


Table 1. Age Distribution of the U.S. Population and Birders: 2006
(Population 16 years of age and older. Numbers in thousands.)

Age	U.S. Population	Number of Birders	Participation Rate
16 to 24	31,564	2,607	8%
25 to 34	37,468	4,825	13%
35 to 44	45,112	10,168	23%
45 to 54	44,209	11,088	25%
55 plus	70,891	19,097	27%

Chart 2. Birders' Participation Rate by Age



The higher the income and education level the more likely a person is to be a birder. Twenty-nine percent of people who live in households that earn \$75,000 or more were bird-watchers—8 percent above the national average of 21 percent. Education, which is often highly correlated with income, shows the same trend. People with less than high school education participated at 12 percent—far below the national average—while people with at least a college degree had the highest participation rate at 28 percent. See Tables 2 and 3 for more information.

Unlike hunting and fishing where men were overwhelmingly in the majority, a larger percent of birders were women—54 percent in 2006 (See Chart 5).



Dave Menke/USFWS

Table 2. Income Distribution of the U.S. Population and Birders: 2006

(Population 16 years of age and older. Numbers in thousands.)

Income	U.S. Population	Number of Birders	Participation Rate
Less than \$20,000	26,046	3,942	15%
\$20,000 to \$29,999	21,898	3,680	17%
\$30,000 to \$49,999	39,209	8,691	22%
\$50,000 to \$74,999	33,434	9,000	27%
\$75,000 or more	50,678	14,749	29%

Chart 3. Birders' Participation Rate by Income

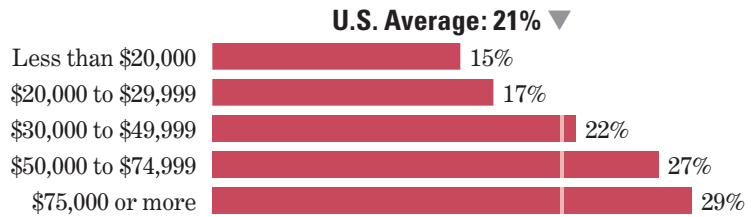


Table 3. Educational Distribution of the U.S. Population and Birders: 2006

(Population 16 years of age and older. Numbers in thousands.)

Education	U.S. Population	Number of Birders	Participation Rate
11 years or less	34,621	4,300	12%
High School Graduate	78,073	13,279	17%
Some College	53,019	12,369	23%
College Graduate +	63,531	17,837	28%

Chart 4. Birders' Participation Rate by Education

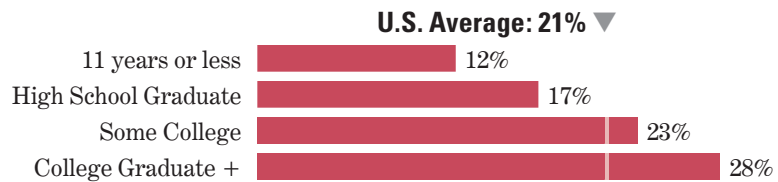


Chart 5. Percent of Birders by Gender: 2006

(Population 16 years of age and older.)



Excepting people that categorize their race as “Other,” birders are not a racially or ethnically diverse group. Eighty-eight percent of birders identified themselves as white. The scarcity of minority birders is not just a reflection of their relatively low numbers in the population at large; it’s also a function of low participation rates. The participation rates of Hispanics, African-Americans, and Asians were all 8 percent or lower while the rate for whites, 24 percent, was slightly above the 21 percent national average. Those that chose “Other,” however, had a participation rate (21 percent) the same as the national average.

The sparser populated an area, the more likely its residents were to watch birds. The participation rate for people living in small cities and rural areas was 27 percent—6 percent above the national average. Whereas large metropolitan areas (1 million residents or more) had the greatest number of birders, their residents had a low participation rate of 17 percent. See Table 5.

Table 4. Racial and Ethnic Distribution of the U.S. Population and Birders: 2006

(Population 16 years of age and older. Numbers in thousands.)

<i>Race</i>	<i>U.S. Population</i>	<i>Number of Birders</i>	<i>Participation Rate</i>
Hispanic	29,218	2,428	8%
White	189,255	44,497	24%
African American	25,925	1,625	6%
Asian	10,104	734	7%
Other	3,960	837	21%

Chart 6. Birders’ Participation Rate by Race and Ethnicity: 2006

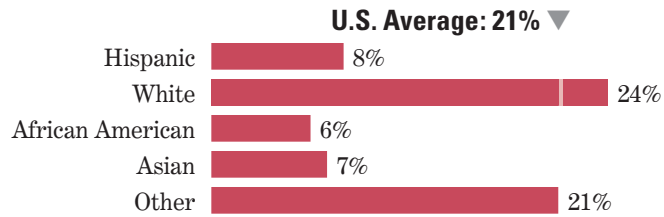


Table 5. Percent of U.S. Population Who Birded by Residence: 2006

(Population 16 years of age and older. Numbers in thousands.)

<i>Metropolitan Statistical Area</i>	<i>U.S. Population</i>	<i>Number of Birders</i>	<i>Participation Rate</i>
1,000,000 or more	120,356	20,545	17%
250,000 to 999,999	46,506	6,779	15%
Less than 249,000	23,562	4,295	18%
Outside MSA	38,820	10,597	27%

Participation rates are varied across the United States. However, the highest participation rates are prevalent in the northern half of the country, where the top 5 States include Montana, Maine, Vermont, Minnesota, and Iowa. See Chart 7 for more details.

Chart 7. Birding Participation Rates by State Residents: 2006

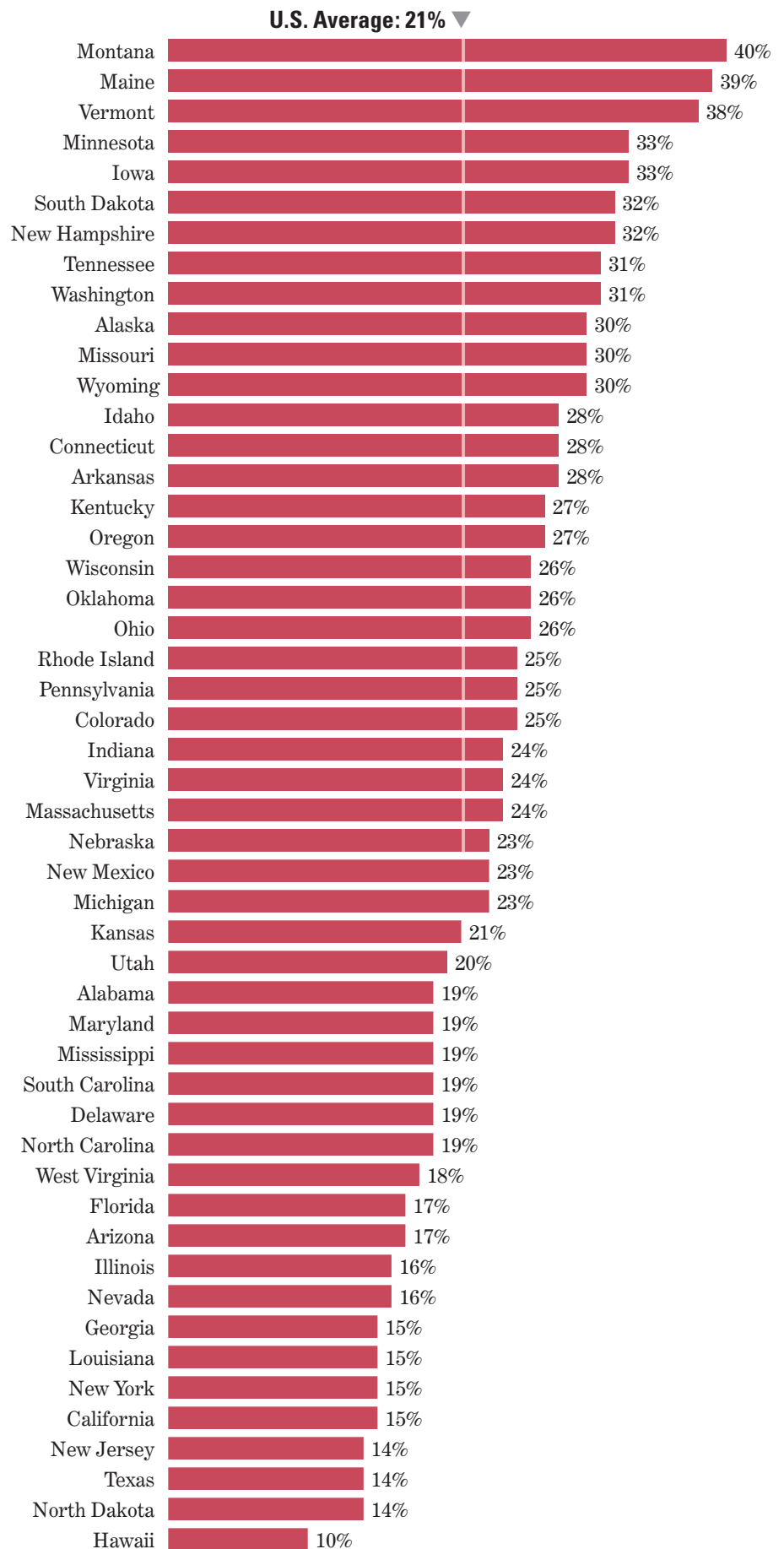
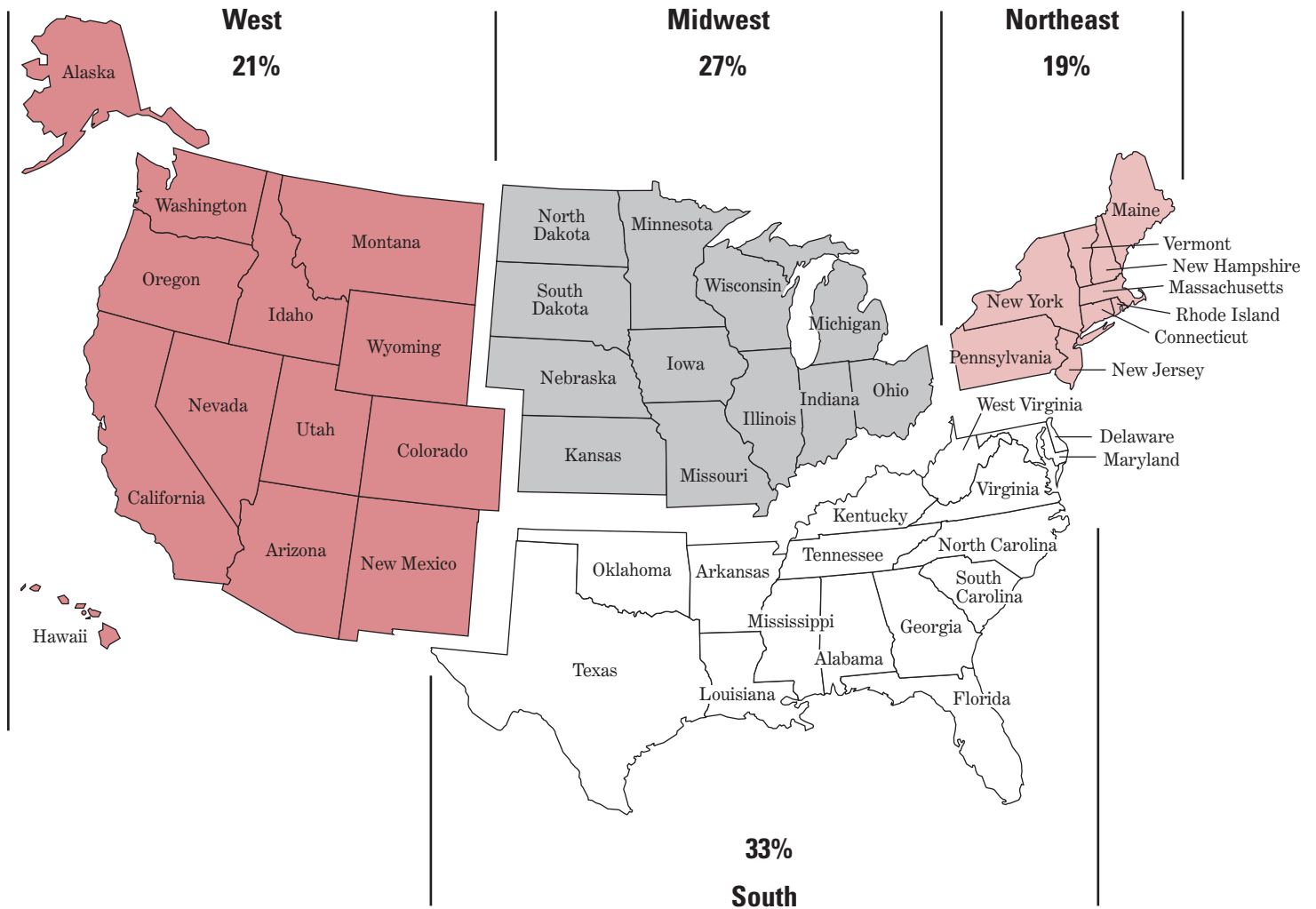


Figure 1. Participation by Region of Residence: 2006

(Population 16 years of age and older.)



There were more participants in the South region (33%) compared to the rest of the United States (see Figure 1). The Midwest had the second highest participation at 27 percent. The West and Northeast had lower participation of 21 percent and 19 percent, respectively.

Bird watching by state residents tells only part of the story. Many people travel out-of-state to watch birds and some states are natural birding destinations. Wyoming reaped the benefits of this tourism with 73 percent of their total birders coming from other states. Four other states (Hawaii, Vermont, Montana, and New Mexico) had more than 45 percent of their total birders coming from other states. (See Table 6.)



Donna Dewhurst/USFWS

Table 6. Birding by State Residents and Nonresidents: 2006

(Population 16 years of age and older. Numbers in thousands).

<i>State</i>	<i>Total Birders</i>	<i>Percent State Residents</i>	<i>Percent Nonresidents</i>
Alabama	828	83%	17%
Alaska	429	34%	66%
Arizona	1,038	74%	26%
Arkansas	764	79%	21%
California	4,493	88%	12%
Colorado	1,229	73%	27%
Connecticut	857	91%	9%
Delaware	189	66%	34%
Florida	3,101	79%	21%
Georgia	1,210	88%	12%
Hawaii	205	49%	51%
Idaho	557	56%	44%
Illinois	1,784	87%	13%
Indiana	1,345	86%	14%
Iowa	842	93%	7%
Kansas	493	92%	–
Kentucky	1,041	84%	16%
Louisiana	552	94%	–
Maine	622	68%	32%
Maryland	980	84%	16%
Massachusetts	1,377	86%	14%
Michigan	1,997	89%	11%
Minnesota	1,448	93%	7%
Mississippi	535	79%	21%
Missouri	1,576	87%	13%
Montana	571	53%	47%
Nebraska	364	87%	–
Nevada	518	57%	43%
New Hampshire	548	60%	40%
New Jersey	1,132	83%	17%
New Mexico	641	54%	46%
New York	2,517	87%	13%
North Carolina	1,586	79%	21%
North Dakota	83	83%	–
Ohio	2,405	95%	5%
Oklahoma	765	94%	–
Oregon	1,046	74%	26%
Pennsylvania	2,669	91%	9%
Rhode Island	297	71%	–
South Carolina	809	78%	22%
South Dakota	283	68%	32%
Tennessee	1,838	79%	21%
Texas	2,476	94%	6%
Utah	639	57%	43%
Vermont	364	52%	47%
Virginia	1,572	89%	11%
Washington	1,853	83%	17%
West Virginia	398	67%	33%
Wisconsin	1,454	79%	21%
Wyoming	448	27%	73%

Note: A hyphen (–) denotes sample sizes that are too small to report reliably (9 or less). This sample size criteria is consistent with the “2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.”

Where and What are They Watching?

Backyard birding is the most prevalent form of birding with 88 percent of participants watching birds from the comfort of their homes. Forty-two percent of birders travel more than a mile from home to bird watch, visiting both private and public lands.

What kinds of birds are they looking at? Seventy-seven percent reported observing waterfowl, making them the most watched type of bird. Birds of prey were also popular with 71 percent of birders watching them, followed in popularity by songbirds (69 percent) and other water birds such as herons and shorebirds (58 percent). See Chart 8.

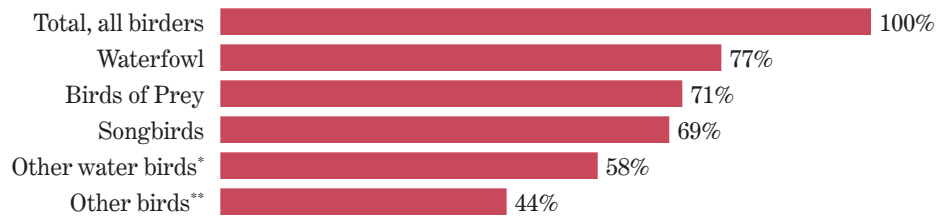
Avidity

All people identified as birders in this report said that they took an active interest in birds—defined as trying to closely observe or identify different species. But what is the extent of their interest? In order to determine their “avidity” the number of days spent bird watching was considered.

Presumably because of the relative ease of backyard birding, birders around the home spent nine times as many days watching birds as did people who traveled more than a mile from home to bird watch. In 2006, the mean number of days for backyard birders was 124 and for away-from-home birders it was 14.

Table 7 shows how avidity has changed from 2001 to 2006. The only change that is significant at the 95 percent level is “Total Away-from-Home Birders.” As shown, the number of away-from-home birders has increased 8 percent as more birders are traveling to observe birds.

Chart 8. Types of Birds Observed by Away-From-Home Birders: 2006



* shorebirds, herons, etc.

**pheasants, turkeys, etc.

Table 7. National Birding Trends

	2001	2006	Percent Change*
Total Birders	45,951	47,693	4%
Around-the-home	40,306	41,821	4%
Away-from-home	18,342	19,860	8%*
Total Days	5,467,841	5,473,398	0%
Around the home	5,159,259	5,202,536	1%
Away-from-home	308,583	270,861	-12%

Note: An asterisk denotes the change is significant at the 95% level. All other “percent changes” are not statistically significant.

The Economics of Bird Watching

Birders spend money on a variety of goods and services for trip-related and equipment-related purchases. Trip-related expenditures include food, lodging, transportation, and other incidental expenses. Equipment expenditures consist of binoculars, cameras, camping equipment, and other costs. By having ripple effects throughout the economy, these direct expenditures are only part of the economic impact of birding. The effect on the economy in excess of direct expenditures is known as the multiplier effect. For example, an individual may purchase a bird house to enhance birding at home. Part of the purchase price will stay with the local retailer. The local retailer, in turn, pays a wholesaler who in turn pays the manufacturer of the bird houses. The manufacturer then spends a portion of this income to pay businesses supplying the manufacturer. In this sense, each dollar of local retail expenditures can affect a variety of businesses. Thus, expenditures associated with birding can ripple through the economy by impacting economic activity, employment, and household income. To measure these effects, a regional input-output modeling method¹ is utilized to derive estimates for total industry output, employment, employment income, and tax revenue associated with birding.



Maslowski/USFWS

¹ The estimates for total industry output, employment, employment income, and federal and state taxes were derived using IMPLAN, a regional input-output model and software system.

Table 8 highlights birders' trip-related and equipment-related expenditures in 2006². Birders spent an estimated \$12 billion on trip expenditures and \$24 billion on equipment expenditures in 2006. For trip expenditures, 57 percent was allocated for food and lodging, 35 percent was spent on transportation, and 7 percent was spent on other costs such as guide fees, user fees, and equipment rental. Equipment expenditures were relatively evenly distributed among wildlife watching equipment (29 percent), special equipment (35 percent), and other items (33 percent). Auxiliary equipment accounted for only 3 percent of all equipment expenditures.

² The Survey does not have an expenditure category for birding. Therefore, expenditures are prorated by multiplying wildlife watching expenditures by a ratio to derive birding expenditures. For trip-related expenditures, the ratio includes only away-from-home birders and is (total number of away-from-home days watching birds)/(total number of away-from-home days watching wildlife). For equipment-related expenditures, the ratio includes both away-from-home birders and backyard birders. The equipment-related expenditure ratio is (total number of days watching birds)/(total number of days watching wildlife).

Table 8. Trip and Equipment Expenditures for Birding by Category: 2006

Trip-Related Expenditures*, total	\$12,068,182,000
Food	\$4,008,032,000
Lodging	\$2,948,366,000
Transportation	\$4,218,433,000
Other	\$893,351,000
Equipment**, total	\$23,659,542,000
Wildlife-watching equipment	\$6,869,054,000
Auxilliary equipment	\$742,276,000
Special Equipment	\$8,240,519,000
Other Items	\$7,807,693,000

*Trip-related expenditures include food, drink, lodging, public and private transportation, guide fees, pack trip or package fees, public and private land use access fees, equipment rental, boating costs, and heating and cooking fuel.

**Equipment expenditures consist of binoculars, cameras, bird food, nest boxes, day packs, and other wildlife-watching equipment. Auxiliary equipment includes tents, backpacking equipment, other camping equipment, and other auxilliary equipment. Special equipment purchases include boats, campers, trucks, and cabins while Other Items includes magazines, land leasing and ownership, membership dues, and plantings.

Total Industry Output

Table 9 depicts the economic effect of bird watching expenditures in 2006. The trip and equipment expenditures of \$36 billion in 2006 generated \$82 billion in total industry output across the United States. Total industry output includes the direct, indirect, and induced effects of the expenditures associated with bird watching.

Direct effects are the initial effects or impacts of spending money; for example, an individual purchasing a bird house is an example of a direct effect. An example of an indirect effect would be the purchase of the bird house by a retailer from the manufacturer. Finally, induced effects refer to the changes in production associated with changes in household income (and spending) caused by changes in employment related to both direct and indirect effects. More simply, people who are employed by the retailer, by the wholesaler, and by the birdhouse manufacturer spend their income on various goods and services which in turn generate a given level of output (induced effects).

Employment and Employment Income

Table 9 shows that birding expenditures in 2006 created 671,000 jobs and \$28 billion in employment income. Thus, each job had an average annual salary of \$41,000. Jobs include both full and part-time jobs, with a job defined as one person working for at least part of the calendar year. Employment income consists of both employee compensation and proprietor income.

Federal and State Taxes

Federal and State tax revenues are derived from birding-related recreational spending. In 2006, \$6 billion in State tax revenue and \$4 billion in Federal tax revenue were generated.

Table 9. Summary of Economic Impacts

Birders	47,693,000
Total Expenditures	\$35,727,724,000
Total Output	\$82,176,751,000
Jobs	671,000
Employment Income	\$27,695,934,000
State Tax Revenues	\$6,157,252,000
Federal Tax Revenues	\$4,375,932,000



Conclusion

This report presented information on the participation and expenditure patterns of 48 million birders in 2006. Trip-related and equipment-related expenditures associated with birding generated over \$82 billion in total industry output, 671,000 jobs, and \$11 billion in local, state, and federal tax revenue. This impact was distributed across local, state, and national economies.



John and Karen Hollingsworth/USFWS

References

MIG, Inc. *IMPLAN System (2004 Data and Software)*. 1940 South Greeley Street, Suite 101, Stillwater, MN 55082. 2004.

U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, Bureau of the Census. *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*. Washington DC: U.S. Government Printing Office, October 2007.



Vernon Byrd/USFWS

U.S. Department of the Interior
U.S. Fish & Wildlife Service
<http://wsfrprograms.fws.gov>





Santa Clara Valley Audubon Society
Founded 1926

January 7th, 2009

Meredith Manning
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022
mt.um@openspace.org

Dear Ms. Manning,

Santa Clara Valley Audubon Society (SCVAS) is pleased to provide scoping comments for the Midpeninsula Regional Open Space District's EIR for the Mount Umunhum Environmental Restoration and Public Access Project. SCVAS growing membership typically share a passion for wildlife and natural resources, especially birds. The mission of SCVAS is to preserve, to enjoy, to restore and to foster public awareness of native birds and their ecosystems, primarily in Santa Clara County. SCVWS is pleased to see that plans to restore Mount Umunhum are progressing, and that the District continues to thrive for the developments of sustainable visitor destinations that balance public access, enjoyment, and education with environmental restoration.

Requested Improvements for birds and birders

On July 20, 2010 we met with District planner Galli Basson. In that meeting, and in following public meetings, SCVAS requested that the plan include components that would serve the bird watcher community of the region. We advocated for a non-bike nature trail, bird friendly amenities such as nest boxes and a raptor nesting platform, and most importantly - a raptor-viewing platform. If implemented, this would be the only developed viewing site in the south bay.

A 2009 report by the U.S. Fish and Wildlife Service shows one of every five Americans watches birds, and in doing so, birdwatchers contributed \$36 billion to the U.S. economy in 2006, the most recent year for which economic data are available. The report – *Birding in the United States: A Demographic and Economic Analysis* (attached) – shows that total participation in bird watching is strong at 48 million, and remaining at a steady 20 percent of the U.S. population since 1996. SCVAS feels that the planning of Mt. Umunhum presents a unique opportunity to improve the landscape for birds and for the many people who love watching them. A nesting platform and a viewing platform require a relatively small investment, but would attract many visitors during the nesting season (Late winter / Spring) and the migration season (Fall).

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As evident in Table 1, birders form a large yet often unrecognized interest group. We ask that that the district add our membership as a target audience, so that the objective “Provide ample, rich, and diverse trail experiences for hikers, bicyclists, and equestrians” will include birders as a distinct group that merits considering its specific needs similar to those of hikers, bicyclists, and equestrians.

Table 1. Age Distribution of the U.S. Population and Birders: 2006
(Population 16 years of age and older. Numbers in thousands.)

<i>Age</i>	<i>U.S. Population</i>	<i>Number of Birders</i>	<i>Participation Rate</i>
16 to 24	31,564	2,607	8%
25 to 34	37,468	4,825	13%
35 to 44	45,112	10,168	23%
45 to 54	44,209	11,088	25%
55 plus	70,891	19,097	27%

From: Birding in the United States: A Demographic and Economic Analysis, 2009

A viewing platform would comprise of solid flat, low maintenance viewing area positioned for the viewshed for both the casual visitor and the avid bird watcher (please see examples in Figures 1 and 2)



Figure 2: Landscape / Bird Viewing area



Figure 2: Landscape / Bird Viewing area

EIR Scoping comments for the proposed Concept Plan

1. Restoration - we request that environmental habitat restoration will focus on native vegetation that provides resources to species of native birds and insects. We would like to see an "Audubon" trail that is bird friendly, single track, hikers only, with bird friendly native landscaping and other bird amenities. Dogs on leash would not be allowed.

2. The concept plan includes several picnic table sites throughout the project area. We are concerned visitors using these tables will intentionally or inadvertently increase the availability of food to wildlife (due to trash, visitors neglect, visitor feeding wildlife). Human food attracts nuisance species such as corvids, starlings, rats, mice, wasps and more. These species may prey on or displace local mammals, birds, reptiles, and amphibians species.

Picnic tables are not compatible with the goal of protecting the local ecosystem, and have the potential of causing a pervasive and persistent impact on local fauna.

Conclusion

Thank you for the opportunity to provide scoping comments for the Midpeninsula Regional Open Space District's EIR for the Mount Umunhum Environmental Restoration and Public Access Project. We hope to continue to be involved in the review process for the proposed project with the aim of providing access while protecting and enhancing the ecosystem, and to promote improvements for birds and birders

Respectfully,

Shani Kleinhaus
Environmental Advocate
Santa Clara Valley Audubon Society

p. 3 of 4

22221 McClellan Rd.
Cupertino, CA 95014
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Attached:

1. SCVAS stakeholder comment summary, Galli Basson, July 20, 2010
2. Birding in the United States: A Demographic and Economic Analysis. 2009. Report 2006-4. Erin Carver. U.S. Division of Economics, US Fish and Wildlife Service

CC: Galli Basson, Midpeninsula Regional Open Space District

Appendix B

Air Quality and Climate Change Data

Summary of GHG Emissions

Construction-Related GHG Emissions

Construction Phase	Year(s) (approximately)	CO2 (MT/Phase)	Source
Phase I – Demolition of Radio Tower and Vehicle Maintenance Building	2011-2012	239	Constr Emiss Summary worksheet
Phase II – Landform and Habitat Restoration; Construction of Connector Trail to Bald Mountain; Upgrade of Mt. Umunhum Road	2013-2014	348	Constr Emiss Summary worksheet
Phase III – Demolition of Former Housing Area; Construction of Two Paved Parking Lots and Staging Areas; Installation of Multi-Use Trail	2017	85	Constr Emiss Summary worksheet
Total	multiple	671	Summation

Operational GHG Emissions

Source	CO2 (MT/year)	Source
Area Sources	0.3	Operational Emiss Summary worksheet
Mobile Sources	688.4	Operational Emiss Summary worksheet
Propane Consumption (for any electricity and water transport needs)	11.5	Propane GHGs worksheet
Total	700.2	Summation

Propane Combustion

The project description states that some propane may be consumed to supply electricity to facilities on the Mt. Umunhum summit and/or to pump supply water from a neighboring private parcel.

	value	units	source
Volume of propane combusted annually	2,000	gal/year	assumption
CO2 emission rate for propage combustion	5.74	kg/gal	See Note 1
CO2 emissions per year	11,480	kg/year	calculation
mass conversion rate	1,000	kg/MT	onlineconversion.com/weight.htm
CO2 emissions per year	11.48	MT/year	conversion calculation

Notes

- 1 California Climate Action Registry. 2009 (January). California Climate Action Registry General Reporting Protocol, Version 3.1. Los Angeles, CA. Available: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf. Last updated January 2009. Accessed March 7, 2011. See Table C.7 on pg. 101.

Summary of Average Daily Construction-Related Emissions (lb/day)

Phase	ROG	NOx	CO	SO2	PM10		PM2.5	
					Dust	Exhaust	Dust	Exhaust
Phase 1 (Fall 2011 - Spring/Summer 2012)	3.9	32.4	19.7	0.0	2.1	1.8	0.6	1.8
Phase 2 (Fall 2013 - Spring 2014)	7.6	50.5	32.6	0.0	150.3	2.9	31.5	2.9
Phase 3 (throughout 2017)	3.6	26.4	17.3	0.0	6.4	0.9	0.9	0.9
Average Daily Emissions of All Construction Activity	4.5	32.1	20.6	0.0	64.2	1.8	13.4	1.8
BAAQMD Threshold of Significance	54	54	none	none	none	82	none	54

Notes

The worst-case average daily emissions levels for each phase represents the average emissions levels when the most subphases are occurring simultaneously.

Activity	Timing (Approx.)			Working Days	URBEMIS Module	Annual Emissions (TPY)						
	Start	End	Days			ROG	NOx	CO	SO2	PM10		
										Dust	Exhaust	Dust
Vehicle Maintenance Building	9/1/2011	12/31/2011	66	Demolition	0.13	1.07	0.65	0.00	0.07	0.06	0.02	
	1/1/2012	3/31/2012	66		0.09	0.74	0.48	0.00	0.05	0.04	0.01	
<i>Subtotal of Phase 1</i>	<i>9/1/2011</i>	<i>3/31/2012</i>	<i>132</i>		<i>0.22</i>	<i>1.81</i>	<i>1.13</i>	<i>0.00</i>	<i>0.12</i>	<i>0.10</i>	<i>0.03</i>	
	9/1/2013	12/31/2013	66		0.13	0.98	0.64	0.00	4.96	0.05	1.04	
	1/1/2014	03/31/2014	66	Fine Site Grading	0.09	0.67	0.45	0.00	3.65	0.03	0.76	
<i>Subtotal of Subphase</i>	<i>9/1/2013</i>	<i>03/31/2014</i>	<i>132</i>		<i>0.22</i>	<i>1.65</i>	<i>1.09</i>	<i>0.00</i>	<i>8.61</i>	<i>0.08</i>	<i>1.80</i>	
to Bald Mountain	1/1/2014	02/28/2014	44	Fine Site Grading	0.02	0.17	0.09	0.00	0.10	0.01	0.02	
num Road	1/1/2014	03/31/2014	66	Fine Site Grading	0.05	0.36	0.24	0.00	0.77	0.02	0.16	
m Road	1/1/2014	03/31/2014	66	Paving	0.08	0.38	0.25	0.00	0.00	0.03	0.00	
<i>Subtotal of Phase 2</i>	<i>9/1/2013</i>	<i>03/31/2014</i>	<i>132</i>		<i>0.37</i>	<i>2.56</i>	<i>1.67</i>	<i>0.00</i>	<i>9.48</i>	<i>0.14</i>	<i>1.98</i>	
Area	1/1/2017	1/31/2017	22	Demolition	0.03	0.29	0.15	0.00	0.07	0.01	0.01	
ing Lots and Staging Areas	2/1/2017	2/28/2017	22	Paving	0.02	0.12	0.11	0.00	0.00	0.01	0.00	
	3/1/2017	3/31/2017	22	Fine Site Grading	0.04	0.26	0.19	0.00	0.06	0.01	0.01	
<i>Subtotal of Phase 3</i>	<i>1/1/2017</i>	<i>01/31/2017</i>	<i>66</i>		<i>0.06</i>	<i>0.38</i>	<i>0.30</i>	<i>0.00</i>	<i>0.06</i>	<i>0.02</i>	<i>0.01</i>	
					0.65	4.75	3.10	0.00	9.66	0.26	2.02	

are the same.

g days per month.

one calendar year and ends in another then the phase/subphase is split into separate rows in order to be consistent with the timeslices created by Urbemis.

all) of the subphases performed under Phase 2 could occur simultaneously.

s under Phase 3 is unknown but it is assumed that they would not occur simultaneously.

Activity	Timing (Approx.)				Average Daily Emissions (lb/day)							
	Start	End	Working Days	URBEMIS Module	ROG	NOx	CO	SO2	PM10			PM2.5
									Dust	Exhaust	Dust	
Vehicle Maintenance Building	9/1/2011	12/31/2011	66	Demolition	3.94	32.42	19.70	0.00	2.12	1.82	0.61	
	1/1/2012	3/31/2012	66		2.73	22.42	14.55	0.00	1.52	1.21	0.30	
	9/1/2011	3/31/2012	132		3.94	32.42	19.70	0.00	2.12	1.82	0.61	
Open	9/1/2013	12/31/2013	66	Fine Site Grading	3.94	29.70	19.39	0.00	150.30	1.52	31.52	
	1/1/2014	03/31/2014	66		2.73	20.30	13.64	0.00	110.61	0.91	23.03	
	9/1/2013	03/31/2014	132		3.33	25.00	16.52	0.00	130.45	1.21	27.27	
Subtotal of Subphase (multiple years)	1/1/2014	02/28/2014	44	Fine Site Grading	0.91	7.73	4.09	0.00	4.55	0.45	0.91	
	1/1/2014	03/31/2014	66		1.52	10.91	7.27	0.00	23.33	0.61	4.85	
	1/1/2014	03/31/2014	66		2.42	11.52	7.58	0.00	0.00	0.91	0.00	
Average Daily Emissions during Phase 2	1/1/2014	03/31/2014	66	Paving	4.85	30.15	18.94	0.00	27.88	1.97	5.76	
	9/1/2013	03/31/2014	132		7.58	50.45	32.58	0.00	150.30	2.88	31.52	
Area	1/1/2017	1/31/2017	22	Demolition	2.73	26.36	13.64	0.00	6.36	0.91	0.91	
	2/1/2017	2/28/2017	22		1.82	10.91	10.00	0.00	0.00	0.91	0.00	
	3/1/2017	3/31/2017	22		3.64	23.64	17.27	0.00	5.45	0.91	0.91	
Average Daily Emissions during Phase 3	1/1/2017	01/31/2017	66	3.64	26.36	17.27	0.00	6.36	0.91	0.91		
Construction Activity	330			4.55	32.09	20.58	0.00	64.24	1.79	13.39		
	54			54	54	none	82	none	82	none		
Emissions levels for each phase represents the average emissions levels when the most subphases are occurring simultaneously.												

Construction Parameters

These parameters are taken from the project description, pgs 3-14 thorough 3-15, and the traffic section, pgs. 4.1-16 through 4.1-17
Parameters and values shaded in green are used in the Urbemis model run.

Phase/Subphase

Phase Type in URBEMIS

Phase 1, Demolition of Radio Tower

Demolition 09/01/2011 - 03/31/2012

Beginning Fall 2011 , 6-12 months
60 workers for 3 months, 50 the remainder of Phase 1
excavator
concrete breaking equipment
reuse of concrete on-site
concrete saws
jackhammers

Because the default parameters in Urbemis assumes that the amount of demolition is based on the acreage of the site, the hours per day that off-road equipment operates was reduced to 25-50% of default values.

Dimensions of Buildings (feet)

	<u>width</u>	<u>length</u>	<u>height</u>	<u>volume (cu. Ft.)</u>	<u>Stories</u>	<u>Area (sq ft)</u>
Radio Tower	63	63	85	337,365	7	27,783
Vehicle Maint Bldg	33	62	20	40,920	2	4,092
			Total	378,285		31,875
Dummy, hypothetical single building	72.3	72.3	72.3	378,285		
Max. Daily Demolition	15.8	15.8	15.8	3,907		

value unit source

Truck hauling of demolition debris 2.6 R. trips/day Demolition module in Urbemis
capacity of haul truck 14.0 cu yd/truck assumption, consistent with traffic analysis
Haul route distance, round trip 66.6 miles Zanker Road Landfill, google maps

Phase 2

Beginning Fall 2013, over 2-3 years

Phase 2A, Landform and Habitat Restoration

heavy earth moving equipment and ground disturbance
5-10 workers including volunteers

	<u>value</u>	<u>unit</u>	<u>source</u>
total area disturbed/graded	22.8	acres	project description, pg. 3-1
Max. daily percent disturbed	25%	%	Urbemis default parameter in fine site grading module
Max. daily area disturbed/graded	5.7	acres/day	calculation

Fine Site Grading 09/01/2013 - 03/31/2014

Phase 2B, Construction of Connector Trail to Bald Mountain

	<u>value</u>	<u>unit</u>	<u>source</u>
length of connector trail to Bald Mtn	1.7	miles	internal exhibit of trail connections
length of connector trail to Raph's Mtn	0.25	miles	internal exhibit of trail connections
Combined length of connector trails	1.95	miles	
distance conversion rate	5,280	ft/mile	onlinconversion.com/length
Combined length of connector trails	10,296	feet	conversion calculation
width	4	feet	assumption
area	41,184	sq ft	caclulation
area conversion rate	43,560	sq ft/acre	http://www.onlineconversion.com/area.htm
area	0.95	acres	conversion calculation
Max. daily area distrubed	25%	%	Urbemis default parameter in fine site grading module
Max. daily area distrubed	0.24	acres/day	caclulation

Fine Site Grading 01/01/2014 - 02/28/2014

Equipment

skip loader
Bobcat
small dump truck

Phase 2C, Soil Excavation along Mt. Um Rd.

	<u>value</u>	<u>unit</u>	<u>source</u>
Volume of Soil balanced on site	12,000	cu yd	assumption
sides of road	2	sides	common sense
width of trenching, average	4	feet	assumption
distance of Mt. Um Rd.	26,324	feet	traffic analysis, pg. 4.1-1
area disturbed	210,592	sq ft	calculation
area conversion rate	43,560	sq ft/acre	http://www.onlineconversion.com/area.htm
area	4.83	acres	conversion calculation
max daily percentage	50%	%	Urbemis default parameter in fine site grading module
max daily disturbed	2.42	acres	calculation
distance exc. soil hauled, avg round trip	5.00	miles	assumption

It is assumed that the excavated material would be hauled to one or various on-site locations and the average round trip distance would not be longer than this.

Phase 2D, Mt. Umunhum Road Upgrade

resurfacing of Mt. Um Rd

3 months

5-10 workers

Asphalt/concrete delivery trucks and paving machine/steamrollers

	<u>value</u>	<u>unit</u>	<u>source</u>
distance of Mt. Um Rd.	26,324	feet	traffic analysis, pg. 4.1-1
new width, on average	22	feet	assumption
area	579,128	sq ft	calculation
area conversion rate	43,560	sq ft/acre	http://www.onlineconversion.com/area.htm
area	13.29	acres	conversion calculation

Paving 01/01/2014 - 03/31/2014

Phase 3, Facilities Construction

Beginning in 2017

Phase 3A, Demolition of Former Housing Area

Demolition 01/01/2017 - 03/31/2017

value unit
Area of housing structures 0.5 acres assumption

Dimensions of Buildings (feet)

	<u>width</u>	<u>length</u>	<u>height</u>	<u>volume</u>
Former Housing Area	100	200	12	240,000
Maximum Daily Demolition	25	50	12	15,000

Phase 3B, Two Paved Parking Lots, staging area

2-3 weeks

5-10 workers

Asphalt/concrete delivery trucks and paving machine/steamrollers

value unit
Total acreage to be paved 2.0 acres assumption (up to)

Paving 01/01/2017 - 01/15/2017

Phase 3C, Installation of multi-use trail

Fine Site Grading 01/01/2017 - 01/31/2017

Combined length of multi-use trails	<u>value</u>	<u>unit</u>	<u>source</u>
width	3,800	feet	Exhibit 3-9 (approx. length)
area	4	feet	assumption
area conversion rate	15,200	sq ft	caclulation
area	43,560	sq ft/acre	http://www.onlineconversion.com/area.htm
area	0.35	acres	conversion calculation
Max. daily area distrubed	25%	%	Urbemis default parameter in fine site grading module
Max. daily area distrubed	0.09	acres/day	caclulation

Operational Emissions Summary

Source	Annual Emissions (TPY)				(MT/year)			
	ROG	NOx	PM10	PM2.5	CO	SO2	CO2	CO2
Area Sources	0.54	0.00	0.00	0.00	0.14	0.00	0.25	0.28
Mobile Sources	0.45	0.64	1.20	0.23	5.99	0.01	624.51	688.40
Total	0.99	0.64	1.20	0.23	6.13	0.01	624.76	688.68
BAAQMD Operational Significance Thresholds	10	10	15	10	NA	NA	TBD	TBD

	value	units	source
Mass Conversion Rate	1.102311	MT/ton	onlinconversion.com/weight.htm
Mass Conversion Rate	2,000	lb/ton	onlinconversion.com/weight.htm
Time Conversion Rate	365	days/year	Gregorian calendar

Source	Average Daily Emissions (lb/day)						
	ROG	NOx	PM10	PM2.5	CO	SO2	CO2
Area Sources	3.0	0.0	0.0	0.0	0.8	0.0	1.4
Mobile Sources	2.5	3.5	6.6	1.3	32.8	0.1	3,422
Total	5.4	3.5	6.6	1.3	33.6	0.1	3,423
BAAQMD Operational Significance Thresholds	54	54	82	54	NA	NA	NA

Notes

NA = Not applicable. Not thresholds has been established by BAAQMD because the air basin is in attainment of all applicable ambient air quality standards for this pollutant.

TBD = To be discussed in EIR

Operational Parameters

Parameters and values shaded in green are used in the Urbemis model run.

Projected Daily Operational Trips, by day of week	<u>Sat</u>	<u>Sun</u>	<u>weekday</u>	<u>units</u>	<u>source</u>
Summer, by day of week	338	244	116	trips/day	Sec 4.1, Traffic and Circulation, pg. 4.1-12
Number of days per year	26	26	130	days/year	Gregorian calendar
Winter, by day of week	169	122	58	trips/day	Assuming winter visitorship is half of summer.
Number of days per year	26	26	130	days/year	Gregorian calendar
Days per year, by week day	52	52	260	days/year	Gregorian calendar
Avg number of daily trips on annual basis, by day of week	254	183	87	trips/day	average, weighted by season
Days per year	<u>value</u>	<u>units</u>	<u>source</u>		
Average daily trips on annual basis	365	days/year	Gregorian calendar		
Area of actively used portion of project	124	trips/day	average, weighted by trips by day of week		
Average annual daily trip rate	22.8	acres	project description, pg. 3-1		
	5.45	trips/acre	calculation		
Earliest year when open space opens to public access	2012	year	assumption based on completion of Phase 1 construction		
Distribution of Visitor Trips from Origin	<u>value</u>	<u>units</u>	<u>source</u>		
from San Jose	65%	%	Assumption		
from Redwood City	17.5%	%	ns based		
from Hayward	17.5%	%	on		
Distance to Mt. Umuunhum Summit (via Hicks Road) (one-way)					
from San Jose	22.9	miles	Google maps		
from Redwood City	41.4	miles	Google maps		
from Hayward	50.1	miles	Google maps		
Average Trip Length (one-way)	30.9	miles	weighted by distribution		
Average annual daily Vehicle-Miles Traveled	3,836	VMT/day	calculation		
Annual Vehicle-Miles Traveled	1,400,213	VMT/year	calculation		

Detail Report for Annual Area Source Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\Operations.urb924

Project Name: Operation of Mount Umunhum Public Access Plan

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.53						
TOTALS (tons/year, unmitigated)	0.54	0.00	0.14	0.00	0.00	0.00	0.25

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 0%

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\laustin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\Operations.urb924

Project Name: Operation of Mount Umunhum Public Access Plan

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Regional Open Space and Recreational Area	0.45	0.64	5.99	0.01	1.20	0.23	624.51
TOTALS (tons/year, unmitigated)	0.45	0.64	5.99	0.01	1.20	0.23	624.51

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Regional Open Space and Recreational Area	5.45	acres	22.80	124.26	3,839.63	
				124.26	3,839.63	

Vehicle Type	Vehicle Fleet Mix				Diesel
	Percent Type	Non-Catalyst	Catalyst	Diesel	
Light Auto	55.2	0.5	99.3	0.2	
Light Truck < 3750 lbs	11.8	1.7	95.8	2.5	
Light Truck 3751-5750 lbs	20.6	0.5	99.5	0.0	
Med Truck 5751-8500 lbs	6.2	0.0	100.0	0.0	
Lite-Heavy Truck 8501-10,000 lbs	0.7	0.0	71.4	28.6	
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	66.7	33.3	
Med-Heavy Truck 14,001-33,000 lbs	0.8	0.0	25.0	75.0	
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0	
Other Bus	0.1	0.0	0.0	100.0	
Urban Bus	0.0	0.0	0.0	0.0	
Motorcycle	2.9	62.1	37.9	0.0	
School Bus	0.1	0.0	0.0	100.0	
Motor Home	0.7	0.0	85.7	14.3	

Travel Conditions

	Residential				Commercial	
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	30.9	30.9	30.9	30.9	30.9	30.9
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

	<u>Travel Conditions</u>			
	Home-Work	Home-Shop	Home-Other	Commercial
% of Trips - Commercial (by land use)				
Regional Open Space and Recreational Area				
			5.0	2.5
				92.5

Operational Changes to Defaults

The urban/rural selection has been changed from Urban to Rural

Home-based work rural trip length changed from 16.8 miles to 30.9 miles

Home-based shop rural trip length changed from 7.1 miles to 30.9 miles

Home-based other rural trip length changed from 7.9 miles to 30.9 miles

Commercial-based commute rural trip length changed from 14.7 miles to 30.9 miles

Commercial-based non-work rural trip length changed from 6.6 miles to 30.9 miles

Commercial-based customer rural trip length changed from 6.6 miles to 30.9 miles

Summary Report for Annual Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\Operations.urb924

Project Name: Operation of Mount Umunhum Public Access Plan

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

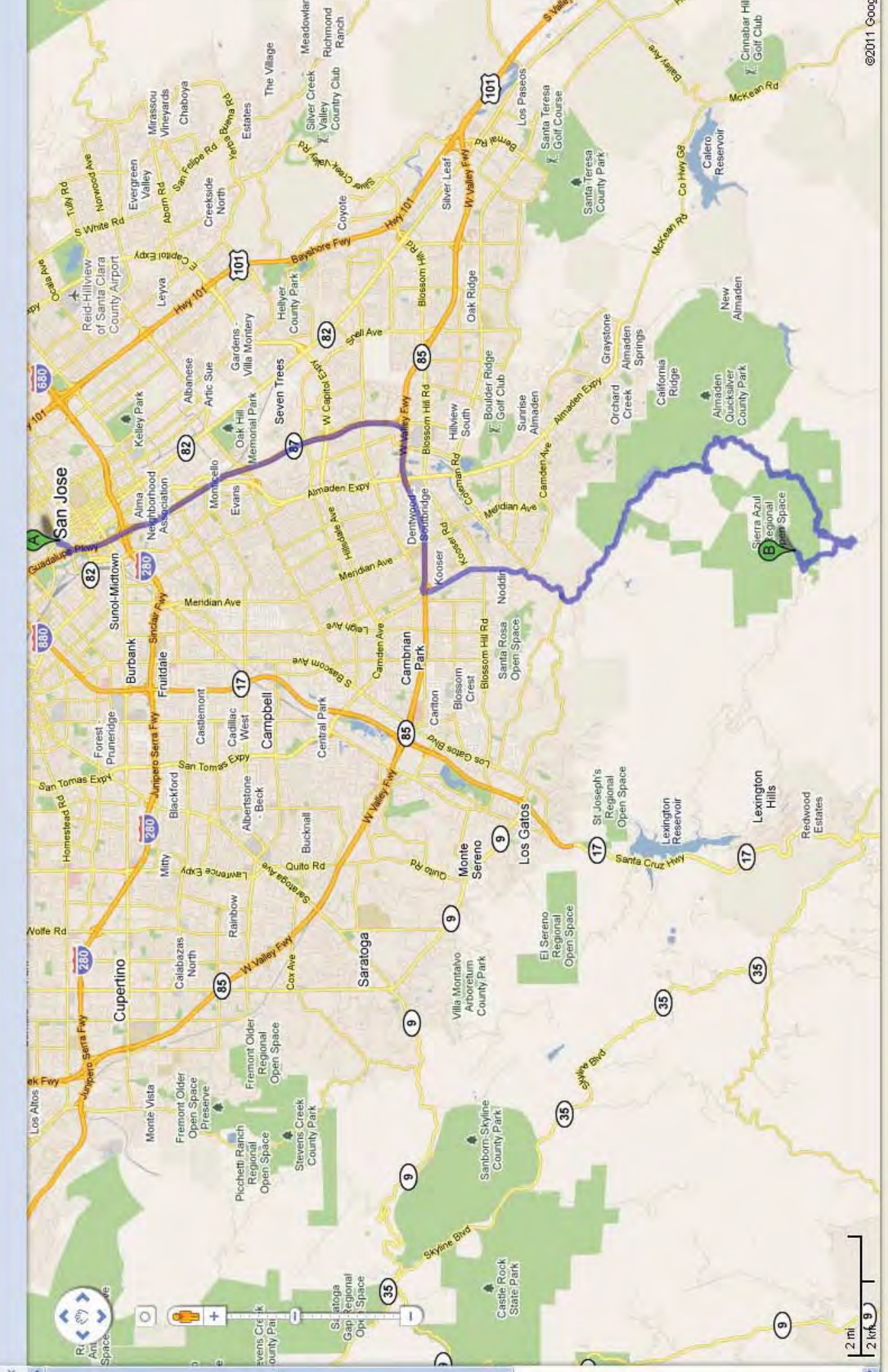
	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.54	0.00	0.14	0.00	0.00	0.00	0.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.45	0.64	5.99	0.01	1.20	0.23	624.51

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

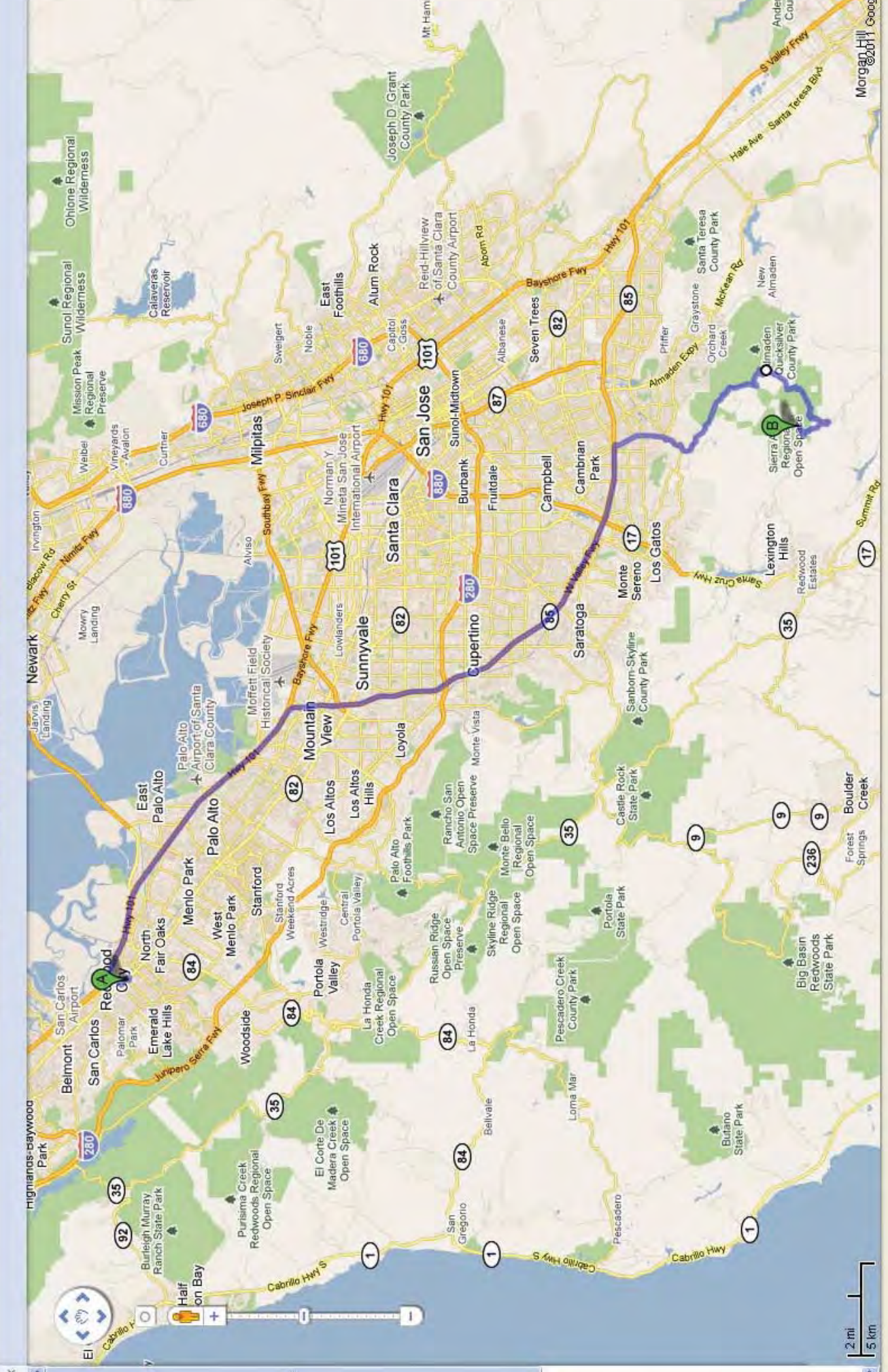
	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.99	0.64	6.13	0.01	1.20	0.23	624.76



Map navigation controls including a compass, a zoom slider, and a scale bar. The scale bar shows 2 miles and 2 kilometers. Below the map, there are several 'mins' labels and a vertical scale with values: 207 ft, 0.3 mi, 5.9 mi, 2.9 mi, 0.2 mi, 479 ft, and 1.8 mi.

The route has been modified. Undo

Search the map



mins

465 ft

0.4 mi

0.5 mi

10.8 mi

16.2 mi

0.3 mi

1.7 mi

0.2 mi

6.1 mi

The route has been modified. Undo



Navigation controls including a compass, a location pin, a zoom-in (+) and zoom-out (-) slider, and a scale bar.

5 mi
10 km

Map legend and status bar. The legend shows a yellow box for 'mins traffic'. The status bar at the bottom right shows a scale from 0.2 mi to 3.0 mi.

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project1
 Demo Radio Tower.urb924

Project Name: 1 Demolition of Radio Tower and Vehicle Maintenance Building

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2011	0.13	1.07	0.65	0.00	0.07	0.06	0.14	0.02	0.06	0.07	123.85
Demolition 09/01/2011-03/31/2012	0.13	1.07	0.65	0.00	0.07	0.06	0.14	0.02	0.06	0.07	123.85
Fugitive Dust	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.01	0.00	0.01	0.00
Demo Off Road Diesel	0.12	0.88	0.52	0.00	0.00	0.05	0.05	0.00	0.05	0.05	86.78
Demo On Road Diesel	0.01	0.18	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	30.43
Demo Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.64
2012	0.09	0.74	0.48	0.00	0.05	0.04	0.10	0.01	0.04	0.05	92.54
Demolition 09/01/2011-03/31/2012	0.09	0.74	0.48	0.00	0.05	0.04	0.10	0.01	0.04	0.05	92.54
Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.00	0.01	0.00
Demo Off Road Diesel	0.08	0.62	0.39	0.00	0.00	0.04	0.04	0.00	0.03	0.03	64.84
Demo On Road Diesel	0.01	0.12	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	22.73
Demo Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.97

Phase Assumptions

Phase: Demolition 9/1/2011 - 3/31/2012 - Demolition of Radio Tower and Veh Maint Bldg

Building Volume Total (cubic feet): 377933.1

Building Volume Daily (cubic feet): 3944.31

On Road Truck Travel (VMT): 173.74

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Off-Road Equipment:

- 1 Aerial Lifts (60 hp) operating at a 0.46 load factor for 8 hours per day
- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Crushing/Processing Equip (142 hp) operating at a 0.78 load factor for 8 hours per day
- 1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\2A Landform Hab Restoration.urb924

Project Name: Phase 2A Landform and Habitat Restoration

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2013	0.13	0.98	0.64	0.00	4.96	0.05	5.01	1.04	0.05	1.08	111.08
Fine Grading 09/01/2013-03/31/2014	0.13	0.98	0.64	0.00	4.96	0.05	5.01	1.04	0.05	1.08	111.08
Fine Grading Dust	0.00	0.00	0.00	0.00	4.96	0.00	4.96	1.04	0.00	1.04	0.00
Fine Grading Off Road Diesel	0.13	0.98	0.58	0.00	0.00	0.05	0.05	0.00	0.05	0.05	105.54
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.54
2014	0.09	0.67	0.45	0.00	3.65	0.03	3.68	0.76	0.03	0.79	81.72
Fine Grading 09/01/2013-03/31/2014	0.09	0.67	0.45	0.00	3.65	0.03	3.68	0.76	0.03	0.79	81.72
Fine Grading Dust	0.00	0.00	0.00	0.00	3.65	0.00	3.65	0.76	0.00	0.76	0.00
Fine Grading Off Road Diesel	0.09	0.67	0.42	0.00	0.00	0.03	0.03	0.00	0.03	0.03	77.64
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.08

Phase Assumptions

Phase: Fine Grading 9/1/2013 - 3/31/2014 - Default Fine Site Grading Description

Total Acres Disturbed: 22.8

Maximum Daily Acreage Disturbed: 5.7

Fugitive Dust Level of Detail: Default

3/8/2011 8:10:06 PM

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\2B Connect Trail Bald Mtn.urb924

Project Name: Phase 2B Connector Trail to Bald Mountain

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2014	0.02	0.17	0.09	0.00	0.10	0.01	0.11	0.02	0.01	0.03	25.86
Fine Grading 01/01/2014-02/28/2014	0.02	0.17	0.09	0.00	0.10	0.01	0.11	0.02	0.01	0.03	25.86
Fine Grading Dust	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.02	0.00	0.02	0.00
Fine Grading Off Road Diesel	0.02	0.17	0.08	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.21
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64

Phase Assumptions

Phase: Fine Grading 1/1/2014 - 2/28/2014 - Default Fine Site Grading Description

Total Acres Disturbed: 0.95

Maximum Daily Acreage Disturbed: 0.24

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Off Highway Trucks (250 hp) operating at a 0.57 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.Kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\2C Soil Excavation Mt Um Rd.urb924

Project Name: Phase 2C Soil Excavation Along Mount Ununhum Road

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	ROG	NOX	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2014	0.05	0.36	0.24	0.00	0.77	0.02	0.79	0.16	0.02	0.18	55.03
Fine Grading 01/01/2014-03/31/2014	0.05	0.36	0.24	0.00	0.77	0.02	0.79	0.16	0.02	0.18	55.03
Fine Grading Dust	0.00	0.00	0.00	0.00	0.77	0.00	0.77	0.16	0.00	0.16	0.00
Fine Grading Off Road Diesel	0.04	0.32	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	43.95
Fine Grading On Road Diesel	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.63
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45

Phase Assumptions

Phase: Fine Grading 1/1/2014 - 3/31/2014 - Default Fine Site Grading Description

Total Acres Disturbed: 4.83

Maximum Daily Acreage Disturbed: 1.21

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 66.96

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\2D Resurfacing Mt Um Rd.urb924

Project Name: Phase 2D Resurfacing Mount Umunhum Road

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2014	0.08	0.38	0.25	0.00	0.00	0.03	0.03	0.00	0.03	0.03	41.63
Asphalt 01/01/2014-03/31/2014	0.08	0.38	0.25	0.00	0.00	0.03	0.03	0.00	0.03	0.03	41.63
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.34	0.22	0.00	0.00	0.03	0.03	0.00	0.03	0.03	31.25
Paving On Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.93
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45

Phase Assumptions

Phase: Paving 1/1/2014 - 3/31/2014 - Resurfacing of Mt Um Rd

Acres to be Paved: 13.29

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\3A Demo Housing.urb924

Project Name: Phase 3A Demolition of Former Housing Area

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2017	0.03	0.29	0.15	0.00	0.07	0.01	0.08	0.01	0.01	0.02	71.51
Demolition 01/01/2017-01/31/2017	0.03	0.29	0.15	0.00	0.07	0.01	0.08	0.01	0.01	0.02	71.51
Fugitive Dust	0.00	0.00	0.00	0.00	0.10	0.00	0.10	0.02	0.00	0.02	0.00
Demo Off Road Diesel	0.02	0.21	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	40.85
Demo On Road Diesel	0.01	0.08	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.26
Demo Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40

Phase Assumptions

Phase: Demolition 1/1/2017 - 1/31/2017 - Demolition of Former Housing Area

Building Volume Total (cubic feet): 240000

Building Volume Daily (cubic feet): 15000

On Road Truck Travel (VMT): 660.71

Off-Road Equipment:

- 1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 1 Generator Sets (549 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\3B Parking Lots Staging Areas.urb924

Project Name: Phase 3B Parking Lots and Staging Areas

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2017	0.02	0.12	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	17.38
Asphalt 01/01/2017-01/31/2017	0.02	0.12	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	17.38
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.02	0.12	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	13.99
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25

Phase Assumptions

Phase: Paving 1/1/2017 - 1/31/2017 - Two Parking Lots and Staging Areas

Acres to be Paved: 2

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\Documents and Settings\Austin.kerr\Application Data\Urbemis\Version9a\Projects\Mt Umunhum Env Rest & Pub Access Project\3C Multi-Use Trail.urb924

Project Name: Phase 3C Installation of Multi-Use Trail

Project Location: Santa Clara County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2017	0.04	0.26	0.19	0.00	0.06	0.01	0.07	0.01	0.01	0.02	59.93
Fine Grading 01/01/2017-03/31/2017	0.04	0.26	0.19	0.00	0.06	0.01	0.07	0.01	0.01	0.02	59.93
Fine Grading Dust	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.04	0.26	0.17	0.00	0.00	0.01	0.01	0.00	0.01	0.01	57.44
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49

Phase Assumptions

Phase: Fine Grading 1/1/2017 - 3/31/2017 - Installation of Multi-Use Trail

Total Acres Disturbed: 0.35

Maximum Daily Acreage Disturbed: 0.09

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Off Highway Trucks (479 hp) operating at a 0.57 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Appendix C

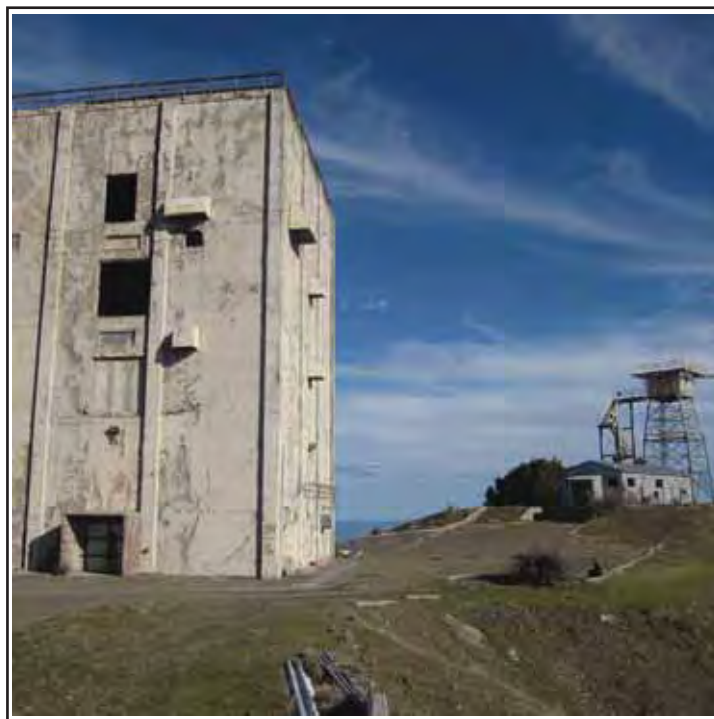
Plant Species Unlikely to Occur

Appendix C. Special Status Plants Unlikely to Occur in the Study Area Due to a Lack of Suitable Habitat					
Species	Status ¹			Habitat	Blooming Period
	FESA	CESA	California Rare Plant Rank		
<i>Arctostaphylos silvicola</i> Bonny Doon manzanita	–	–	1B.2	Closed-cone coniferous forest, chaparral, lower montane coniferous forest	February- March
<i>Arenaria paludicola</i> marsh sandwort	E	E	1B.1	Freshwater marshes	May-August
<i>California macrophylla</i> round-leaved filaree	–	–	1B.1	Clay soil, cismontane woodland, grassland	March-May
<i>Campanula californica</i> swamp harebell	–	–	1B.2	Moist places; bogs and fens, closed- cone coniferous forest, coastal prairie, meadows, freshwater marshes and swamps	June- October
<i>Carex comosa</i> bristly sedge	–	–	2.1	Marshes and swamps, lake margins, coastal prairie, grassland	May- September
<i>Carex saliniformis</i> deceiving sedge	–	–	1B.2	Moist places, coastal prairie, coastal scrub, meadows, coastal salt marshes	June
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	–	–	1B.2	Alkaline soil, grassland	May-October
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i> Ben Lomond spineflower	E	–	1B.1	Lower montane coniferous forest	April-July
<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	T	--	1B.2	Coastal dunes, chaparral, cismontane woodland, coastal scrub, grassland	April-July
<i>Chorizanthe robusta</i> var. <i>hartwegii</i> Scotts Valley spineflower	E	–	1B.1	Meadows, grassland	April-July
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	E	–	1B.1	Coastal dunes, coastal scrub, openings in cismontane woodland, in sandy or gravelly soil	April- September
<i>Dacryophyllum falcifolium</i> tear drop moss	–	–	1B.3	Coniferous forest on carbonate soils	Not applicable
<i>Eriogonum nudum</i> var. <i>decurrens</i> Ben Lomond buckwheat	–	–	1B.1	Inland marine sands in chaparral, closed-cone coniferous forest, sand parkland, sandhill ponderosa pine forest	June- October
<i>Fissidens pauperculus</i> minute pocket moss	–	–	1B.2	Coniferous forest on damp coastal soil	Not applicable
<i>Fritillaria liliacea</i> fragrant fritillary	–	–	1B.2	Heavy clay soil, cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland	February- April
<i>Hesperocyparis abramsiana</i> Santa Cruz cypress	E	E	1B.2	Closed-cone coniferous forest, chaparral, sandhill ponderosa pine forest on sandstone or granitic	Not applicable

Appendix C. Special Status Plants Unlikely to Occur in the Study Area Due to a Lack of Suitable Habitat					
Species	Status ¹			Habitat	Blooming Period
	FESA	CESA	California Rare Plant Rank		
				substrate	
<i>Holocarpha macradenia</i> Santa Cruz tarplant	T	E	1.B.1	Coastal prairie, coastal scrub, grasslands	June-October
<i>Horkelia marinensis</i> Point Reyes horkelia	–	–	1B.2	Coastal dunes, coastal prairie, coastal scrub	May-September
<i>Lasthenia conjugens</i> Contra Costa goldfields	E	–	1B.1	Moist places, grassland, vernal pools, cismontane woodland, alkaline playas	March-June
<i>Microseris paludosa</i> marsh microseris	–	–	1B.2	Moist places in closed-cone coniferous forest, cismontane woodland, coastal scrub, grassland	April-June
<i>Penstemon rattanii</i> var. <i>kleei</i> Santa Cruz Mountains beardtongue	–	–	1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest, often in sandy soil	May-June
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	E	E	1B.1	Grassland, coastal scrub, coastal prairie	March-May
<i>Plagiobothrys diffusus</i> San Francisco popcorn-flower	–	E	1.B.1	Coastal prairie; grassland	March-June
<i>Plagiobothrys glaber</i> hairless popcorn-flower	–	–	1A	Alkaline soil in meadows, coastal salt marshes	March-May
<i>Polygala subspinosa</i> spiny milkwort	–	–	2.2	Great Basin scrub and Pinyon and juniper woodland on gravelly, rocky soils	May - August
<i>Polygonum hickmanii</i> Scotts Valley polygonum	E	E	1B.1	Grassland	May-August
<i>Streptanthus albidus</i> ssp. <i>albidus</i> Metcalf Canyon jewel-flower	E	–	1B.1	Serpentine soil, grassland	April-July
<i>Trifolium buckwestiorum</i> Santa Cruz clover	–	–	1B.1	Coastal prairie; margins of broadleaf upland forest, cismontane woodland	April-October
<i>Tropidocarpum capparideum</i> caper-fruited tropidocarpum	–	–	1B.1	Alkaline soils, grassland	March-April
¹ Status definitions:					
Federal Endangered Species Act (FESA): E Endangered T Threatened	California Rare Plant Rank: 1A Presumed extinct in California 1B Considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)	Extensions: .1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat) .2 Fairly endangered in California (20 to 80% of occurrences are threatened) .3 Not very endangered in California	California Endangered Species Act (CESA): E Endangered	2 Considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)	
Source: CNDDDB 2011 and CNPS 2011.					

Appendix D

Section 106 Technical Report and SHPO
Concurrence Letter



Section 106 Technical Report

October 12, 2011

Former Almaden Air Force Station
Mt. Umunhum and Mt. Thayer,
Santa Clara County, CA

Prepared for
Mid-Peninsula Regional Open Space District
Los Altos, CA

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I. INTRODUCTION

The U.S. Congress established the Section 106 Federal Review process as part of the National Historic Preservation Act of 1966 to ensure that historic properties are considered during Federal project planning and execution.¹ Section 106 of 36 CFR Part 800 (“Protection of Historic Properties”), of the National Historic Preservation Act requires Federal agencies or other agencies making use of Federal funds to take into account the effects of their undertakings on historic properties.² Under Section 106, historic properties are defined as “any prehistoric or historic district, site, building, or object included in, or eligible for inclusion in, the National Register of Historic Places.”³ Under Section 106, in order for an undertaking to affect a historic property, the property must be listed or determined eligible for listing in the National Register. Properties eligible for local or state historical registers are not considered historical resources under the Section 106 Federal Review Process, unless they also qualify for National Register listing.⁴

FEDERAL UNDERTAKING

The U.S. Army Corps of Engineers (USACE) is proposing to abate hazardous-containing materials from existing structures at the former Almaden Air Force Station site. This project follows hazardous materials remediation completed by the USACE under the Formerly Used Defense Sites, (FUDS) program. Under FUDS, petroleum-related contamination was remediated, including removal of several large diesel storage tanks, associated piping, and PCB-containing transformers. The FUDS program did not address the presence of asbestos and lead-based paint, nor other hazardous building materials which in their current condition are potentially harmful to both people and the environment. USACE is proposing to remove these hazardous materials from the interior and exterior of existing structures at the former base. The proposed abatement actions are being conducted by firms under contract to the USACE. The Midpeninsula Open Space District (MROSD), as the owner of the property, must issue a Permit to Enter to the USACE.⁵ This technical report is being prepared in support of Section 106 consultation and documentation. The USACE is the lead agency for this project.

PROJECT LOCATION

The project site, owned by MROSD, is located on the summits of Mount Umunhum and Mount Thayer, both at approximately 3,480 feet above sea level (See **Appendices A and B**). These two summits are part of a range of mountains on the west side of the Santa Clara Valley (east of Monterey Bay) that, along with numerous other ranges, comprise the northern Coast Ranges of California. The project site is part of MROSD’s 17,000-acre Sierra Azul Open Space preserve (refer to Exhibit 2-2, Regional Map). The project site is accessed by Mt. Umunhum Road and is currently closed to the public. Although the entire base consists of 43.72 acres, the project site is limited to the immediate areas around the on-site structures; approximately 20 acres on Mount Umunhum and approximately 3 acres on Mount Thayer. The project site is located on the following Assessor’s Parcel Numbers (APNs): 562-08-003, 562-08-004, and 562-09-050.

¹ Advisory Council on Historic Preservation, *Section 106 Regulations* <<http://www.achp.gov/regs.html>>

² Undertakings are defined as “any project, activity, or program that can result in changes in the character or use of historic properties, if any such historic properties are located in an area of potential effect. The project, activity, or program must be under the direct or indirect jurisdiction of a Federal agency or licensed or assisted by a Federal agency. Undertakings include new and continuing projects, activities or programs and any of their elements not previously considered under Section 106.”[36 CFR § 800.2 (o)]

³ 16 U.S.C. 470w (5)

⁴ Advisory Council on Historic Preservation, *Introduction to Federal Projects and Historic Preservation Law* (January 1993) II-30.

⁵ Ascent Environmental, “Almaden AFS Structural Abatement IS/MND.”

SITE DESCRIPTION

The project site consists of a complex of former military buildings and associated facilities (driveways, parking lots, storage buildings, etc.), including a large concrete structure formerly used as a podium supporting an 85-ton radar dish. This dish was removed before MROSD acquired the property. The buildings have been abandoned for 30 years and are currently severely dilapidated due to vandalism and extreme weather conditions. The site has become overgrown with vegetation (mostly ornamental landscaping species), and interior roads, parking lots and infrastructure have deteriorated. The FUDS Remediation Project was limited to petroleum-related contamination. Hazardous Materials Investigations conducted in 1997 and 2010 have confirmed the existence of hazardous materials in almost all structures on site including asbestos, lead based paints, and PCB-containing light fixture ballasts. Due to the current deteriorated state of the existing structures, the hazardous materials are becoming an increasing hazard. For example, over time asbestos insulation on pipes has broken off and fallen to the ground, creating friable asbestos-containing dust; asbestos floor tiles and mastic have popped off the floor; lead and asbestos laden exterior coatings have begun to peel and fall to the ground.⁶

NEED FOR THE PROPOSED PROJECT

All of the major structures on the project site were constructed with asbestos- and lead-containing materials. Many of these materials, including those on the soil surface, are currently in a deteriorated, friable state and present an increasing environmental hazard. Because the project site is on a mountain summit, winds are often very strong. Over time if the current conditions are not remediated, there is the potential that these materials could be blown further afield, and possibly off the project site. In addition, the location of the site is at the top of four key watersheds, which could be harmfully affected by the deteriorating materials. Abatement of the hazardous materials associated with the on-site structures is necessary to protect the surrounding environment by mitigating the potential for spreading of contamination.

PUBLIC PARTICIPATION

The USACE completed a Record of Environmental Consideration (REC) as part of its National Environmental Protection Act-Categorical Exemption (NEPA-CatEx) report, which was completed in August 2010 for the Remediation project. RECs do not allow consultation or coordination with state or federal resource agencies, Native American groups, or the general public at large.

MROSD conducted stakeholder and public outreach regarding the Restoration project⁷ as part of the CEQA process. The outreach was performed prior to abatement, and the public was informed about the Remediation project. Among the stakeholder groups consulted were Native American tribe members. In March 2010, the District wrote to the California Native American Heritage Commission to request the list of Native American contacts relevant to the project area. The District communicated with the persons listed on the NAHC contact list to invite them to public meetings, media events, and for project meetings. Two meetings were conducted: one with the Amah Mutsun and one with members of the Muwekma tribe. Since the Remediation project only affected existing structures and not the land around them, there was no real interest or potential impacts on any Native American cultural resources. The MROSD submitted the full documentation of their outreach with the Native Americans as part of their Restoration Project Section 106 package.

⁶ Ascent Environmental, "Almaden AFS Structural Abatement IS/MND."

⁷ MROSD's Mount Umunhum Environmental Restoration and Public Access Project (Restoration project) will occur after the Remediation project is complete. It includes phased public access to the summit of Mount Umunhum, as well as roadway and access improvements, environmental restoration, development of public use facilities and a range of possible amenities such as trails, observation and reflection areas, interpretive displays, picnic tables, restrooms, camp sites, and visitor center. The project also includes longer term plans to allow public access to the summit of Mount Thayer via a trail connection from Ralph's Mountain.

In addition, the CEQA Mitigated Negative Declaration for the Remediation project was adopted by the MROSD Board during a public meeting, wherein public comments were addressed. As part of the preparation of the administrative draft EIR for the Restoration Project, the County of Santa Clara Department of Planning and Development was also consulted about the findings of Page & Turnbull's Historic Resource Study (March 2011), and as a result of their comments, Page & Turnbull produced an addendum that further explored the local historic context. The County of Santa Clara Department of Planning and Development ultimately concurred with the findings of the report.

II. PROJECT DESCRIPTION

PROJECT OBJECTIVES

The proposed project is intended to achieve the following primary objectives:

- ▲ Protect public health by abatement of building materials that could pose a hazard to the public and that are currently being released into the environment;
- ▲ Protect the surrounding environment by removing loose hazardous materials on the site that could be carried off site by wind or surface water runoff; and
- ▲ Protect wildlife by removing loose hazardous materials on the site that could be internalized by local wildlife species and subsequent predators.

DESCRIPTION OF PROPOSED STRUCTURE ABATEMENT

The proposed Remediation project involves removing hazardous building materials from the interiors and exteriors of on-site structures, as well as removal of pieces of exterior coating that have fallen to the ground around the structures. The following building materials were found to contain asbestos, lead, or polychlorinated biphenyls (PCBs): floor tiles, adhesives & mastics (including between metal wall and roof panels), exterior and interior wall panels, wallboard system (joint compound), window glazing, exterior caulking, exterior sealants, roof mastic, exterior/interior paint, ceramic tile glaze, flashing, and lighting ballasts.

Removal of hazardous materials from the structures will be mostly accomplished manually with hand-held tools or smaller machines/equipment and will not require heavy equipment (such as bull dozers, excavators, or front loaders). Boom lifts, scissor lifts, and other types of lifts will likely be utilized in lieu of scaffolding due to the high winds experienced on site. Hazardous materials that have blown off the buildings onto the ground surface will be removed either by hand or with an approved HEPA-filtered vacuum. All abatement activities will be performed consistent with state and federal Occupation Safety and Health Administration (OSHA) and Bay Area Air Quality Management District (BAAQMD) regulations.

The project would not involve ground disturbing construction activities (e.g., grading, excavating, etc.), although substantial pruning and clearing of overgrown vegetation around the buildings will be required to provide access around the buildings to complete the abatement work.

All hazardous materials removed from the buildings and the ground surface will be stored at the project site consistent with OSHA and BAAQMD regulations. It is anticipated that approximately four trucks per week will transport waste from the project site to approved disposal facilities, depending on type of material and level of hazard (either Kettleman City, Alameda, or Forward landfill in Stockton). Non-hazardous wastes will be transported to a recycling facility or a local landfill.

The abatement project will take approximately 4-6 months to complete with a maximum on site presence of a 50-worker abatement crew. Most work will be during daylight hours; nighttime work

may also occur, and primarily will take place inside the buildings. Several of the existing paved parking areas on-site will serve as construction worker parking areas and construction vehicle staging areas. There may also be some temporary worker lodging on site.

CONDITION OF THE SITE AFTER STRUCTURE ABATEMENT

Once the structure abatement is complete, the potential for wind-blown hazardous materials to be transported off the site by wind or surface runoff would be eliminated. Since there has been surface contamination of flaked materials around some of the buildings, future projects will test soils, and determine whether further remediation is required. Therefore, there may be future clean up activities required, either around or under building structures. This work would be completed under a separate, future project, which would be the subject of future environmental review prior to approval.

MROSD anticipates the ultimate future use of the Mt. Umunhum site will be for public open space; however, the federal funds to be used for this project are intended solely to clean up hazardous waste, which is required irrespective of any future use. Although it is acknowledged that the District intends to use the site for public open space in the future, the proposed project is a priority for the District to protect public health and the environment. The proposed structure abatement is necessary whether or not the site is proposed for future open space use.⁸

III. RESEARCH METHODOLOGY

This Section 106 Technical Report is based upon research that Page & Turnbull conducted for CEQA purposes in 2010 and 2011. In July 2010, Page & Turnbull completed a Historic Resource Study of forty-five resources at the former Almaden Air Force Station.⁹ This study consisted of site visits on February 10 – 11, 2010. Page & Turnbull updated this Historic Resource Study in February and March 2011 by surveying the Almaden Air Force Station GATR complex at Mt. Thayer, bringing the total number of surveyed properties to forty-seven. Fieldwork focused primarily on basic documentation with field notes and digital photography. No DPR forms were produced for the Historic Resource Study, though they are being produced for this Section 106 report using field notes and photographs from February 2010 (see Appendix G).

The survey found that thirty (30) buildings, structures, and objects were no longer extant or were not visible for survey in February 2010 (prior to the abatement project). They were therefore not evaluated in Page & Turnbull's Historic Resource Study (March 2011), nor were they evaluated in this report. They include:

Building # and Name	Reason Not Surveyed
104: Paint Storage	Shown on 1970s map (see Appendix B) northwest of Operations (Building 100); removed prior to 1994.
106: Water Storage Tank	In-ground storage tank; not visible to be surveyed.
107: Radio Tower FPS-90	Removed in 1980; concrete footing foundation extant but radar and structure no longer extant.
117: Diesel Storage A&B	All fuel tanks were removed by the Army Corps of Engineers through the FUDS program in the mid-1990s.
124: Fire Hose House	1970s map indicates it was located in front of the training building (Building 110); removed prior to 1994.

⁸ Ascent Environmental, "Almaden AFS Structural Abatement IS/MND."

⁹ Page & Turnbull staff member Christina Dikas is the primary author of this study. She meets the Secretary of the Interior's Professional Qualifications Standards in Architectural History.

126: Fire Hose House	1970s map indicates it was located near the USGS equipment east of Building 100; removed prior to 1994.
127: Fire Hose House	1970s map indicates it was located near the USGS equipment east of Building 100; removed prior to 1994.
128: Fire Hose House	1970s map indicates it was located behind the supply storage building addition (Building 120); removed prior to 1994.
129: Fire Hose House	1970s map indicates it was located in front of Building 119, at the west end; removed sometime between 1994 and February 2010.
130: Fire Hose House	1970s map indicates it was located in front of the power plant (Building 120); removed sometime between 1994 and February 2010.
140: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
141: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
142: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
143: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
209: Fire Hose House	1970s map indicates it was located at the south end of the Orderly Room (Building 207); no longer extant.
310: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
311: Sewage Septic Tank	In-ground vault; not visible to be surveyed.
415: Storage for Heating Fuel	All fuel-related items were removed by the Army Corps of Engineers through the FUDS program in the mid-1990s.
420: Storage for Gasoline	All fuel-related items were removed by the Army Corps of Engineers through the FUDS program in the mid-1990s.
421: Vehicle Fueling Station/Pump	All fuel-related items were removed by the Army Corps of Engineers through the FUDS program in the mid-1990s.
600: Water Pump Station	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
601: Water Pump Station	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
602: Storage Tank	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
607: Earthen Dam Facility	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
609A: Earthen Dam Facility	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
609B: Earthen Dam Facility	Located off site on lands that are now owned by San Jose Water Company. They were never sold to the District and are not part of the Project Area
711: Heating Fuel Oil Storage	All fuel tanks were removed by the Army Corps of Engineers through the FUDS program in the mid-1990s.
712: Sewage Septic Tank	In-ground vault; not accessible for survey.
713: Water Storage Tank	In-ground vault; not accessible for survey.
884A: Water Tank, Wood	Collapsed and removed prior to 1994.

Page & Turnbull conducted a review of historical documents, maps, facilities records, and historic photos. Research sources are cited in the bibliography. Historic research also included consultation with Kirk Lenington, Senior Resource Planner at the MROSD, as well as interviews with local Santa Clara valley residents who have amassed a wealth of information regarding the former Almaden Air Force Station. These local sources included:

- Basim Jaber, who has been very active with Almaden Air Station veterans and has provided information regarding the Almaden Air Force Station site history and individual building histories. This information was derived from historic documents, photographs and oral histories, as well as correspondence with former Air Force staff.
- David Schwaderer, who provided information about the Almaden Air Force Station site history.

In July 2011, Page & Turnbull further researched the local historic context of Santa Clara County during the Cold War era. The information is contained in the Addendum to the Historic Resource Study, included in the Section 106 Technical Report.

This Section 106 Report does not contain a summary of archeological documentation, but a detailed analysis of potential impacts to archeological resources was conducted by Mark Hylkema and is included in Hylkema's *Mt. Umunhum Rehabilitation ASR* (2010).

IV. AREA OF POTENTIAL EFFECTS

According to the implementing regulations of the National Historic Preservation Act (NHPA), the Area of Potential Effect (APE) is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."¹⁰ The APE should include all visual, audible, socio-cultural and indirect effects that may occur as a result of the undertaking.

BOUNDARIES

In accordance with the U.S. Army Corps of Engineers' "Record of Environmental Consideration," the Area of Potential Effects (APE) for this project consists of the "project site [which] is limited to the immediate areas around the on-site structures: approximately 20 acres on Mount Umunhum and approximately 3 acres on Mount Thayer."¹¹ This area includes the Radar installation and cantonment on Mt. Umunhum and the GATR site on Mt. Thayer, as depicted in yellow and orange on the project APE Map (see **Appendix C**). Thus, the boundaries will include all of the built features that formed the Almaden AFS at the peaks of both mountains. This APE was concurred upon by the California SHPO in a letter dated 27 April 2011, which states, "I concur that the APE has been properly determined and documented pursuant to 36 CFR Parts 800.4 (a) 1(1) and 800.16(d)."¹²

PROPERTIES WITHIN THE APE

The following 52 individual buildings, structures, and objects are located within the APE:

1: Flag Pole (1957)	225: Airman's Dining Hall (1957)
100: Operations (1957, addition in 1959)	226: Fire Hose House (ca. 1957)

¹⁰ 36 CFR 800.16(d) "Protection of Historic Properties," amended August 5, 2004.

¹¹ U.S. Army Corps of Engineers, "Record of Environmental Consideration," n.d., pg. 1.

¹² California Office of Historic Preservation, "Reply in Reference To: COE100816B, RE: Section 106 Consultation for Hazardous Material Abatement, Former Almaden Air Force Station, Santa Clara County," 27 April 2011.

102: Radar Tower FPS-24 (1959-1961)	230: Commissary (1957; addition in 1967)
103: Landing Zone (1962)	232: Fire Hose House (ca. 1957)
105: Fallout Shelter (1961)	233: Barracks, aka Airman's Dormitory and Chapel (1957)
108: Radar Tower MPS-14 (1962)	234: Fire Hose House (ca. 1957)
110: Training (1957)	245: Recreation (1957)
112: Electrical Power Station (1960)	250: Auto Maintenance Storage (1958)
114: Sheet, Pipe & Paint Storage (1965)	275: Swimming Pool (1957)
115: Security Sentry House (1964)	276: Bath House (1966)
118: Diesel Fuel Pump (1957)	300: Sewage Treatment (1958)
119: CE [Civil Engineering] Maintenance Shop (1957)	303: Sewage Area Storage (1958)
120: Warehouse Supply & Equipment (1957)	505: Carport (1958)
200: Water Pump Station (1957)	506, 507, 508, 509: Fire Hose House (ca. 1957)
205: Bachelor Officers' Quarters (1957)	510, 511, 512, 513, 514: Fourplex Apartment (1958)
206: Fire Hose House (ca. 1957)	515, 517: Triplex Apartment (1958)
207: Squadron Headquarters Orderly Room (1957)	516: Commander's House (1958)
211: Auto Maintenance Shop, aka Motor Pool (1960)	700: Communications Transmitter/Receiver (GATR Building) (1962)
212: NCO Open Mess (1957, addition 1975)	715/ 722: Security Sentry House (1966)
213: Dispensary (1957)	884B: Steel Water Tank (1958)
215: Fire Hose House (ca. 1957)	TELCO (1957)
217: Bowling Alley (1961)	Pipe Storage (post-1962)

AFFECTED ENVIRONMENT

Abatement is occurring on all of the buildings and structures within the APE because the materials contain asbestos and lead. Most or all of the buildings and structures will ultimately be demolished in order to return the mountains to their natural state.

The APE does not include any historic architectural, archeological, or cultural properties (see **Appendix D** and **Appendix G** for a detailed historic context and DPR523A and B forms). Furthermore, according to Mark Hylkema's thorough archeological analysis in *Mt. Umunhum Rehabilitation ASR* (2010), there are no archeological resources within the APE.

V. ARCHITECTURAL DESCRIPTION OF THE SITE

The primary facility on Mt. Umunhum is roughly divided into three sections: the operations area, the cantonment area, and the family housing area. The operations area is located at the east end of the site, and is divided into an upper and a lower section. The upper operations area, located on the highest peak of the site, housed the radar operations facilities, including the operations building (Building 100); storage shed; a concrete radar tower for the AN/FPS-24 (Building 102); a steel tower structure for the AN/MPS-14 (Building 108); and a training building (Building 110). The lower section of the operations area, located southwest of the peak, includes a supply warehouse (Building 120); the power station (Building 112); the civil engineering maintenance shop (Building 119); a TELCO building, paint storage (Building 114); pipe storage; and a diesel fuel pump building (Building 118).

The cantonment area is located at a lower elevation to the southwest, near the main entrance to the site. It includes the site administration buildings and support facilities for personnel at the station. The squadron headquarters/orderly room building (Building 207) and the bachelor officers quarters (Building 205) are located on a slight hill to the east in the cantonment area. A water pump is situated across the parking lot from these two buildings below a large metal water tank (once the site of two water tanks). Former community service buildings are located at the center of the cantonment area, including a dispensary (Building 213); NCO open mess (Building 212); automobile maintenance facility (Building 211); recreation building (Building 245); swimming pool and bathhouse (Buildings 275 and 276); bowling alley (Building 217); barracks/chapel/hobby shop (Building 233); commissary (Building 230); and airmen's dining hall (Building 225).

Downslope to the south is the family housing residential section, which includes a long carport (Building 505); five fourplex apartments (Buildings 510, 511, 512, 513, 514); two triplex apartments (Buildings 515 and 517); one single-family residence (Building 516); and several fire hose houses for fire protection. A sewage treatment area with oxidation ponds is located northwest of the cantonment.

The GATR complex is located one mile west on Mt. Thayer. Only two buildings remain: a small security sentry house (recorded as both Building 715 and 722) and the Communications Transmitter/Receiver building, also known as the GATR Building (Building 700). Surrounding Building 700 is an "antenna farm" of wood poles with anchoring cables.

The buildings at the former Almaden AFS feature reinforced concrete, concrete masonry unit (CMU), or wood frame construction. Notably, the station also includes a number of prefabricated steel "Butler buildings," which were first used by the military during World War II. Built by the Butler Manufacturing Co., Butler buildings feature an integrated structural steel building system with components that have been pre-engineered and fabricated based on the designer's specifications. At Almaden AFS, these buildings are long and narrow, with concrete foundations, corrugated metal siding, divided-light steel awning windows, and metal gable roofs. The steel Butler buildings are located in both the operations and cantonment areas of the station. They include the Training Building (Building 110); one section of the Operations building (Building 100); CE Maintenance Shop (Building 119); the Squadron Headquarters/Orderly Room (Building 207); Bachelor Officers Quarters (Building 205); Dispensary (Building 213); NCP Open Mess (Building 212); the Airmen's Dining Hall (Building 225); Commissary (Building 230); Barracks/Chapel (Building 233), and the Auto Maintenance Storage (Building 250). Five other Butler barracks buildings were once located in the cantonment, but were removed in the 1970s due to extensive deterioration and uninhabitable conditions. Only their concrete footing foundations remain today.

There is also one steel structure in the operations area—the tower for the AN/MPS-14 height finder radar. This structure has four steel supports that elevate a small metal enclosure at the top of the platform, which is accessed by metal stairs on the east side. The radar unit is no longer located above the tower.

The concrete masonry unit (CMU) buildings are also located in both the operations and cantonment areas, as well as at the GATR complex on Mt. Thayer. They include two sections of the Operations Building (Building 100); Warehouse Supply and Equipment (Building 120); the Electrical Power Station (Building 112); TELCO; Bowling Alley (Building 217); Recreation Building (Building 145); Paint Storage (Building 303); and the Communications Transmitter/RCVR building at GATR (Building 700). The AN/FPS-24 tower is a behemoth of reinforced concrete construction.

The wood frame buildings and structures are primarily located in the family housing section and the cantonment area, though there is a wood frame Sheet, Pipe and Paint Storage building (Building 114)

in the operations area and a wood-frame security sentry house (Building 715/722) at the GATR complex.

The apartment buildings, single family residence, and fire hose houses are all constructed with wood frames. The apartment buildings are of a typical Modern style common in California during the 1950s and 1960s, with flush wood doors, sliding aluminum-sash windows, and open stairwells ornamented with vertical wood slats. They appear to have been designed by the architecture firm of Porter, Urquhart, McCreary & O'Brien.

VI. EVALUATION AS A HISTORIC DISTRICT

The following is an evaluation of the former Almaden AFS for its eligibility as a National Register historic district, based upon the historic context of the site found in **Appendix D**. The historic context is primarily copied from Page & Turnbull's *Historic Resource Study: Former Almaden Air Force Station* (March 2011) and the *Historic Resource Study Addendum* (July 2011). However, it includes new information about the history of the Butler Manufacturing Company. The evaluation uses the significance criteria of the National Register of Historic Places. Individual evaluations are found in the attached DPR 523A and B forms (**Appendix G**).

The boundaries of the potential Almaden AFS historic district that is evaluated in this section aligns with the boundaries of the APE; in other words, it includes all of the built resources that were erected for the former Almaden AFS. The period of significance for the potential historic district is 1957-80, the period in which the station was in operation and all the buildings, structures, and objects were erected.

National Register of Historic Places

The National Register is the nation's most comprehensive inventory of historic properties. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, resources over fifty years of age are eligible for listing in the National Register if they meet any one of the four criteria of significance and if the resources retain historic integrity. However, resources under fifty years of age can be determined eligible for listing in the National Register if it can be demonstrated that they are of "exceptional importance," or if they are contributors to a proposed historic district. The National Register Criteria for Evaluation are described in full in Code of Federal Regulation, Title 36, Part 60 and in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*. There are four criteria under which a structure, site, building, district, or object can be considered eligible for listing in the National Register. These criteria are:

Criterion A (Event): Properties associated with events that have made a significant contribution to the broad patterns of our history;

Criterion B (Person): Properties associated with the lives of persons significant in our past;

Criterion C (Design/Construction): Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components lack individual distinction; and

Criterion D (Information Potential): Properties that have yielded, or may be likely to yield, information important in prehistory or history.

Registration Requirements

JRP Historical Consulting Services' *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) was reviewed in preparation for this report. This document, which was prepared for the U.S. Army Corps of Engineers, referenced the nationwide historic context, *Searching the Skies: The Legacy of the United States Cold War Defense Radar System* (David F. Winkler for the U.S. Air Force Air Combat Command, June 1997). JRP's report on California military resources includes a theme of "Early Warning Systems and Electronic Warfare," and a property type of "Major Radar Arrays." Registration requirements for this property type state that: "If the building is found to have supported an important radar set and the building itself retains integrity to its original appearance, the possibility exists that the building could be found to qualify for the National Register."¹³ Nevertheless, the report suggests that "it is unlikely that a major radar [structure] would be intact, including the radar unit itself."¹⁴ Thus, emphasis is made upon integrity, including the original radar sail, in order for the structure to be eligible.

Criterion A (Events)

The former Almaden Air Force Station was not found eligible for listing in the National Register as a historic district under Criterion A (Events). Though the facility was constructed as part of NORAD's Cold War defense system for the United States and Canada, nine permanent Early Warning Radar Air Force Stations existed in California during the same period. All of these facilities were connected to the SAGE command and control system in 1960-61, and at least three other stations contained separate GATR facilities. The former Almaden AFS was not singularly significant in function, nor was its equipment unique.

Within the network of California's NORAD stations, Mill Valley AFS functioned as headquarters. It was used as a control station in the 1950s; as a SAGE combat division center from 1961 to 1963; as San Francisco Defense Area NORAD Control Center from 1961 to 1974; and as one of six SLBM radar stations from 1968 to 1980. Because of these significant functions, the station was determined eligible for listing as a historic district on the National Register in 1995. By contrast, the former Almaden AFS did not operate at nearly the same level of significance within the Early Warning Radar system as Mill Valley AFS.

Almaden AFS operated from 1958 to 1980. It was not the first Cold War-era Air Force radar station to be established in California. In fact, it was the last station established without transferring a radar squadron from a previous location in California (e.g., Santa Rosa AFS to Lompoc AFS and San Clemente AFS to Fort MacArthur). The Mill Valley, Point Arena, Klamath, and Cambria Air Force Stations were established in 1951, and the Madera, Santa Rosa, Boron, San Clemente, and Mt. Laguna Air Force Stations were established in 1952. The establishment of these stations may be considered more significant than Almaden AFS because the 1951-52 system of Early Warning Radar stations was the United States' first major radar construction project as a result of Cold War tensions.¹⁵ Other stations also operated for longer periods than Almaden AFS, including Klamath AFS, which closed in the 1980s, Mt. Laguna which closed in the 1990s, and Point Arena which did not close until 1998.

In summary, Almaden AFS is not a unique example of a California Early Warning Radar Air Force Station, nor is it the first, most important, longest-serving, or only remaining example of such a station. For these reasons, the former Almaden AFS was not found eligible for listing in the National Register as a historic district at the national and state-wide levels of significance.

¹³ JRP Historical Consulting Services, *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) 8-25.

¹⁴ Ibid.

¹⁵ National Park Service: 1.

Within Santa Clara County, Cold War operations occurred at a number of locations in addition to Almaden AFS. These include Moffett Field, Onizuka AFS (then AFB), and within the high-tech industry. Onizuka AFS served an extremely important purpose as the primary military satellite communications facility in the U.S., with no other comparable backup facility for thirty years. It has been identified as potentially eligible for the National Register. It does not appear that Onizuka AFS interacted with Almaden AFS during the Cold War. Compared to Onizuka AFS, the responsibilities of Almaden AFS were not nearly as vital within the context of Cold War defense in Santa Clara County, nor did Almaden AFS's operations maintain intimate links with the technological developments that were locationally unique to Silicon Valley during this period. For these reasons, the former Almaden AFS has been found ineligible for listing in the National Register as a historic district at the local level of significance.

In conclusion, the former Almaden AFS does not possess sufficient significance in conjunction with its role in Cold War defense within the national, state-wide, or local context. It therefore was not found eligible for listing as a historic district on the National Register.

Criterion B (Persons)

The former Almaden AFS was not found eligible for listing in the National Register under Criterion B (Persons). It was a military facility and by definition all of the personnel worked together in support of the operational mission. Research has failed to turn up an intimate association with a particularly prominent person or persons that would justify its inclusion in the National Register under this criterion.

Criterion C (Architecture & Design)

The former Almaden Air Force Station was not found eligible for listing in the National Register as a historic district under Criterion C (Architecture & Design). The buildings at the former Almaden AFS are common to radar stations of the Cold War era in terms of construction materials, style, size, massing, and use. The prefabricated steel Butler buildings used for radar support, administration, barracks and support facilities were also common to other military installations, including other Air Force Stations within the California NORAD system. Various engineering firms designed the type of building they wanted (width, length, and interior layout), and Butler Manufacturing Company manufactured them. Though utilized by the U.S. military, Butler buildings did not develop as a response to World War II or the Cold War, but rather, to agricultural and industrial needs. They are a ubiquitous building type that has been used for commercial, residential, industrial, institutional, and agricultural applications since the early 20th century. Though the expansion of federal defense projects was good business for Butler Manufacturing Company during the Cold War, it was not significant in terms of producing the building type.

The wood-frame buildings at the former Almaden AFS were found at all of the Air Force radar stations. The wood-frame apartments, though modern in design, resemble other mass-produced military housing of the era, such as those constructed for the Capehart and Wherry programs. The buildings likewise do not appear significant in the portfolio of Porter, Urquhart, McCreary & O'Brien, who worked on larger military housing projects elsewhere.

The radar structures used at the Almaden AFS followed common conventions similar to other radar installations. Height-finder radars were placed on steel structural supports, while search radars were placed on multi-story concrete cubes. The specific types of radars varied from station to station, and also varied over the years as technology improved. However, a select number of radars were in use during a given time period. For example, all nine other stations in California used AN/FPS-6 series height-finder radars, and seven used the AN/FPS-90. Three used the AN/FPS-20 search radar, and Santa Rosa AFS used the AN/MPS-14. Point Arena was the only other Early Warning Radar Station in California to operate the large AN/FPS-24. The concrete tower at the former Almaden AFS

supported the second of twelve production models of the AN/FPS-24—the first being at Point Arena. Furthermore, the radars themselves have been removed from the towers at the former Almaden AFS. The towers consequently do not retain integrity of design, materials, workmanship, feeling, and association because they do not retain the technical equipment related to the historic function of the building. Thus, the historic integrity has been lost. A rare fully intact AN-FPS-24 radar sail remains at Camp Hero on Long Island, New York.

The buildings and structures at the former Almaden AFS do not represent the work of a master or possess high artistic values. They embody the characteristics of a type, period, and method of construction, but within the broader historic context of the period, they do not stand out as a collection of buildings that should be recognized for their design as a National Register historic district.

Finally, in consideration of the former Almaden AFS as a cultural landscape, the facility's site and layout are not unique compared to the other Cold War-era Air Force radar stations. For example, the Mill Valley, Point Arena, Klamath, Cambria, Santa Rosa Island, San Clemente, and Mt. Laguna Air Force Stations were all situated on elevated pieces of land—either mountains or coastal bluffs—as these locations were advantageous for non-obstructed radar placement. It was also not uncommon for stations to combine the radar installation with multiple family housing and community services because the facilities were situated in relatively isolated locations. The former Almaden AFS therefore does not appear significant as a cultural landscape.

Criterion D (Information Potential)

The analysis of the former Almaden Air Force Station for eligibility under National Register, Criterion D (Information Potential) is beyond the scope of this report. This Criterion is typically reserved for archaeological resources.

VII. FINDING OF NO HISTORIC PROPERTIES IDENTIFIED

The APE does not include historic properties. Prior to Page & Turnbull's Historic Resource Study (July 2010 and March 2011), none of the buildings and structures on the site had been evaluated for historic significance, and none were assigned California Historical Resource Status Codes.

Of the 52 resources Page & Turnbull examined at the former Almaden Air Force Station on Mt. Umunhum and Mt. Thayer, none of the properties were found individually eligible for listing on the National Register by Page & Turnbull, whether at the local, state, or national level of significance (see Table 1). Most are support facilities or residences that are not significant architecturally and did not have a function individually vital to the mission of the station. The four extant buildings that were most important to the station include Building 100 (the Operations Building); Building 102 (the concrete tower for the AN/FPS-24 radar); Building 108 (the steel tower for the AN/MPS-14 radar); and Building 110 (the original GATR building). However, none of these buildings retain sufficient integrity to qualify for listing in the National Register as historic properties (see **Appendix G**).

Therefore, the proposed project has a finding of “No Historic Properties Affected” under Section 106 of the National Historic Preservation Act.

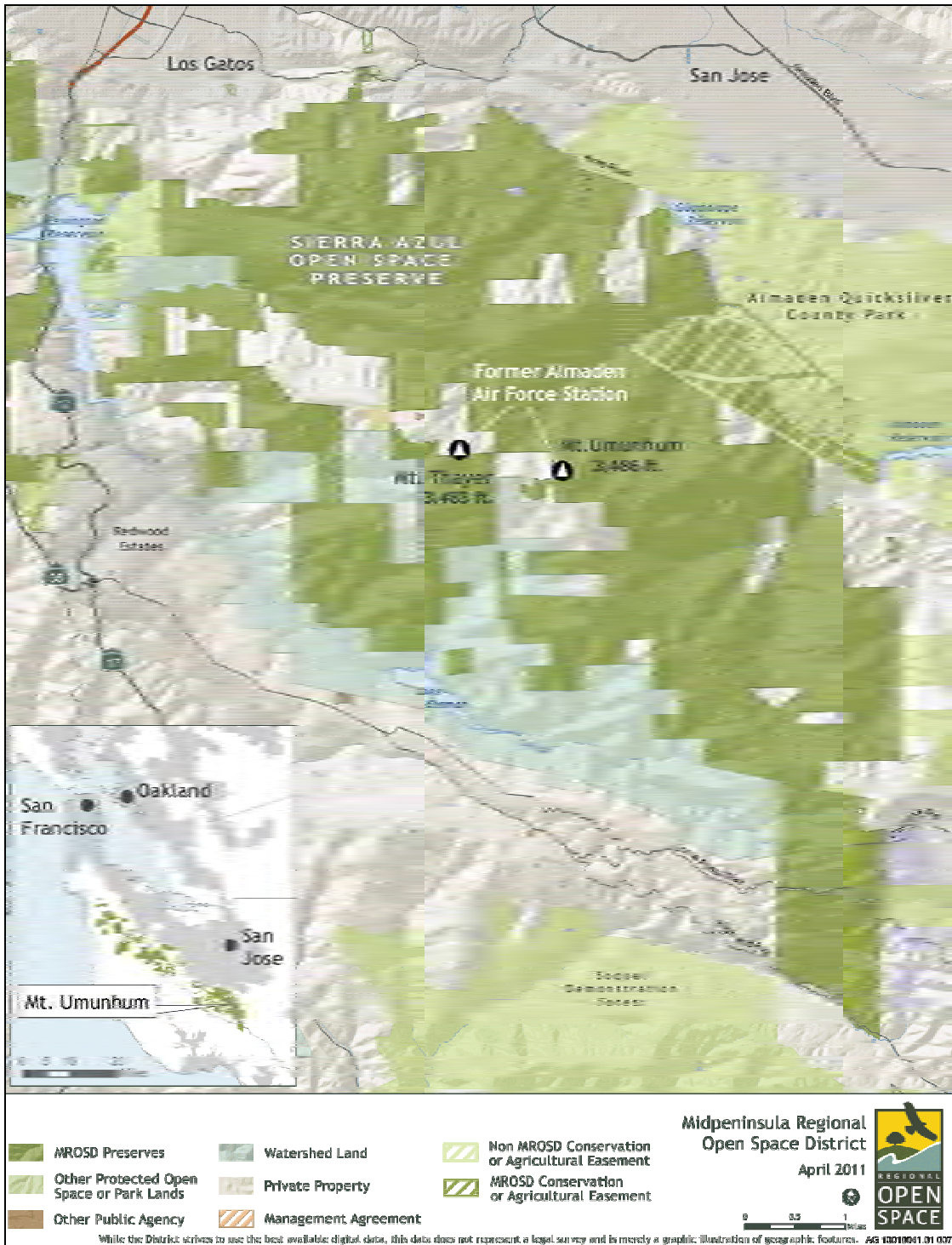
Table 1. Determination of Eligibility for 52 Surveyed Buildings, Structures, and Objects at the Former Almaden Air Force Station on Mt. Umunhum.¹⁶

¹⁶ All dates checked and/or provided via Email Correspondence with Basim Jaber, 9 March 2010. Some drawings for buildings on file at MROSD are dated 1955 or 1956, but these drawings pre-date the establishment of the facility and actual construction of the buildings.

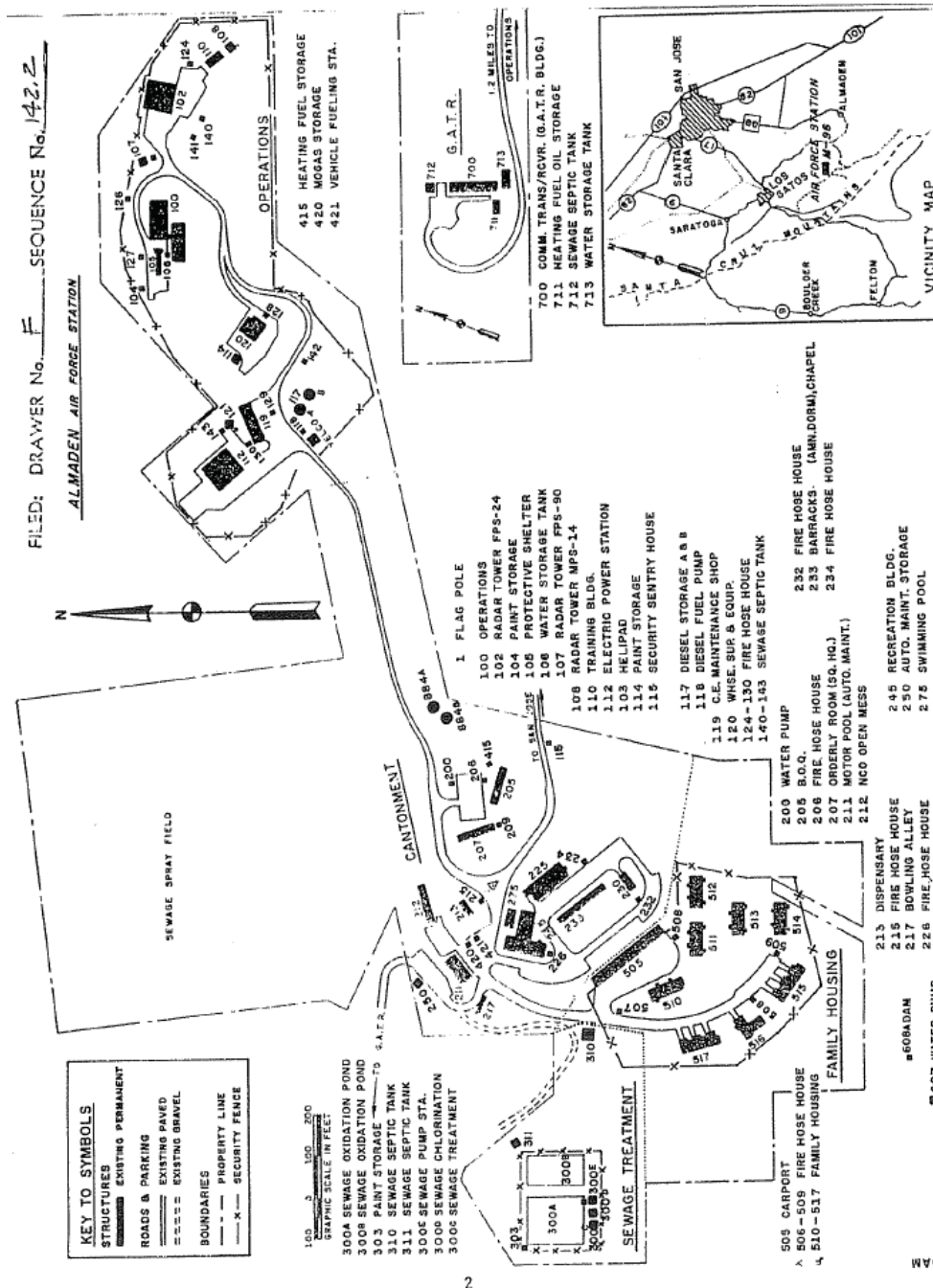
Resource Identifier	Applicable NR for Historic Significance	Integrity (in February 2010)?
001: Flag Pole (1957)	N/A	Yes
100: Operations (1957, addition in 1959)	A	No
102: Radar Tower FPS-24 (1959-1961)	A, C	No
103: Helicopter Pad (1962)	N/A	No
105: Fallout Shelter (1961)	N/A	Yes
108: Radar Tower MPS-14 (1962)	A, C	No
110: Training (1957)	A	No
112: Electrical Power Station (1960)	N/A	Yes
114: Sheet, Pipe & Paint Storage (1965)	N/A	No
115: Security Sentry House (1964)	N/A	Yes
118: Diesel Fuel Pump (1957)	N/A	Yes
119: CE [Civil Engineering] Maintenance Shop (1957)	N/A	Yes
120: Warehouse Supply & Equipment (1957)	N/A	No
200: Water Pump Station (1957)	N/A	Yes
205: Bachelor Officers' Quarters (1957)	N/A	Yes
206: Fire Hose House (ca. 1957)	N/A	No
207: Squadron Headquarters Orderly Room (1957)	N/A	Yes
211: Auto Maintenance Shop, aka Motor Pool (1960)	N/A	Yes
212: NCO Open Mess (1957, addition 1975)	N/A	Yes
213: Dispensary (1957)	N/A	Yes
215: Fire Hose House (ca. 1957)	N/A	No
217: Bowling Alley (1961)	N/A	Yes
225: Airman's Dining Hall (1957)	N/A	Yes
226: Fire Hose House (ca. 1957)	N/A	Yes
230: Commissary (1957; addition in 1967)	N/A	Yes
232: Fire Hose House (ca. 1957)	N/A	No
233: Barracks, aka Airman's Dormitory and Chapel (1957)	N/A	Yes
234: Fire Hose House (ca. 1957)	N/A	Yes
245: Recreation (1957)	N/A	Yes
250: Auto Maintenance Storage (1958)	N/A	Yes
275: Swimming Pool (1957)	N/A	Yes
276: Bath House (1966)	N/A	Yes
300: Sewage Treatment Building (1958)	N/A	Yes
303: Sewage Area Storage (1958)	N/A	Yes
505: Carport (1958)	N/A	Yes
506: Fire Hose House (ca. 1957)	N/A	Yes
507: Fire Hose House (ca. 1957)	N/A	No
508: Fire Hose House (ca. 1957)	N/A	No
509: Fire Hose House (ca. 1957)	N/A	Yes
510: Fourplex Apartment (1958)	N/A	Yes

Resource Identifier	Applicable NR for Historic Significance	Integrity (in February 2010)?
511: Fourplex Apartment (1958)	N/A	Yes
512: Fourplex Apartment (1958)	N/A	Yes
513: Fourplex Apartment (1958)	N/A	Yes
514: Fourplex Apartment (1958)	N/A	Yes
515: Triplex Apartment (1958)	N/A	No
516: Commander's House (1958)	N/A	Yes
517: Triplex Apartment (1958)	N/A	No
700: Communications Transmitter/Receiver (GATR Building) (1962)	N/A	No
715/ 722: Security Sentry House (1966)	N/A	No
884B: Steel Water Tank (1958)	N/A	Yes
TELCO (1957)	N/A	No
Pipe Storage (post-1962)	N/A	No

IX. APPENDICES
APPENDIX A. REGIONAL MAP



APPENDIX B. SITE MAP



Site Map, Former Almaden Air Force Station, ca 1960s. Some of the buildings on this map were longer extant in February 2010 when the Historic Resource Study was conducted.
 (Source: Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994).

APPENDIX C. AREA OF POTENTIAL EFFECT (APE)



Project Area of Potential Effect (APE). The APE boundary has been depicted with a yellow line around the peak of Mt. Umunhum and an orange line around the peak of Mt. Thayer.

APPENDIX D: HISTORIC CONTEXT

History of the Almaden Air Force Station

With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of NORAD to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, 48.02 fee acres, 43.72 easement acres, and 26.62 lease acres (total acreage of 118.36) from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹⁷

Radar Facilities and Responsibilities

The station was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. However, funding shortfalls at the Air Defense Command delayed construction, and the squadron was not officially transferred until 7 October 1957.¹⁸ Almaden AFS subsequently became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.¹⁹ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).²⁰

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The first operational radars were an AN/FPS-20 search radar and AN/FPS-6A height finder that had been constructed in 1957. The AN/FPS-6A was located immediately north of the Operations Building (Building 100), and designated as Building 125. The radar was removed in 1963, and the structure is no longer extant.²¹

A second AN/FPS-6A height-finder radar was installed as Building 107 in 1958, and upgraded to an AN/FPS-90 in the spring of 1963. An AN/MPS-14 radar (Building 108) was constructed in 1962 and came online in 1963. The AN/MPS-14 was constructed at the same as the AN/FPS-6A, but was constructed to be mobile rather than fixed.

The AN/FPS-20 search radar was situated west of the Operations Building where the helipad is currently located. The radar was housed in a domed structure called a radome. This radar was replaced by a massive AN/FPS-24 search radar atop Building 102—itsself an imposing five-story concrete tower constructed between 1959 and 1961. This building also included a height finder shop on the second floor. The AN/FPS-24 was deployed by the manufacturer in 1961, but bearing problems often occurred due to the eighty-five ton weight of the antenna. In subsequent years, the radar was rarely updated because of difficulties arising from its enormous size.²²

The AN/FPS-24 system at Almaden was the second of twelve production models built between 1958 and 1962. The radar became operational in 1962, and had a 250-mile range—considerably stronger than the 200-mile range of the Air Force radars at Mill Valley and Cambria.

¹⁷ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

¹⁸ "Almaden Air Force Station," Wikipedia. Website accessed on 16 March 2010 from:

http://en.wikipedia.org/wiki/Almaden_Air_Force_Station

¹⁹ 682nd Radar Squadron, 2.

²⁰ U.S. Army.

²¹ Email correspondence with Basim Jaber, 23 March 2010. Information drawn from accounts by veterans who completed the upgrades and moves.

²² Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.

The AN/FPS-20 radome was removed after 1961, and the structural footings were shaved to the ground.²³ The AN/FPS-24 radar “sail” was removed in June 1980, and the radars for the AN/MPS-14 and AN/FPS-90 were removed about the same time.²⁴

The Ground to Air Transmitter Receiver (GATR), or communications function, was originally located in Building 110. The communications equipment was connected to the Operations Building (Building 100) via cable trough. Following the construction of the AN/FPS-24 tower, the GATR function needed to be moved so that the UHF frequency of the radar would not interfere with the transmitter communication equipment. A new GATR site was constructed in May 1962, about a mile away on Mt. Thayer. Building 110 was then converted to the D.E. supply room.²⁵ “D.E.” was the Air Force office symbol at the time for “Civil Engineering.” When Building 110 was used for GATR, the Civil Engineering Supply was located in part of Building 119, the Civil Engineering Quarters (CEQ), also known as Station Support. When GATR moved to Mt. Thayer, the CEQ moved the supply portion into Building 110 until the new power plant (Building 112) was completed and the original power plant (Building 120) was converted to the D.E. warehouse/supply. Around 1965, Building 110 was converted for training new personnel.²⁶

The Operations Building (Building 100) was used to process information received from the radars. This included a Digital Data Processor, and an AN/FST-2B “computer” which was installed in 1961 for the SAGE automated control system.²⁷ The AN/FST-2B accepted all data input from the search and height finder radars and processed them into readable data for the radar scopes. The AN/FST-2B required a large room in the Operations Building to house all the equipment, as well as an air-conditioning system specifically designed to cool the equipment. The AN/FST-2B was replaced in 1973 by advanced technology in the form of an AN/FYQ-47, which took up only a couple racks of equipment instead of an entire room.²⁸ Building 100 also included a room for cryptography, where encrypted messages were sent and received from NORAD and the various Air Defense Sector “Direction Centers.” This room included crypto “typewriters” that were used to encode messages, but the process of decoding was manual.²⁹

After operating as a NORAD Ground Control Intercept site from 1958 to 1963, the 682nd Radar Squadron reverted to a Long Range Radar Squadron in April 1966. At that time, it became part of the 26th Air Division headquartered at the Adair AFS in Oregon, under the command of the 4th Air Force at Hamilton Air Force Base, California. On 1 July 1968, the Squadron was incorporated into the Backup Interceptor Control Center (BUIC) system, which provided backup capability in the event that a regional control center was destroyed. The squadron’s mission again reverted to a Long Range Radar in March 1969, and on 15 September 1969, the squadron fell under the operational control of the 26th Air Division NORAD Region, headquartered at Luke Air Force Base, Arizona.³⁰ By the mid-1970s, a handout provided by the 682nd Radar Squadron stated its mission was to “equip, administer and train all assigned personnel to provide surveillance data, height information, and IFF/SIF responses to the Region Control Center at 26AD/NORAD Region. We also provide ground-to-air communications and data link with aircraft in our area of responsibility.”³¹

²³ Email correspondence with Basim Jaber, 23 March 2010. Information based upon historic photographs and veterans’ accounts.

²⁴ Email correspondence with Basim Jaber, 23 March 2010. A friend moved onto the mountain in June 1980 and recalls watching the radars being removed immediately after moving.

²⁵ Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.

²⁶ Email correspondence with Basim Jaber, 23 March 2010.

²⁷ Telephone interview with Basim Jaber regarding the former Almaden AFS, 2 March 2010.

²⁸ Email communication with Basim Jaber, 23 March 2010.

²⁹ Ibid.

³⁰ 682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

³¹ 682nd Radar Squadron, 3.

In May 1962, following construction of the AN/FPS-24 tower, the Air Force acquired land on the neighboring peak of Mt. Thayer and moved the Ground-to-Air Transmitter-Receiver (GATR) so that the radar would not interfere with GATR's radio frequency signals. The primary building erected on Mt. Thayer was the Communications Transmitter/Receiver building, also known as the GATR Building (Building 700). Initially it contained mostly the same equipment as that used when GATR was in Building 110, but with some improvements. Over the years, the communications equipment grew to include transmitters, receivers, antennae, data links, and a Klystron tube. A power line connected the GATR site to the power plant at the Operations site. Telephone lines came from the phone company to the demarcation point in the TELCO Building, and then local wiring was distributed throughout the facility. Radar Operations used the GATR via the TELCO lines to communicate to intercept and patrol aircraft.³²

Other enhancements to the GATR site on Mt. Thayer included below-surface water storage and septic tanks (Buildings 711, 712, and 713, which appear no longer extant), antenna arrays, and a small security sentry house (Building 715/722) down the road. The sentry house was installed at the gate in the summer of 1966, possibly as a result of heightened anti-war efforts for those opposing the Vietnam War.³³ The tall wood poles for lower-frequency antennae were placed in a mesh arrangement and sent and received signals from intercept aircraft on patrol for intercept missions. Another type of antenna array was the FRT-49 (no longer extant), a high power data-link transceiver "horizontal ladder array." It protruded out from the east and west sides of the east and west sides of Building 700 and had a peak output of 20,000 watts. The FRT-49 was coupled with the GKA-5 data link for sending data to intercept fighters for cockpit on-screen display information. When Almaden AFS was designated as a Semi-Automatic Ground Environment (SAGE) site between January 1961 and Feb 1974, a SAGE Direction Center could communicate to the site via secure telephone lines to Building 700 and were able to communicate with intercept fighters within the Almaden AFS GATR transmission range remotely.³⁴

Support Facilities and Residential Facilities

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.³⁵ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Recreational facilities included a bowling alley, pool and gymnasium. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

The widespread use of Butler buildings at Almaden AFS differed from some of the other Air Force stations that were constructed earlier in the 1950s in California, such as Klamath AFS and Mill Valley AFS (both established in 1951). There, the barracks, administration buildings, mess halls, recreation facilities, and maintenance buildings were primarily of wood-frame construction and based on

³² Email correspondence with Basim Jaber, 2 March 2011.

³³ Email correspondence with Basim Jaber, 4 March 2011.

³⁴ Ibid.

³⁵ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

standardized designs by the Chicago-based architectural firm of Holabird, Root and Burgee.³⁶ However, prefabricated steel buildings were used at Mill Valley AFS, Point Arena AFS, and Red Bluff AFS.

Administration was located in Building 207, the Orderly Building. It housed the commander's office, the first sergeant, and others who handled business operations. In its earliest years, the Almaden AFS commander lived in the Bachelor Officers' Quarters (Building 205, also known as the Visiting Airman Quarters or the Transient Lodging Facility). As the names suggest, this building was mostly used as temporary housing and included four hotel-style rooms, a bar and lounge.

Single male enlisted personnel were housed in six steel Butler barracks. In 1974, the commander condemned the old barracks buildings because they were leaking, moldy, and no longer habitable. Five of the six barracks buildings were purchased by the U.S. Forest Service and dismantled. Only their concrete footings remain today. Personnel without families moved to leased quarters off-base, and the remaining barracks building (Building 233) became the chapel/photo lab/ceramics workshop.³⁷

The twenty-seven family housing units (Buildings 510 to 517) on site were completed in 1959. Dependent children attended nearby schools in San Jose via a bus service. According to the architectural drawings, the apartment buildings were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO). PUMO also designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

The threat of wild fires meant that fire protection was an important aspect of living on the mountain. Fire hose houses were located throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the Cantonment area. All of the surviving fire hose houses are marked with an interior stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.³⁸

Medical and dental services were located within Building 213. Two medical technicians provided routine medical care, and a civilian contract doctor offered services one day a week by appointment. An Air Force dentist visited the station for a period of thirty days every three months to take care of military personnel. Dental care for dependents was provided by local dentists in the San Jose area. A fully equipped ambulance was available on station 24 hours a day for emergencies. Military patients requiring care beyond the capabilities of the station were transported to Moffett Naval Air Station Dispensary, Letterman Hospital in San Francisco, or to Travis Air Force Base Hospital.³⁹

³⁶ National Park Service, Western Region. Historic American Buildings Survey: Mill Valley Air Force Station, HABS No. CA-2615 (San Francisco, CA: National Park Service, 1995) 7.

³⁷ Telephone interview with Basim Jaber, chronicler of the former Almaden AFS, 2 March 2010.

³⁸ 682nd Radar Squadron, 7.

³⁹ 682nd Radar Squadron, 6.

Community services were supplied by Almaden AFS for personnel and residents. The Post Exchange was located in the recreation hall, Building 245. Although small in size, it carried most basic necessities and some popular items, such as cameras, radios, stereos, calculators, and a small selection of clothing. Almaden AFS had a branch commissary supported by Travis Air Force Base. The store maintained a supply of canned goods, dairy products, frozen foods, produce, and other foodstuffs. The commissary was open during the weekdays, but not on weekends. Recreational facilities consisted of a pool table, a half-court gymnasium (Building 245), weight room, ping pong tables, a foosball table, a nine-foot swimming pool with a diving board, and a two-lane bowling alley with automatic pin-setters (Building 217). Building 245 also included a library. Hobby shops were located in Building 233, and included a Photo Lab and a Ceramic Shop. The “Top of the Rock” Consolidated Open Mess in Building 212 required club membership to attend squadron functions.

Closure

Almaden AFS came under Tactical Air Command (TAC) jurisdiction in 1979 as part of a consolidation of air defense operations, and the facility’s closing ceremony took place on 29 March 1980 with a final lowering of the flag.⁴⁰ The official “inactivation” date was 30 June 1980.⁴¹ On 30 September 1980, a total of 18.42 acres of leased land was disposed of by terminating two leases (14.60 and 3.82 acres). The net remaining acreage was 48.02 fee acres, 43.72 easement acres, and 8.20 leasehold acres for a total of 99.94 acres of land. In June 1982, control of the property and improvements was transferred to the General Services Administration (GSA). On 21 April 1986, the GSA quitclaimed 91.696 acres of perpetual easements and fee acres to the Midpeninsula Regional Open Space District (MROSD). The remaining 8.20 acres of leaseholds were terminated at that time.⁴²

Today the site is part of the Sierra Azul Open Space Preserve. It is not open to the public because of environmental hazards, including asbestos and lead-based paint. In addition, most of the buildings have deteriorated due to damage from the 1989 Loma Prieta earthquake, as well as ongoing vandalism and a significant amount of weather exposure which has damaged both the exteriors and interiors.

National Context: The Cold War (1945 – 1991)

With the conclusion of World War II in 1945, disagreements arose between the Allied powers over the future political and economic direction of the conquered nations. These tensions soon developed into the “Cold War,” so named because it was not characterized by direct armed conflict, but rather by the buildup of nuclear and missile defense systems, spying, and economic competition. This indirect conflict involved multiple nations, but was primarily a contest between the Soviet Union and the United States. The Cold War was not fully resolved until the Soviet Union collapsed and was officially dissolved in 1991.⁴³

During the Cold War, both the Soviet Union and the United States vastly expanded their respective weapons capabilities, first with long-range nuclear bombers, and later with the development of Intercontinental Ballistic Missile (ICBM) systems capable of delivering nuclear warheads to targets located thousands of miles away. These developments compelled both nations to devise new defense systems, including significant investments in radar technology that could detect and help destroy incoming threats.⁴⁴

⁴⁰ Telephone interview with Basim Jaber, 2 March 2010.

⁴¹ Email correspondence with Basim Jaber, 23 March 2010.

⁴² U.S. Army.

⁴³ “Cold War,” Wikipedia. Accessed on 2 March 2010, http://en.wikipedia.org/wiki/Cold_War

⁴⁴ “NORAD Fact Sheet,” Online Air Defense Radar Museum. Accessed on 23 February 2010, <http://www.radomes.org/museum/data/newsletters/NORAD79-1.jpg>

Radar Defenses

As part of its defense systems, the United States—in cooperation with Canada—built and maintained extensive radar networks. These included the interim LASHUP and PERMANENT networks throughout the United States (1951); 35 radar sites on the PINETREE line (1951) across mid-Canada; and the Distant Early Warning System, or DEW line (1954), in northern Canada.⁴⁵ The Semi-Automatic Ground Environment (SAGE) system, established in 1958, allowed the military to locate enemy aircraft in U.S. airspace through an automated system that could receive and analyze data from many stations simultaneously.⁴⁶ Along with other radar networks, management of the SAGE system was incorporated within the North American Aerospace Defense Command (NORAD), inaugurated in 1958. At its height in the early 1960s, NORAD employed about 120,000 individuals and commanded an annual budget of \$1.4 billion.⁴⁷ Its mission was to protect U.S. airspace from invasion, warn of weapons entering that airspace, and intercept any attacks that were launched from the air, sea, or ground.

Radar was originally developed by the U.S. Navy in 1940. The term is an acronym for Radio Detection and Ranging, indicating its use of electromagnetic radio waves to detect the presence of objects at long distances.⁴⁸ Radar systems transmit radio waves and use any returns, or bounces, to pinpoint the location of objects. By the 1950s, radar had become sufficiently advanced to allow tracking of airborne missiles.

During the Cold War, Air Force radar stations generally operated three types of radars: a general surveillance radar, a search radar, and a long-range height-finder radar. The search radars detected potential hostile aircraft and told the range and bearing, while the height-finder radars rocked up and down to find the altitude of objects in the airspace.⁴⁹ These two types of radars worked together to triangulate the specific location of objects. The radars each went through several upgraded iterations as technology improved over the years. General surveillance radars included the AN/FPS-20, AN/FPS-66, AN/FPS-67, AN/FPS-93. Search radars included the AN/FPS-24, AN/FPS-26, AN/FPS-27, AN/FPS-28, AN/FPS-35. The AN/FPS-7 was a long-range search radar, and the NA/FPS-6 and AN/FPS-90 were long-range height finder radars.

The highest period of tension for the United States during the Cold War was the 1962 Cuban Missile Crisis, when it was discovered that the Soviet Union was in the process of placing nuclear missiles on the island. Threats of nuclear war slowly diminished after that event, which was resolved without armed conflict. Between 1963 and 1979, the United States and Canada cooperated on reducing the size of NORAD facilities and eliminating obsolete sites, as air defense of the United States shifted more to the Air National Guard and Air Force Reserve. The Aerospace Defense Command (ADC), the U.S.'s operating arm of NORAD, was inactivated in 1979 and replaced with the Tactical Air Command, which consolidated air defense operations. The 1979 Joint U.S.-Canada Air Defense Study paved the way to modernize NORAD through the development of new radar lines and the use of Airborne Warning and Control System (AWACS) aircraft for improved performance.⁵⁰ The development of these new technologies made many of the older radar facilities obsolete, and most were closed over the coming years.

⁴⁵ National Park Service, Western Region. Historic American Buildings Survey: Mill Valley Air Force Station, HABS No. CA-2615 (San Francisco, CA: National Park Service, 1995) 4.

⁴⁶ Ibid.

⁴⁷ "The Mission of ADC," Aerospace Defense Command Pamphlet 190-1, September 1963. Online Air Defense Radar Museum. Accessed on 23 February 2010

⁴⁸ "Radar," Wikipedia. Accessed on 2 March 2010, <http://en.wikipedia.org/wiki/radar>

⁴⁹ David F. Winkler, *Searching the Skies: The Legacy of the United States Cold War Defense Radar Program* (Champaign, IL: United States Air Force Headquarters Air Combat Command, June 1997) 30.

⁵⁰ "Aerospace Defense Command," Wikipedia. Accessed on 3 March 2010, http://en.wikipedia.org/wiki/Aerospace_Defense_Command

Butler Buildings

The former Almaden AFS and some of the other Air Force radar stations in California include a number of prefabricated steel “Butler buildings” (see **Appendix F** for images). Built by the Butler Manufacturing Co., Butler buildings feature an integrated structural steel building system with components that have been pre-engineered and fabricated based on the designer’s specifications.

Butler Manufacturing Company was established in Clay Center, Kansas in 1901 by Charles Butler and Emanuel Norquist. The business was initially focused on the design and construction of pre-assembled livestock watering tanks for agricultural use. The company also produced other agricultural storage products, particularly grain storage bins.⁵¹ In 1909, Emanuel Norquist designed and built an automobile garage using an all-steel framework with bolted corrugated galvanized-steel culvert sheets which gave the garage an arched roof. This design was modified to be more cost effective, and by 1910, the first “Butler building” was sold.⁵² Over the ensuing decades, the company continued to manufacture an array of products, including agricultural and oil equipment, as well as a line of Butler Blackhawk airplanes during the late 1920s. The company’s first large contract with the U.S. government arrived in 1939, when the Butler Manufacturing produced over 20,000 steel grain storage bins for the U.S. Department of Agriculture.⁵³

Around the same time, the company was also perfecting designs for a line of rigid-frame steel buildings, which were offered for sale by 1940. During World War II, Butler Manufacturing Company teamed with R. Buckminster Fuller to design futuristic, mass-produced, moveable housing for military troops and their families. Only a few hundred were manufactured and put to use by the Army for medical operating rooms and Signal Corps housing.⁵⁴ During the Cold War era, Butler buildings came into more widespread use at U.S. military facilities, as they were “...built to be inexpensive and easily modified or moved.”⁵⁵ Various engineering firms designed the type of buildings they wanted (width, length, and interior layout), and Butler Manufacturing Company manufactured them. During this period, the Butler Manufacturing Company also continued to manufacture buildings for commercial, industrial, institutional, and rural use. The Butler product line evolved into a comprehensive building system including Butler frames, walls, roofs, fasteners, doors, and windows.

In the 1980s, Butler acquired several other companies in the aluminum and building system business. In the 1990s, the company expanded worldwide with distribution centers in other countries. The company was acquired by BlueScope Steel Limited of Melbourne, Australia, in 2004, and continues to manufacture and sell a number of prefabricated building systems today under the name “Butler.” This includes buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.⁵⁶

Statewide Context: Other NORAD Radar Facilities in California

The Almaden Air Force Station was one of two hundred air defense and long-range radar facilities that monitored the skies over the continental U.S. As such, it was one of about 23 Lashup

⁵¹ “Butler Manufacturing Company – Founded 1901,” eNotes, <http://www.enotes.com/company-histories/butler-manufacturing-company/founded-1901> accessed 12 September 2011.

⁵² Butler Manufacturing Company, “Through the Years,” <http://www.butlermfg.com/about/history.asp> accessed 30 August 2011.

⁵³ Ibid.

⁵⁴ Ibid.

⁵⁵ Wayne Donaldson, “Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁵⁶ “Through the Years,” Butler Manufacturing Company. Website accessed on 31 August 2011 from: <http://www.butlermfg.com/about/history.asp>

(temporary) and permanent radar stations in California that were constructed to protect the West Coast from Soviet attack. The radar ranges generally reached up to 200 miles, though a couple, like Almaden's AN/FPS-24, reached 250 miles. The ranges overlapped for good coverage, and removable radars were positioned in gaps.

In order to provide a comparative basis for the facilities at the former Almaden AFS, the following is a discussion of the other nine permanent NORAD radar facilities in California (Air Force Stations—excluding impermanent Lashup sites and Air Force Bases). It includes information about when the installations were established, what types of radar equipment were operated, when the stations closed, and any available information about their current state.

Mill Valley Air Force Station

The closest station north of Mt. Umunhum was the Mill Valley Air Force Station, located on a 106.4 acre site on the west peak of Mt. Tamalpais. The site was leased from the Marin Municipal Water District in 1942 and returned to them in 2005. The 666th Aircraft Control and Warning (AC&W) Squadron began operating an AN/CPS-6B radar there in late 1951. Mill Valley AFS was designated the Master Direction Center under the manual control system of operations in 1951, meaning that it had operational tactical control over three other Ground Radar Squadrons, two Navy picket ships, two Air Early Warning and Control Aircraft, sixteen Army Air Defense Artillery Nike-Ajax and Nike-Hercules units in the San Francisco-Travis Air Force Base complex.⁵⁷

Between 1955 and 1964, the Mill Valley AFS operated an AN/FPS-8, AN/GPS-3, AN/FPS-4 height-finder radar, AN/FPS-6 set, AN/FPS-7 search radar, AN/FPS-6B height-finder radar, AN/FPS-26A height-finder radar, and AN/FPS-90. In January 1961, the site began feeding data into the SAGE System. Following the station's integration into the SAGE system, Battery Integration and Radar Display Equipment (BIRDIE) was installed in April "to provide a tightly-knit control of Nike defenses, unattainable prior to its development, assuring optimum target engagement in the most efficient and economical manner." At this time, Mill Valley AFS was designated the headquarters for the San Francisco NORAD Control Center, composed of both Army and Air Force personnel and equipment. The same year, the 666th squadron became host to the 40th Artillery Brigade Air Defense Command Post, and was put in charge of the Nike-Hercules missile systems in the San Francisco-Travis AFB area.⁵⁸ In 1966, the AN/FPS-26A was removed from SAGE duties when it was converted to an AN/FSS-7 SLBM detection & warning radar. The U.S. Army Air Defense Command Post also shared this radar site during the 1960s for Nike-missile control because the site was linked with the Nike missile site at nearby Fort Barry.⁵⁹

Mill Valley AFS came under Tactical Air Command (TAC) jurisdiction in October 1979. During the 1980s, most of the property was turned over to the National Park Service and the Federal Aviation Administration (FAA). The Air Force retained control of the height-finder radar (modified to an AN/FPS-116) and the SLBM radar, which was deactivated circa 1980. In 1995 the FAA operated an AN/FPS-66A search set, which was replaced in the late 1990s with an ARSR-4.

⁵⁷ National Park Service, Western Region. Historic American Buildings Survey: Mill Valley Air Force Station, HABS No. CA-2615 (San Francisco, CA: National Park Service, 1995) 8.

⁵⁸ National Park Service: 9.

⁵⁹ Ibid.

At its height, the Air Force Station contained sixty-two buildings, and radar systems were housed in radome tower buildings. Most of the radar facilities were deactivated by 1980, but the ARSR-4 continues to function for the FAA.⁶⁰ The majority of facilities have since been removed.

The site was documented in the Historic American Buildings Survey (HABS) in 1995, and was determined eligible for listing in the National Register of Historic Places based on its significant role as one of the most important radar stations in the country. According to the HABS documentation:

At every phase of its history—as a control station in the 1950s, as a SAGE combat division center from 1961 to 1963, as San Francisco Defense Area NORAD Control Center from 1961 to 1974, and as one of six SLBM radar stations from 1968 to 1980—it was one of the few radar stations to hold a position of leadership.⁶¹

Because it was determined eligible for listing on the National Register, the Mill Valley Air Force Station was automatically listed on the California Register of Historical Resources. It was assigned a California Historic Resource Status Code of “2D2,” which means “Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.”

Point Arena Air Force Station

Further north along the coast, the Point Arena AFS operated from December 1951 to the mid-1980s. The 72-acre station was manned by the 776th Radar Squadron until the unit was deactivated in 1980, and an element of the 26th Air Defense Squadron continued operations. The site included barracks, a post exchange, recreation center, tennis courts and a pool, wastewater treatment plant, boiler plant, and an operations building, among other structures.⁶² It featured two radar towers, including an eighty-foot concrete tower, much like the one at the Almaden AFS. The Point Arena AN/FPS-24 general surveillance radar was the first of twelve productions (Almaden’s was the second. During its operational years, the site contained an AN/TPS-1B radar, AN/FPS-3 and AN/FPS-4, AN/FPS-8, AN-GPS-3, AN-FPS-20 and AN/FPS-6 set, AN-FPS-6B, AN-FPS-24, AN-FPS-26A and AN-FPS-90 height-finders, AN/FPS-93A, AN-FPS-91A and AN/FPS-116. In addition to the site’s radars, it also supplied ground-to-air (GATR) communications to aircraft in the operating area. The GATR site was remotely located from the radar site to minimize interference from the radars into the radio gear.⁶³ Nearly identical to GATR at Almaden AFS, the Point Arena GATR featured tall poles for lower-frequency antennae and a linear FRT-49 antenna array.

Point Arena AFS came into NORAD’s SAGE command and control system in 1960. The site came under TAC jurisdiction in 1979. Once manned by 200 Air Force personnel, by 1982 Point Arena AFS was operated by forty-four civilians. The site remained in use as joint FAA and civilian-manned radar station until 1998, but is now closed.⁶⁴

Klamath Air Force Station

Klamath AFS was first established in 1951 as a temporary installation, but became part of the permanent radar network in April 1952 when the 777th AC&W Squadron began operating AN/FPS-

⁶⁰ “Mt. Tamalpais West Peak/Mill Valley AFS,” Website accessed on 9 March 2010 from: <http://wikimapia.org/1482223/Mt-Tamalpais-West-Peak-Mill-Valley-AFS-site>; and “Mill Valley AFS,” Website accessed on 9 March 2010 from: <http://www.militarymuseum.org/MillValleyAFS.html>.

⁶¹ National Park Service: 10.

⁶² “April 2004 SitRep,” Air Defense Radar Museum. Website accessed on 11 March 2010 from: <http://www.radomes.org/museum/>

⁶³ “Point Arena Air Force Station. Wikipedia. Website accessed on 9 March 2010 from: http://en.wikipedia.org/wiki/Point_Arena_Air_Force_Station

⁶⁴ Ibid.

3 and AN/FPS-4 radars. Between 1956 and 1966, the facility operated an AN/GPS-3, AN/FPS-20, AN/FPS-6, AN/FPS-6A, AN/FPS-20A, AN/FPS-66, AN/FPS-90, AN/FPS-26 height-finder, and an AN/FPS-27 long-range search radar. The 777th became a SAGE radar squadron in 1960, and the site came under TAC jurisdiction beginning in 1979. In the 1980s, much of the property was turned over to the National Park Service, and the operations area became an FAA/U.S. Air Force joint-use facility. In 1995, the FAA operated an AN/FPS-66A search set in the old AN/FPS-27 tower. The Klamath AFS has since been replaced by the FAA/U.S. Air Force site at Rainbow Ridge, CA.⁶⁵

Red Bluff Air Force Station

Red Bluff AFS began in 1955 with the acquisition of 24.2 acres of grazing land south of Redding in Tehama County. The station became operational by the end of 1956 with the 85th AC&W Squadron as a garrisoning unit. The 858th initially operated the AN/MPS-8 height finder radar and the AN/MPS-11 search radar, which were both mobile systems. At different times between 1959 and 1970, the facility operated fixed AN/FPS-6, AN/FPS-6A, AN/FPS-67 fixed search radar, AN/FPS-90 height finder radar.

The radar information began being fed into the SAGE command and control system in 1960, which removed the Ground Control Intercept function from the station and reduced its manpower requirements. A GATR site and two gap filler annexes were established in 1960. With the transfer of the GATR function, the former on-site building was converted into the station's commissary. In 1964, Red Bluff AFS came under joint control of the FAA and the ADC. The 859th Squadron was inactivated in 1970, and the facility closed. In 1971, the GATR site and operations portion of the main station were transferred to the FAA, who continues to operate a search radar there as part of the Joint Surveillance System (JSS), a joint U.S. Air Force/FAA air sovereignty monitoring system. By the end of 1972, the remainder of the station was transferred to Tehama County, which developed the site into a county park.

Red Bluff AFS was unique to California radar stations in that it was the only station that used metal buildings for administration, logistical support, and housing. All of the other stations used wood frame construction for at least some of their buildings. With closure of the station, most of the buildings were disassembled and transferred to government agencies and non-profit organizations.⁶⁶

Madera Air Force Station

Several radar Air Force Stations were situated south of Almaden. The Madera AFS was located northeast of Fresno, and was established as a temporary emergency site. It was first occupied by the 774th AC&W Squadron in 1951, and construction began that year on several concrete and wood-frame buildings to house the radar and support equipment, as well as its eight officers and 108 enlisted airmen and noncommissioned officers. The site became a permanent Air Force Station in 1952. Nine family housing units were constructed in 1956, and seventeen more in 1960. The facilities at Madera AFS also included a swimming pool, skeet range, athletic court and field, base exchange, and a three-hole golf course, which contributed to the station's unofficial nickname, "Country Club of the Air Force."⁶⁷

Madera AFS was integrated into NORAD's SAGE command and control system in 1960. With this change, the 774th AC&W Squadron became the 774th Radar Squadron (SAGE). Between 1950 and

⁶⁵ "Klamath Air Force Station," Wikimapia. Website accessed on 15 March 2010 from: <http://wikimapia.org/5166808/Klamath-Air-Force-Station>

⁶⁶ "Red Bluff Air Force Station," The California State Military Museum, Website accessed on 15 March 2010 from: <http://www.militarymuseum.org/RedBluffAFS.html>.

⁶⁷ "Madera Air Force Station," The California State Military Museum, Website accessed on 9 March 2010 from: <http://www.militarymuseum.org/Madera%20AFS.html>.

1963, the site operated an AN/TPS-1B search radar, AN/FPS-3 and height finder, AN/FPS-4 radar sets, an AN/FPS-6A height finder radar set, an AN/FPS-20 system, an AN/FPS-66 and an AN/FPS-90.⁶⁸

On 25 June 1966, the Madera AFS and the 774th Radar Squadron were both deactivated. In December of that year, the U.S. Air Force issued a permit to the Bureau of Indian Affairs (BIA), Department of the Interior to use the site as a school and vocational training center.⁶⁹ It is unclear if any buildings remain standing at the site.

Cambria Air Force Station

The Cambria AFS was established in 1951 on the Pacific coast, about thirty miles north of San Luis Obispo. The 34-acre site contained an AN/FPS-26A height finder, as well as AN/FPS-6 and AN-FPS-107 radar towers during its period of operation. The radar units have since been dismantled, but the structures remain. The AFS was nearly self-sufficient, and included a post exchange, library, mess hall, theater/bowling alley, tennis courts, dark room, medical unit, two radar towers, six barracks, a bomb shelter, a telephone exchange building, officers' quarters, a pump house, automotive maintenance facility, two gate houses, a boiler room, a sewage treatment plant, a water filtration facility, power plant building, club/pool room, commissary, recreation building, administration building, operations buildings, maintenance shop, and various ancillary buildings.⁷⁰

By 1968, 180 Air Force personnel and twenty-five civilian workers were employed at Cambria AFS. About sixty percent of the staff lived off-station, some in an Air Force housing tract in Cambria, some in Cayucos, and others in Morro Bay.⁷¹ The AFS was closed in 1979. As of 2008, the site was owned by a private individual, but it was still in minor use by the government to broadcast safety notices and weather information to ships through USCG Navigational Telex.

Santa Rosa Island and Lompoc Air Force Stations

The Santa Rosa Island AFS operated from 1952 to March 1963 on Santa Rosa, one of the Channel Islands. At various times, the 669th AC&W Squadron operated an AN/CPS-6B, AN-FPS-10, AN/FPS-3, AN-GPS/3, and AN/MPS-14.

The Lompoc AFS was established at Oak Mountain in Santa Barbara County in 1963, when the 669th AC&W Squadron moved from Santa Rosa Island AFS. The 669th operated as part of the SAGE network, and was administered by Vandenberg Air Force Base. A GATR facility was located about a mile south at Sudden Ranch. Between 1963 and 1968, the Lompoc AFS operated an AN/FPS-67, AN/FPS-6, AN-FPS/6A height-finder radar, and AN-FPS-67. The 669th was deactivated in June 1968. The GATR site has been retained.⁷²

Boron Air Force Station

Boron AFS was established in February 1952 in the Mojave Desert, and was initially managed by Edwards Air Force Base. The 750th AC&W Squadron subsequently assumed command of the site and operated two AN/FPS-10 radars, one of which remained until 1959. Between 1958 and 1969, Boron AFS operated an AN/FPS-6 height-finder radar, AN/FPS-61 height-finder, AN-FPS-10, AN/FPS-20, AN/FPS-35 FD, AN/FPS-26A and AN/FPS-90 height-finder radars, and an

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ "Cambria Air Force Radar Station Conversion Project Proposal," Website accessed on 9 March 2010 from: <http://www.macronet.org/airbase/airforce.html>

⁷¹ <http://sloblogs.thetribunenews.com/slovault/2008/04/13/1968-cambria-air-station/>

⁷² "Lompoc Air Force Station," Website accessed on 15 March 2010 from: www.radomes.org

AN/FPS-67 with a radome. The facility provided data for the regional SAGE center in 1961, and the AN/FPS-6A became an operational ADC/FAA joint-use radar.

The 750th was deactivated in June 1975. Part of the site continued to be used by the FAA, while the other section was used as a federal prison camp, which subsequently closed in April 2000.⁷³

San Clemente Air Force Station and San Pedro Hill Air Force Station/Fort MacArthur

The 670th AC&W Squadron began operations at San Clemente AFS in May 1952 with a single AN/FPS-3 radar. A year later, an AN/FPS-4 height-finder radar joined the site. Over the years between 1955 and 1960, the facility also operated an AN/FPS-8, AN/GPS-3, and AN/FPS-4. The site was deactivated in 1960, and the 670th AC&W Squadron relocated to Fort MacArthur/San Pedro Hill AFS, a joint-use Air Force/Army/FAA radar site. San Clemente Island was handed over to the Navy. Operations at San Pedro Hill AFS/Fort MacArthur included AN/FPS-6B and AN/FPS-26A height-finder sets in 1963, and AN/FPS-90 and AN/FPS-27 radars in 1964. The 670th Radar Squadron was deactivated in April 1976.

Mt. Laguna Air Force Station

Operations at the Mt. Laguna Air Force Station, located east of San Diego, began in April 1952. At that time, the 751st AC&W Squadron (later 751st Radar Squadron) operated AN/CPS-4 and AN/FPS-3 radars. Between 1952 and 1966, the Radar Squadron also operated an AN/FPS-8, AN/GPS-3, AN/FPS-6, AN/FPS-7C search radar and AN/FPS-6 and 6B height-finder radars, AN/FPS-90 set; AN/FPS-26A FD height-finder radar; and AN/FSS-7 SLBM D&W radar. The site became integrated into the SAGE system in 1961. Mt. Laguna became a joint-use ADC/FAA facility around 1965. In 1979 the facility came under TAC jurisdiction. In the 1980s, the FAA assumed greater control, replacing the AN/FPS-7E with an ARSR-3 search radar, leaving the Air Force responsible only for the height-finder tower, which was removed circa 1988. In the late 1990s, the ARSR-3 was replaced by the ARSR-4.⁷⁴ The other radars have since been removed, and only the towers remain. The FAA currently uses the ARSR-4 radar for en route flight safety and air traffic control. The site is scheduled to be dismantled in 2010 by the U.S. Forest Service with federal stimulus funds.⁷⁵

Local Context: Santa Clara County During the COld War

The following section provides a discussion of other military installations that operated during the Cold War in Santa Clara County. There is also a discussion of microwave, missile, satellite, and computer industries that received government funding to develop military technology.

Moffett Federal Airfield

Moffett Federal Airfield, originally called the Sunnyvale Naval Air Station, was first constructed in 1931. More commonly called Moffett Field, the facility is located in northern Mountain View on the east side of U.S. Route 101. From World War II through the Cold War, Moffett Field was the primary military presence in Silicon Valley. It is perhaps best known as the home of Hangar One, which was constructed to contain a dirigible called the USS Macon. During World War II, the base was home for many non-rigid blimps and air balloons.

⁷³ "Boron Federal Prison Camp/Boron AFS," Wikimapia. Website accessed on 15 March 2010 from: <http://wikimapia.org/3945077/Boron-Federal-Prison-Camp-Boron-AFS-site>

⁷⁴ "Mount Laguna AFS," Website accessed on 9 March 2010 from: <http://wikimapia.org/5329703/Mount-Laguna-AFS-site>

⁷⁵ "751st Radar Sqdn., Mount Laguna AFS, CA," Website accessed on 9 March 2010 from: <http://www.radomes.org/museum/recent/MountLagunaAFSCA.html>

In the post-war years, Moffett Field became a major Naval Air Transport Service Squadron Center. The base moved into the jet age, extending Moffett Field's landing strips and modifying its hangars. During the Korean Conflict in 1950, Moffett Field housed the first night jet fighter in the service. More support buildings and landing facilities were built during this time period, and the base became popular for testing new aircraft and jet operations. In 1963, Moffett Field became the home of the Navy's first land-based anti-submarine patrol aircraft, the Orion Hunter. These planes operated out of Moffett Field for the next 30 years. During the 1970s, the base became the headquarters of the Commander Patrol Wings, U.S. Pacific Fleet, responsible for patrolling 93 million square miles of ocean from Alaska to Hawaii. Operations continued until the Navy officially closed Moffett Field in July 1, 1994, and use of the base was transferred to NASA Ames Research Center.⁷⁶

In February 1994, the United States Naval Air Station, Sunnyvale was listed as a National Register Historic District by the National Park Service. It is significant at the national level for its association with the expanding coastal defense capabilities of the U.S. Navy and airship technology during the era between 1932 and 1945.⁷⁷ Hangar One was determined eligible for nomination to the National Register of Historic Places circa 2001 by the U.S. Navy, in consultation with the California State Historic Preservation Officer. Hangar One was inducted as a Naval Historical Landmark in the early 1950s and as a California Historic Civil Engineering Landmark by the San Francisco Section, American Society of Civil Engineers in May 1975. It is also listed in the Santa Clara County Heritage Resource Inventory.⁷⁸ Military contributions during Cold War are outside Moffett Field's defined period of significance.

Onizuka Air Force Station

Onizuka Air Force Station (AFS) is a former United States Air Force installation in Santa Clara County, just outside the city limits of Sunnyvale. The station was developed on land immediately south of Moffett Field. The main building, known locally as the "Blue Cube," is large, pale blue, and windowless. It is surrounded by an array of parabolic dish antennas used for communication with remote tracking stations that control military satellites. Built in 1960 on land purchased from Lockheed, the station was originally known as the Air Force Satellite Test Center. It was later renamed the Air Force Satellite Control Facility and Sunnyvale Air Force Station. In 1986, the base was renamed Onizuka Air Force Base in honor of Lt. Col. Ellison Onizuka, USAF, one of the astronauts who died in the Space Shuttle *Challenger* disaster on 28 January 1986. On 26 January 1994, Onizuka Air Force Base was renamed Onizuka Air Force Station.⁷⁹

Onizuka AFS was operated by the 21st Space Operations Squadron, a geographically separated unit (GSU) of the 50th Space Wing. The facility contained Detachment 2 of the Space and Missile Systems Center and a branch of the National Reconnaissance Office.⁸⁰ The latter was a classified operation that was created in September 1961 in response to the Soviet launch of Sputnik. Its purpose was overseeing "all satellite and overflight reconnaissance projects whether overt or covert."⁸¹ It operated at Onizuka AFS from 1961 to 2007. In general, between 1960 and 1970, Onizuka AFS was the exclusive satellite control center for all military satellites, international communications, space operations, space shuttle, and NASA communications. It was the primary

⁷⁶ "Moffett Field History Tour," NASA Ames Research Center Historic Preservation Office. Website accessed on 13 July 2011 from: <http://historicproperties.arc.nasa.gov/history/history1.html>

⁷⁷ "Hangar One (Mountain View, California)," Wikipedia. Website accessed on 13 July 2011 from: http://en.wikipedia.org/wiki/Hangar_One_%28Mountain_View,_California%29

⁷⁸ Page & Turnbull, "Hangar One, Moffett Field, California: Re-Use Guidelines," Prepared for NASA/Ames Research Center (24 August 2001) 7-8, 13.

⁷⁹ "Onizuka Air Force Station," Wikipedia. Website accessed on 15 July 2011 from: http://en.wikipedia.org/wiki/Onizuka_Air_Force_Station

⁸⁰ Ibid.

⁸¹ "The NRO," National Reconnaissance Office, Website accessed on 15 July 2011 from: <http://www.nro.gov/about/nro/index.html>

military communications facility in the U.S., with no other comparable backup facility for 30 years.⁸² The AFS closed on 28 July 2010, and operations were moved to the new Ellison Onizuka Satellite Operations Facility at Vandenberg Air Force Base.

Based on its significance as a “mid-century scientific site associated with important geo-political developments during the Cold War,” the former Onizuka AFS was found by historic architecture consultant Frederick Knapp in 2008 to be potentially eligible for the local (City of Sunnyvale) register. The buildings were not age-eligible for listing in the California Register and National Register at the time of evaluation, but were found to possibly qualify under Criterion Consideration G: Properties that have Achieved Significance Within the Past Fifty Years.⁸³ It does not appear that Onizuka AFS interacted intimately with Almaden AFS.

Missile, Satellite, Microwave, and Computer Technology

During the Cold War and the arms race, the Korean conflict, and the space program, the Department of Defense (DOD) ordered numerous high-technology products from armament factories in California. Many companies established Research and Development (R&D) departments and production facilities in Santa Clara County, where Stanford University provided bright engineers and scientists. These burgeoning companies were largely supported by the DOD’s demand for electronic products.⁸⁴

During the 1960s, FMC (formerly Food Machinery Corporation) built the M113 Armored Personnel Carrier (APC), the Bradley Fighting Vehicle, and the XR311 prototype military vehicle at its former facility in Santa Clara, California.⁸⁵ Automatic Electric, a subsidiary of GTE (formerly General Telephone & Electronics Corporation), supplied electronic switching equipment for the DOD’s global communications systems, and GT&E International, another subsidiary of GTE, produced earth-based stations for both foreign and domestic markets. Though GTE had offices in Palo Alto, it also operated offices throughout the country and it is unclear through basic research which production departments were located in Palo Alto. Varian Associates was founded in Palo Alto in 1948, following the invention of a microwave device called the klystron at Stanford University by Russell and Sigurd Varian. During the Cold War period, Varian Associates developed vacuum electron tubes, power amplifiers, power supplies, microwave components, electromagnets for satellite communications, and radar and electronic warfare applications.⁸⁶ Westinghouse had a plant in Sunnyvale that manufactured launch tubes for Trident submarines beginning ca. 1968. Lockheed opened its R&D department in the Stanford Research Park in 1956 and started Lockheed Missiles and Space Company (LMSC) in Sunnyvale. Between 1959 and 1978, the company manufactured the U.S. Navy’s submarine-launched ballistic missiles called UGM-27 Polaris and UCM-73 Poseidon.⁸⁷

In addition to the above technological developments, the U.S. government created the Advanced Research Project Agency (ARPA), which sought to develop computers as an aid to defense.

⁸² “City of Sunnyvale Report: Heritage Preservation Commission,” City of Sunnyvale (6 August 2008): 3-4. Website accessed on 15 July 2011 from: <http://sunnyvale.ca.gov/LinkClick.aspx?fileticket=rRYNovK3ux0%3D&tabid=662>

⁸³ Ibid: 10.

⁸⁴ Martin Groger, “Importance of Military Funding,” The Silicon Valley Story. Website accessed on 14 July 2011 from: <http://www.silicon-valley-story.de/sv/militFunding.html>

⁸⁵ “FMC Corporation,” Wikipedia. Website accessed on 14 July 2011 from: http://en.wikipedia.org/wiki/FMC_Corporation

⁸⁶ “Company Information, History,” CPI: Communications & Power Industries. Website accessed on 14 July 2011 from: <http://www.cpii.com/history.cfm>

⁸⁷ Andreas Parsch, “Lockheed UCM-73 Poseidon,” Directory of U.S. Military Rockets and Missiles, Website accessed on 14 July 2011 from: <http://www.designation-systems.net/dusrm/m-73.html>

The government was also heavily involved in the development of computer software. Defense agencies funded the basic R&D that led to early computer programs and programming languages. During the 1970s, in fact, defense spending fueled over half of all academic computing research, and grants from the military's Advanced Research Project Agency (ARPA) established the first university computer science programs at MIT, Stanford, Carnegie Mellon and elsewhere. The defense establishment took computing seriously. In 1962, ARPA's computer research budget exceeded that of all other countries combined; by 1970, its funding had increased fourfold. The Department of Defense was the single largest purchaser of software well into the 1980s, ensuring the consistent market demand that fueled an ever-growing industry.⁸⁸

Despite using military funding during the Cold War, these technological developments took place in various corporations' offices and manufacturing plants, Stanford University and the Stanford Research Institute, where non-military development and production also occurred. These technological developments do not appear to have directly affected Almaden Air Force Station.

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⁸⁸ The Breakthrough Institute, *Case Studies in American Innovation: A New Look at Government Involvement in Technological Innovation* (April 2009). Website accessed on 13 July 2011 from:
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<http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

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accessed on 23 February 2010 from: www.radomes.org/museum

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_____, 23 March 2010.

_____, 2 March 2011.

_____, 4 March 2011.

Telephone interview with Basim Jaber, local resident and chronicler of information about the former Almaden AFS, 2 March 2010.

Telephone interview with David Schwaderer, local chronicler of the former Almaden AFS, 1 March 2010.

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APPENDIX E. HISTORIC PHOTOGRAPHS OF THE SITE



Aerial, Almaden Air Force Station, ca. 1960s. Cantonment in the western foreground and radars to the east (several steel barracks buildings were removed in the 1970s).
(Source: <http://www.radomes.org/museum/>)



Operations (Building 100) with AN/FPS-20 radome to the left, AN/MPS-14 radar to at center, and AN/FPS-6A to the far right, ca. 1959-1960.
(Source: <http://www.radomes.org/museum/>)



Figure 17. View east from the barracks buildings (no longer extant) to the Headquarters/Orderly Room (Building 207) and Bachelor Officers' Quarters (Building 205) on the hill, ca. 1959-60.
(Source: <http://www.radomes.org/museum/>)



Cantonment, ca. 1969.
(Source: <http://www.radomes.org/museum/>)



Playground by apartments, ca. 1969.
(Source: <http://www.radomes.org/museum/>)

APPENDIX F. HISTORIC PHOTOGRAPHS OF CALIFORNIA AIR FORCE STATIONS

Butler Buildings



Operations Guard House at Mill Valley AFS, n.d.
(Source : Radomes. <http://www.radomes.org/museum/recent/MillValleyAFSCA.html>)



Motor Pool at Point Arena AFS, 2009.
(Source : Rick Chinn, http://www.unecda-audio.com/776th/1280/dsc_0016.jpg)



Red Bluff Air Force Station, n.d. This AFS used metal buildings for administration, logistical support, and housing.

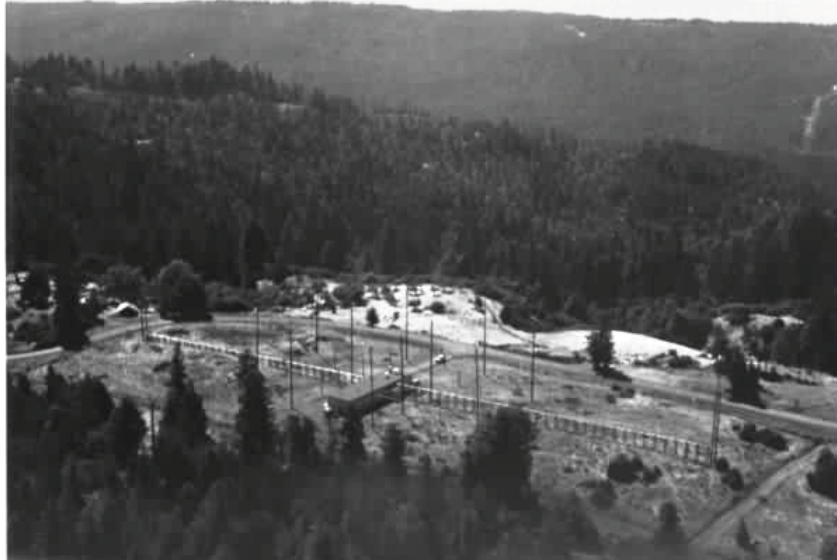
(Source: <http://www.radomes.org/museum/>)

Other Images



Point Arena AFS, AN/FPS-24 tower.

(Source: Online Air Defense Radar Museum, <http://www.unceda-audio.com/776th/>)



Aerial of the GATR site at Point Arena AFS (n.d.)
(Source: Online Air Defense Radar Museum, <http://www.radomes.org/museum/>)



Former Cambria AFS—the AN/FPS-26A radome in 1968, and the AN/FPS-107 radar tower in 2004.
(Source: <http://sloblogs.thetribunenews.com/slovault/2008/04/13/1968-cambria-air-station/>; Online Air Defense Radar Museum, <http://www.radomes.org/museum/recent/CambriaAFSCA.html>)



Former Cambria AFS barracks in the cantonment area, July 2003.
(Source : Online Air Defense Radar Museum,
<http://www.radomes.org/museum/recent/CambriaAFSCA.html>)

**APPENDIX G: DPR523A AND B FORMS FOR ALL EXTANT BUILDINGS, STRUCTURES,
AND OBJECTS**

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) Building 1: Flag Pole

P1. Other Identifier: Flag Pole

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 1: Flag Pole is a metal pole located at the center of the cantonment area, in a triangular piece of landscaping at the middle of a three-way juncture where Mt. Umunhum Road turns northeast up to the Operations area at the peak of Mt. Umunhum. It is situated southeast of Building 211: Auto Maintenance Building, Building 212: NCO Open Mess, and Building 213: Dispensary. It is southwest of Buildings 207 (Administration/Orderly Room) and 205 (Bachelor Officers' Quarters). The flag pole is of unknown height and tapers toward the top, where it is capped by a metal ball. The pole's cord and pulley system to hoist the flag to the top are no longer intact.

The flag pole appears to be in fair condition. The base of the flagpole was riddled with gunshot holes, such that the pole is unstable. In 2011, the remediation contractor installed a sleeve to better reinforce the flagpole temporarily.

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
 View looking southeast (September 2011).

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Flag Pole
- B2. Common name: Flag Pole
- B3. Original Use: Flag Pole
- B4. Present use: Flag Pole

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Erected in 1957.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. References:

-682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. Evaluator: Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop.

Building 1: Flag Pole was constructed at the center of the Cantonment area and was erected when the Air Force station was first established in 1957. The area around the flagpole was a key gathering place for ceremonies, where announcements, awards, and events took place.

Evaluation: Building 1: Flag Pole is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The flag pole is not representative of any particular important events that occurred at Almaden AFS. Furthermore, the flag pole does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 1: Flag Pole is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 1: Flag Pole is not individually significant under Criterion C (Architecture/Design). It is not a good example of distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value. It is a typical metal flag pole without unique characteristics.

Building 1: Flag Pole is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 1: Flag Pole possessed integrity. Building 1 was not altered during hazardous materials abatement at the site, and continues to retain integrity.

Conclusion: Building 1: Flag Pole has not been found historically significant, though it possesses integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA09999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource name(s) or number (assigned by recorder) Building 100: Operations

P1. Other Identifier: Operations

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 100: Operations is a one-story building located at the east end of Mt. Umunhum Road in the operations area at the peak of Mt. Umunhum. The building is 7,450 square feet in size, and is designed in a simple utilitarian style. The irregular-plan building features a concrete slab foundation and consists of three sections: a 4,000 square-foot, steel framed, corrugated steel-clad section to the northeast with a corrugated metal gable roof; a 2,000 square-foot concrete masonry unit (CMU) section to the southwest with a shed roof (only the steel frame of the roof was extant in February 2010); and a 1,450 square-foot northwest CMU section with a combination flat and shed roof. The building terminates in CMU parapets and metal coping.

The primary facade faces east and includes a primary entrance in the metal-clad section. The entrance has a projecting metal vestibule with a shed roof and a partially glazed wood door that faces north. There are also three multi-light steel sash windows and a vent at the gable peak. The east facade of the southwest CMU section contains two vents and exterior pipes. The south facade of the metal section does not contain openings; the southwest CMU section features paired flush metal doors protected by an L-shaped CMU wall. The west facade of the southwest CMU section has paired flush metal doors in a vestibule with CMU walls and corrugated metal roof. The west facade of the northwest CMU section contains a similar protected entrance and doors. The north facade of the northwest CMU section does not contain any openings; the north facade of the metal section has a boarded wood door, as well as a projecting vestibule with a shed roof and a vented wood door (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
Primary facade, view looking west
(February 2010), prior to
abatement.

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ntensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description (continued)**

In February 2010, the building appeared in fair to poor condition. Doors were boarded up; the roof was missing from the southwest CMU section resulting in weather damage; the building was emptied of equipment; and cracks and spalling were evident in CMU walls. In 2011, the building underwent hazardous materials abatement. This involved stabilizing lead paint and the removal of the majority of the building interior.



**Building 100, looking northwest toward the northeast metal section and southwest CMU section prior to abatement.
(Page & Turnbull, February 2010)**



**Building 100, looking east toward the west facade of the building prior to abatement.
(Page & Turnbull, February 2010)**



**Building 100, looking southeast toward the north façade of the building prior to abatement.
(Page & Turnbull, February 2010).**

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Operations Building
- B2. Common name: Operations Building
- B3. Original Use: Radar Operations B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Northeast Butler Building section and southwest CMU section constructed 1957. Northwest CMU addition in 1959. Radar shielding added in 1963. AN/FST-2B "computer" replaced in 1973 with smaller equipment. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Unknown

b. Builder: Sverdrop Engineers; Indenco Engineers

*B10. **Significance:** Cold War Military Radar Operation **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance 1957-1980 **Property Type** Special Military Use **Applicable Criteria** A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.
- Email correspondence with Basim Jaber, 23 March 2010.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

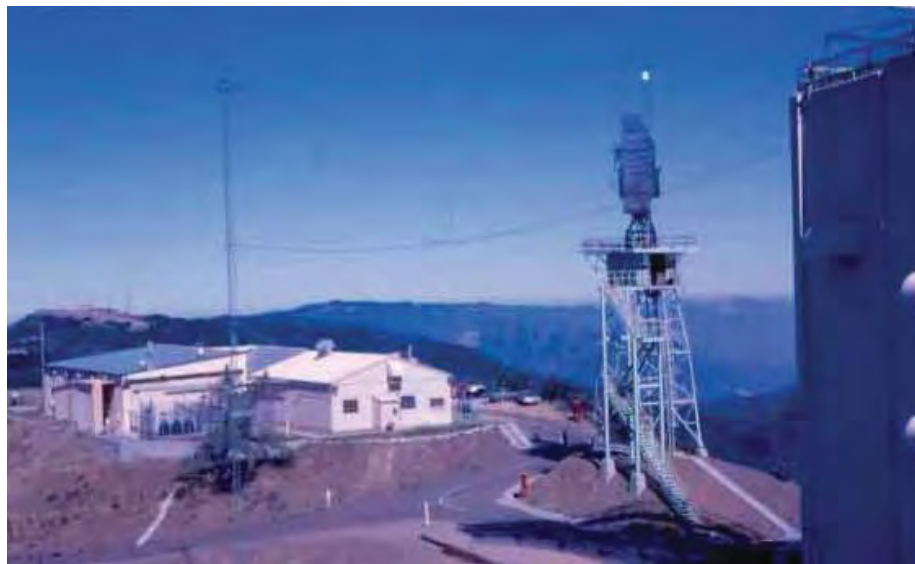
² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 100: Operations was originally constructed as two separate buildings of steel and concrete block construction. Site engineer Sverdrup designed the original Butler building. Indenco Engineers of San Leandro, California, was responsible for the siting of the CMU additions in 1957 and 1959. The roof was joined to make one building with three separate sections inside for scopes, cryptography, and administration. Nuclear fallout shielding was added in 1963 by Indenco. This consisted of additional CMU walls around three-fourths of the building, double-width in many areas and filled with sand.

Building 100: Operations was used to process information received from the radars. This included a Digital Data Processor, and an AN/FST-2B "computer" which was installed in 1961 for the Semi-Automatic Ground Environment (SAGE) automated control system.⁴ The AN/FST-2B computer accepted all data input from the search and height finder radars and processed them into readable data for the radar scopes. The computer required a large room in the Operations Building to house all the equipment, as well as an air-conditioning system specifically designed to cool the equipment. The AN/FST-2B was replaced in 1973 by advanced technology in the form of an AN/FYQ-47, which required only a few racks of equipment instead of an entire room.⁵ Building 100 also included a room for cryptography, where encrypted messages were sent and received from NORAD and the various Air Defense Sector "Direction Centers." This room included crypto "typewriters" that were used to encode messages, but the process of decoding was manual.⁶ Cryptography was later moved to the main FPS-24 radar tower.



Historic photograph of Building 100: Operations, the AN/FPS-90 (Building 107- no longer extant), and the corner of Building 102, ca. 1969. (Source: Online Air Defense Radar Museum, <http://www.radomes.org/museum/>)

Evaluation: Building 100: Operations has been found individually significant locally within the former Almaden Air Force Station under National Register Criterion A (Events). It was the control arm of the radar facility, processing and analyzing data obtained from the radars, and was therefore vital to the operation. However, Building 100 is not eligible for listing due to lack of integrity (see below). The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁷

Building 100: Operations is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

⁴ Telephone interview with Basim Jaber regarding the former Almaden AFS, 2 March 2010.

⁵ Email communication with Basim Jaber, 23 March 2010.

⁶ Ibid.

⁷ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

***B10. Significance (Continued):**

Building 100: Operations is not individually significant under Criterion C (Architecture/Design) It is not a good example of distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 100: Operations is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 100: Operations possessed integrity of location, design, and materials. The building had not been moved and the exterior cladding had not been greatly altered. However, integrity of setting, workmanship, feeling, and association had been compromised because the radar towers that once immediately surrounded the building were no longer extant and the equipment inside had been removed. It did not function in any capacity related to its original use, which prevented the building from directly conveying a connection to its historic function and design. The building has since undergone abatement for hazardous materials, which has compromised integrity of materials. Building 100 does not retain integrity.

Conclusion: Although Building 100: Operations appears locally significant because of its vital function within Almaden AFS, it does not meet the general registration requirements for listing in the National Register due to lack of integrity.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource name(s) or number (assigned by recorder) Building 102: Radar Tower FPS-24

P1. Other Identifier: AN/FPS-24 Radar Tower

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos
Block: 562-08

Zip 94033
Lot: 004

***e. Other Locational Data:** Assessor's Parcel Number

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 102: Radar Tower FPS-24 is a 5 1/2-story building located at the east end of Mt. Umunhum Road in the operations area at the peak of Mt. Umunhum. Completed in 1961, the building is approximately 19,845 square feet in size, and is designed in a simple utilitarian style. The rectangular-plan building features a concrete foundation, cast-in-place concrete construction, and flat concrete roof. The walls are divided vertically into three sections by projecting piers and are clad in concrete and plaster. The building terminates in a parapet and metal railings. The roof features a roof hatch and footings for a radar sail (removed)

The primary facade faces west and includes a primary entrance in the center section of the first story. The entrance features paired flush metal doors and a projecting vestibule with CMU (concrete masonry unit) walls and roof. A metal loading door is located at the third story and two large openings are located at the fourth and fifth stories. Three horizontal windows or openings on the third and fourth floors are boarded with sheet metal panels. Three metal ventilation ducts are located on the façade at the first, third, and fifth floors. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View to the east (February 2010),
prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1961 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description (Continued):**

The south façade includes five ventilation ducts at the first story and three large ducts on the upper stories. The east façade includes three pedestrian doors in projecting CMU exterior vestibules. The southern-most door is flush metal, the center door is metal with boarded glazing, and the northern-most door is flush metal with a vent. Five boarded windows/openings are located on the first, third, and fourth stories. Two small aluminum sliding windows are located at the second and fifth stories. There are also two metal ducts at the second and fifth stories. The north façade features seven metal ducts and one large metal pipe. Two metal exhaust fans at the first story sit on CMU platforms adjacent to the façade.

The interior primarily consists of open rooms on each floor with smooth concrete floors, large concrete piers, and walls clad in smooth plastered concrete and CMU blocks. The ceilings are exposed concrete waffle grids. The interior spaces feature exposed pipes, ducts, vents, and hanging incandescent light fixtures, as well as remnants of equipment platforms.

In February 2010, Building 102 appeared in fair condition due to weathering and vandalism. In 2011, the building underwent hazardous material abatement. This included removal of the asbestos-containing exterior coating, lead-based paint stabilization, and removal of asbestos-containing interior drywall and ceiling finishes.



Building 102: Radar Tower FPS-24 prior to abatement, looking northwest.
(Page & Turnbull, February 2010)



Fourth floor interior prior to abatement.
(Page & Turnbull, February 2010)



Center footing for the radar sail on the roof.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 5

*NRHP Status Code 6Z
*Resource Name or # Building 102: Radar Tower FPS-24

- B1. Historic name: AN/FPS-24 Search Radar
- B2. Common name: Radar Tower
- B3. Original Use: US Air Force Radar Support Tower

B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Constructed 1959-1961. Radar sail removed in June 1980. Interior equipment removed ca. 1980. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Burns & Roe

b. Builder: Indenco Engineers

*B10. **Significance:** Cold War Military Radar Operation; Design Area Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance 1959-1980 **Property Type** Special Military Use **Applicable Criteria** A, C

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

¹U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.

Email correspondence with Basim Jaber, 23 March 2010.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The first operational radars were an AN/FPS-20 search radar and AN/FPS-6A height finder that had been constructed in 1957. A second AN/FPS-6A height-finder radar was installed as Building 107 in 1958, and upgraded to an AN/FPS-90 in the spring of 1963. An AN/MPS-14 radar (Building 108) was constructed in 1962 and came online in 1963. The AN/MPS-14 was constructed at the same as the AN/FPS-6A, but was constructed to be mobile rather than fixed. The AN/FPS-20 radar was replaced by a massive AN/FPS-24 search radar atop Building 102—an imposing five-story concrete tower constructed between 1959 and 1961. The building was designed and engineered by Burns & Roe, Architects & Engineers of New York, and the site was engineered by Indenco Engineers of San Leandro, California. This building included a height finder shop on the second floor. The AN/FPS-24 was deployed by the manufacturer in 1961, but bearing problems often occurred due to the eighty-five ton weight of the antenna. In subsequent years, the radar was rarely updated because of difficulties arising from its enormous size.⁴

The AN/FPS-24 system at Almaden AFS was the second of twelve production models built between 1958 and 1962 (the first was located at Point Arena). The Almaden AFS radar became operational in 1962, and had a 250-mile range—considerably stronger than the 200-mile range of the Air Force radars at Mill Valley and Cambria. The AN/FPS-24 radar “sail” was removed in June 1980, and the radars for the AN/MPS-14 and AN/FPS-90 were removed about the same time.⁵



Historic photograph of the AN/FPS-24 (Building 102) at left, Building 110, and AN/FPS-90 (Building 108), ca. 1960s.

Evaluation: Building 102: Radar Tower FPS-24 has been found individually significant locally within the former Almaden Air Force Station under National Register Criterion A (Events) as the most prominent and pertinent example of radar operation at the site. Though not the first or only radar erected at the site, it best represents the overall mission and purpose of Almaden AFS. The building is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California’s network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 102: Radar Tower FPS-24 is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS. (Continued)

⁴ Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.

⁵ Email correspondence with Basim Jaber, 23 March 2010. A friend moved onto the mountain in June 1980 and recalls watching the radars being removed immediately after moving.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

Page 5 of 5

Resource Name or # (Assigned by recorder) Building 102: Radar Tower FPS-24

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Building 102: Radar Tower FPS-24 is individually significant locally under Criterion C (Architecture/Design) as the only concrete radar tower at the site, supporting the highest-powered antenna at the site. The radar sail was not the only or first of its kind to be manufactured, however, and thus, is not particularly noteworthy at the state or national levels. Despite significance at the local level within Santa Clara County, it is not individually eligible for the National Register due to lack of integrity (see below).

Building 102: Radar Tower FPS-24 is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: JRP Historical Consulting Services' *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) was reviewed in preparation for this report. This document, which was prepared for the U.S. Army Corps of Engineers, referenced the nationwide historic context, *Searching the Skies.: The Legacy of the United States Cold War Defense Radar System* (David F. Winkler for the U.S. Air Force Air Combat Command, June 1997). JRP's report on California military resources includes a theme of "Early Warning Systems and Electronic Warfare" and a property type of "Major Radar Arrays." Registration requirements for this property type state that "If the building is found to have supported an important radar set and the building itself retains integrity to its original appearance, the possibility exists that the building could be found to qualify for the National Register."⁷ Nevertheless, the report suggests that "it is unlikely that a major radar [structure] would be intact, including the radar unit itself."⁸ Thus, emphasis is made upon integrity, including the original radar sail, in order for the structure to be eligible.

As of February 2010, Building 102: Radar Tower FPS-24 possessed integrity of location and setting. The building had not been moved, and the surrounding buildings largely remained the same. However, integrity of design, materials, workmanship, feeling, and association had been compromised because openings had been covered, and the radar unit on the roof and the other technical machinery to operate the radar had been removed. The removal of the radar sail and equipment prevented the building from directly conveying a connection to its historic function and design. Since then, hazardous materials have been abated, further compromising integrity of materials.

Conclusion: Although Building 102: Radar Tower FPS-24 appears locally significant as the most prominent radar facility at Almaden AFS, it does not meet the general registration requirements for listing in the National Register due to a lack of integrity.

⁷ JRP Historical Consulting Services, *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) 8-25.

⁸ Ibid.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) Building 103: Landing Zone

P1. Other Identifier: Landing Zone

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 103: Landing Zone is a circular concrete pad located at the east end of Mt. Umunhum Road in the Operations area at the peak of Mt. Umunhum. It is west of Building 100: Operations. The pad is divided into three sections and features slightly projecting concrete and metal footings from the AN/FPS-20 radome, which used to stand at this location. This pad, having been constructed as a radome foundation, is not officially a helicopter pad because it was not designed as such to meet FAA requirements.

The landing zone appears to be in fair condition because the concrete has cracked in several places.

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View looking west (February 2010)

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: AN/FPS-20 Radome Building
B2. Common name: Helicopter Pad; Landing Zone
B3. Original Use: AN/FPS 20 Radome Building Foundation Pad
B4. Present use: Vacant

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed in 1957.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. References:

-682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. Evaluator: Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 103: Landing Zone was originally designed as a concrete foundation pad for the AN/FPS-20 general surveillance radar. This radar type began production in 1956 and was a dual-modular, fixed station, general surveillance system developed by the Air Force Rome Air Development Center (RADC). The radar was built by Bendix and had a range of over 200 miles. By the late 1950s, this radar dominated the U.S. radar defense network. At Almaden AFS, the AN/FPS-20 search radar and the AN/FPS-6A height finder were the first operational radars at the station. The AN/FPS-20 was housed in a domed structure called a radome west of the Operations building. It was replaced by the massive AN/FPS-24 search radar on Building 102, which was constructed between 1959 and 1961.⁴ The radar structure was dismantled, but the concrete foundation slab remained. It has been used as a helicopter landing zone, though it is not a technical helicopter pad since it was not designed with specifications for the FAA.

Evaluation: Building 103: Landing Zone is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The concrete pad is not representative of any particular important events that occurred at Almaden AFS. Furthermore, it does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 103: Landing Zone is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 103: Landing Zone is not individually significant under Criterion C (Architecture/Design). It is not a good example of distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value. It is a remnant foundation of one of the first radars constructed at Almaden AFS.

Building 103: Landing Zone is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 103: Landing Zone possessed integrity as a landing zone, though it did not possess integrity as part of a radar structure since the structure itself has long been removed. Building 103 was not altered during hazardous materials abatement at the site.

Conclusion: Building 103: Landing Zone has not been found historically significant, since it is actually the foundation of a former radar and not an official landing pad. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 22 and 27.

⁵ *Ibid.*, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 105: Fallout Shelter

P1. Other Identifier: Fallout Shelter

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 105: Fallout Shelter is an underground, one-story building located at the east end of Mt. Umunhum Road in the operations area at the peak of Mt. Umunhum. It is situated west of Building 100: Operations. The building is approximately 1,590 square feet in size, and is designed in a simple utilitarian style. The rectangular-plan building features a concrete slab foundation. The building consists of two corrugated metal quonset huts with semicircular walls and roofs that are placed longitudinally adjacent to one another. The flat end walls are poured concrete. Building 105 is covered by about three feet of earth. An escape hatch is located at the west end of Building 100: Operations, accessed by 100 stairs. The opening at ground level is lined with concrete and metal pole railings.

In February 2010, the building appeared to be in fair condition.

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View looking north (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1961 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

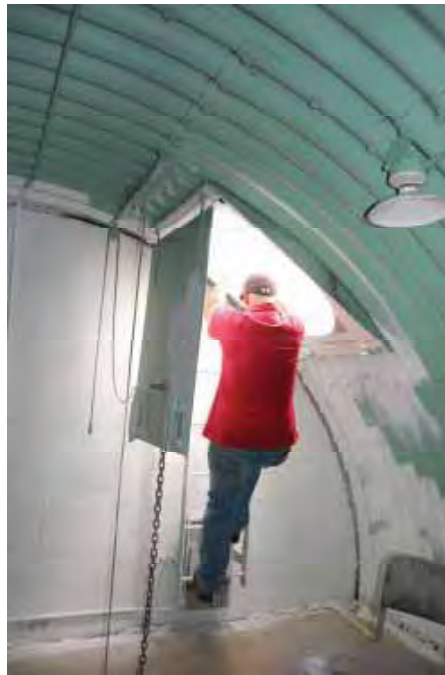
***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)



Building 105: Fallout Shelter, access hatch from the interior.
(Source: MROSD, 2011)



Building 105: Fallout Shelter, interview view.
(Source: MROSD, 2011)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Fallout Shelter
- B2. Common name: Fallout Shelter
- B3. Original Use: Fallout Shelter
- B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1961. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Earl & Wright, Inc.

b. Builder: Unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

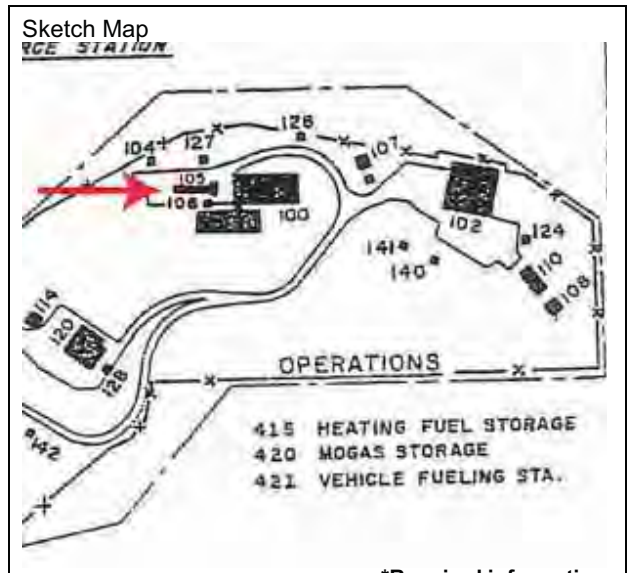
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 105: Fallout Shelter was designed by consulting engineers Earl & Wright, Inc. and constructed in 1961. The building was never needed as a fallout shelter from radiation exposure, and it was generally used as storage.

Evaluation: Building 105: Fallout Shelter is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that was never used for its intended function. It was primarily used as storage. Furthermore, the building does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 105: Fallout Shelter is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 105: Fallout Shelter is not individually significant under Criterion C (Architecture/Design). It is not a good example of distinctive characteristics of a type, period, or method of construction of quonset huts, since it is buried underground and altered to meet fallout shelter requirements; nor does it represent the work of a master or possess high artistic value.

Building 105: Fallout Shelter is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 105: Fallout Shelter possessed integrity, though integrity of association was compromised since the building was never actually used as a fallout shelter. The building has since undergone abatement for hazardous materials, including removing most of the interiors. This compromised integrity of materials, but Building 105 retains integrity.

Conclusion: Building 105: Fallout Shelter has not been found historically significant, though it possesses integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
DPR 523L

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 108: Radar Tower MPS-14

P1. Other Identifier: Radar Tower MPS-14

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 108: Radar Tower MPS-14 is a 40-foot-tall steel structure located at the east end of Mt. Umunhum Road in the operations area at the peak of Mt. Umunhum. Built in 1962, it is situated immediately south of Building 110 (the training building). The structure is designed in a utilitarian style. It has four concrete footings spaced 19 feet apart, which support a steel frame with a square corrugated metal building at the top. Concrete steps and a steel staircase at the northeast corner lead up to a small steel grille platform on the north side of the building. A vertical metal ladder with a protective metal chute extends from the center of the north side, as well. The building at the top of the structure does not contain any windows, but it has a vent on the west façade and an overhead sliding door on the north facade. It terminates in a flat metal roof that is encircled by a steel platform with a steel grille walkway and metal railings. The radar sail has been removed. Remnants of cable trays run from under the structure to the Operations Building.

The structure appeared in fair condition in February 2010. In 2011, lead paint was stabilized as part of hazardous materials abatement. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1962 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

*P3a. Description: (Continued)



Building 108: Radar Tower MPS-14, looking southwest. Building 110: Training is at right.
(Page & Turnbull, February 2010)



Building 108: Radar Tower MPS-14 and Building 110: Training, looking south from Building 102.
(Page & Turnbull, February 2010)



Historic photograph of the AN/FPS-24 (Building 102) at left and AN/FPS-90 (Building 108) at right, ca. 1969.
(Source: Online Air Defense Radar Museum, <http://www.radomes.org/museum/>)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Radar Tower MPS-14
B2. Common name: Radar Tower MPS-14
B3. Original Use: Radar Operations B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1962. Radar removed spring/summer 1980.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** Cold War Military Radar Operation **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance 1957-1980 **Property Type** Special Military Use **Applicable Criteria** A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Winkler, David F. *Searching the Skies: The Legacy of the United States Cold War Defense Radar Program* (Champaign, IL: United States Air Force Headquarters Air Combat Command, June 1997).
- JRP Historical Consulting Services. *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements*, March 2000.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 108: Radar Tower MPS-14

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The AN/MPS-14 was a mobile height-finder radar (hence the "M" in "MPS"), and the last of five radars constructed at Almaden AFS. It was constructed in 1962 and came online in 1963. Height finder radars rocked up and down to find the altitude of objects in the airspace. The AN/MPS-14 worked with the search radar, which detected potential hostile aircraft and gave the range and bearing.⁴ The AN/MPS-14 radar was removed from the steel tower in the spring/summer of 1980, around the same time that the AN/FPS-24 search radar was removed from its concrete tower.

Evaluation: Building 108: Radar Tower MPS-14 has been found individually significant locally within the former Almaden Air Force Station under National Register Criterion A (Events). It is the only steel height-finder radar tower remaining on site, and worked in conjunction with the search radar. The radars represent the primary mission and function of Almaden AFS. However, Building 108 is not eligible for listing due to lack of integrity (see below). The building is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 108: Radar Tower MPS-14 is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 108: Radar Tower MPS-14 is not individually significant under Criterion C (Architecture/Design) It is a utilitarian structure that is not a good example of distinctive characteristics of a type, period, or method of construction. It also does not represent the work of a master or possess high artistic value.

Building 108: Radar Tower MPS-14 is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: JRP Historical Consulting Services' *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) was reviewed in preparation for this report. This document, which was prepared for the U.S. Army Corps of Engineers, referenced the nationwide historic context, *Searching the Skies.: The Legacy of the United States Cold War Defense Radar System* (David F. Winkler for the U.S. Air Force Air Combat Command, June 1997). JRP's report on California military resources includes a theme of "Early Warning Systems and Electronic Warfare" and a property type of "Major Radar Arrays." Registration requirements for this property type state that "If the building is found to have supported an important radar set and the building itself retains integrity to its original appearance, the possibility exists that the building could be found to qualify for the National Register."⁶ Nevertheless, the report suggests that "it is unlikely that a major radar [structure] would be intact, including the radar unit itself."⁷ Thus, emphasis is made upon integrity, including the original radar sail, in order for the structure to be eligible.

In February 2010, Building 108: Radar Tower MPS-14 possessed integrity of location and setting. The building had not been moved and the immediately surrounding buildings were in their original locations, as well. However, integrity of design, materials, workmanship, feeling, and association had been compromised because the radar unit at the top of the structure and the other technical machinery to operate the radar had been removed. The removal of the radar sail and equipment prevented the building from directly conveying a connection to its historic function and design.

Conclusion: Although Building 108: Radar Tower MPS-14 appears locally significant as a representative of radar operation at Almaden AFS, it does not meet the general registration requirements for listing in the National Register due to lack of integrity.

⁴ David F. Winkler, *Searching the Skies: The Legacy of the United States Cold War Defense Radar Program* (Champaign, IL: United States Air Force Headquarters Air Combat Command, June 1997) 30.

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

⁶ JRP Historical Consulting Services, *California Historic Military Buildings and Structures Inventory, Volume III: Historic Context: Property Types and Registration Requirements* (March 2000) 8-25.

⁷ Ibid.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 5

Resource name(s) or number (assigned by recorder) Building 110: Training

P1. Other Identifier: Training Building

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 110: Training is a one-story, approximately 1,080 square foot, rectangular-plan building. Built in 1957, it is located at the east end of Mt. Umunhum Road in the operations area at the peak of Mt. Umunhum. It is situated south of Building 102 (Radar Tower FPS-24) and immediately north of Building 108 (Radar Tower MPS-14). It is a prefabricated rigid frame Butler building features a concrete slab foundation, a steel structure, corrugated steel walls, and a corrugated steel gable roof. The building terminates in shallow eaves and metal coping at the roofline.

The primary façade faces northwest. It includes a projecting entry vestibule with a shed roof, which opens onto a concrete loading dock with concrete stairs to the east. The entry vestibule contains a flush wood door. The building features multi-light steel-sash windows on all four facades, one of which is boarded up on the primary facade. A second projecting entry vestibule on the southeast (rear) façade is boarded up. Metal ventilation ducts are located on the southwest and northwest facades.

The interior contains two rooms with vinyl tile flooring, drywall, incandescent lights, and a paneled wood interior door.

In February 2010, the building appeared in fair condition, due to weather damage and vandalism. In 2011, the building underwent hazardous materials abatement. This involved removal of the interiors, metal siding, and roof. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View southeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:** (Continued)



**Building 110: Training, looking south from Building 102.
(Page & Turnbull, February 2010)**



**Building 110: Training, interior view looking south.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 5

*NRHP Status Code 6Z
*Resource Name or # Building 110: Training

- B1. Historic name: GATR Building
- B2. Common name: Training Building
- B3. Original Use: Ground to Air Transmitter Receiver (GATR)
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel Butler building

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. GATR equipment removed in 1962. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** Cold War Military Radar Operation

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance 1957-1980 **Property Type** Special Military Use **Applicable Criteria** A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.
- Email correspondence with Basim Jaber, 23 March 2010.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

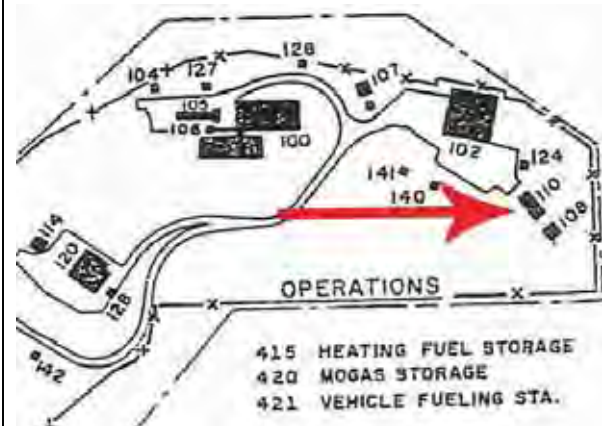
B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

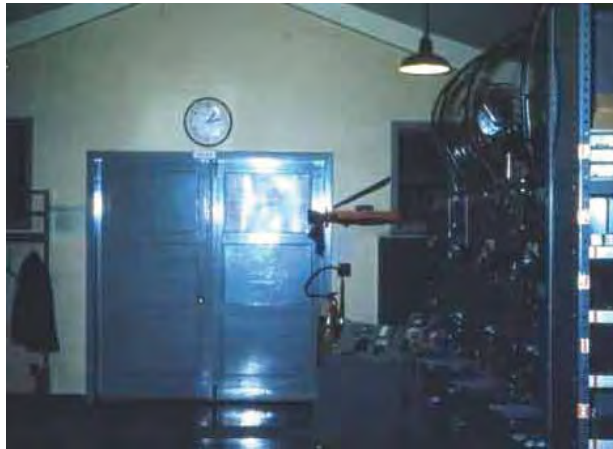
³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 110: Training was constructed in 1957 at Almaden AFS. It is a pre-fabricated steel building manufactured by the Butler Manufacturing Co., with site engineering by Sverdrup & Parcel of San Francisco, California. Butler Manufacturing Company was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁴ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

The Ground to Air Transmitter Receiver (GATR), or communications function, was originally located in Building 110. The communications equipment was connected to the Operations Building (Building 100) via a cable relay trough. Tall wood poles for lower-frequency antennae were placed in a mesh arrangement around the building and sent and received signals from patrolling intercept aircraft.

Following the construction of the AN/FPS-24 tower, the GATR function was moved so that the UHF frequency of the radar would not interfere with the transmitter communication equipment. A new GATR site was constructed in May 1962, about a mile away on Mt. Thayer. Building 110 was then converted to the D.E. (Civil Engineering) supply room.⁵ When Building 110 was used for GATR, the Civil Engineering Supply was located in part of Building 119, the Civil Engineering Quarters (CEQ), also known as Station Support. When GATR moved to Mt. Thayer, the CEQ moved the supply portion into Building 110 until the new power plant (Building 112) was completed and the original power plant (Building 120) was converted to the D.E. warehouse/supply. Around 1965, Building 110 was converted to a training space for new personnel.⁶



Historic Photographs of GATR (Building 110), prior to construction of a separate GATR site, ca. 1959-1960.
(Source: Online Air Defense Radar Museum, <http://www.radomes.org/museum/>)

Evaluation: Building 110: Training has been found individually significant locally within the former Almaden Air Force Station under National Register Criterion A (Events). Early in its existence, it had an important function as the first GATR building at the station. However, Building 110 is not eligible for listing due to lack of integrity (see below). The building is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that it was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁷

⁴ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁵ Telephone interview with Basim Jaber, local chronicler of the former Almaden AFS, 2 March 2010.

⁶ Email correspondence with Basim Jaber, 23 March 2010.

⁷ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

***B10. Significance (Continued):**

Building 110: Training is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 110: Training is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 110: Training is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 110: Training possesses integrity of location, design, and materials. The building had not been moved or greatly altered. Though the immediately surrounding buildings and structures were in their original locations, integrity of setting has been compromised because the antenna arrays that used to surround the building during its GATR period were no longer extant. Furthermore, integrity of workmanship, feeling, and association had been compromised because the GATR equipment and function was removed in 1962. Without the equipment inside and outside Building 110, the shell of the building did not convey the connection to its historic use, and therefore, the building did not retain integrity.

Conclusion: Although Building 110: Training appears locally significant for its vital early function as the GATR communications building at Almaden AFS, it does not meet the general registration requirements for listing in the National Register due to lack of integrity.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 112: Electrical Power Station

P1. Other Identifier: Electrical Power Station; Generator Building

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 112: Electrical Power Station is a one-story, approximately 5,660 square foot, rectangular-plan building. Built in 1960, the building is located on the north side of Mt. Umunhum Road, at the west end of the operations area on Mt. Umunhum. It features a concrete slab foundation with depressed equipment wells featuring metal grate walkways. The building has three sections: a center double-height steel structure with corrugated transite panel walls and a corrugated steel gable roof; and two flanking one-story wings with concrete masonry unit (CMU) walls and shed roofs. The building terminates in shallow eaves with metal coping and gutters.

The primary façade faces southeast. It includes a partially glazed steel door in a projecting CMU exterior vestibule; a roll-up metal garage to the east, and a horizontal metal vent at the western wing. The northeast façade does not contain any openings. The northwest (rear) façade features one partially glazed metal door in a projecting CMU exterior vestibule in the center section, as well as a horizontal metal vent at the west wing. The southwest façade has four adjacent Cycoil oil bath air cleaners for engines/compressors resting on concrete footings, with pipes that curve into the CMU wall and metal exhaust pipes that protrude from the shed roof. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1960 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

The interior features walls and ceilings with exposed metal framing; three compressed air tanks; electrical panels; and control panels. Four General Electric (GE) generators are located inside, though their copper wiring has been removed.

In February 2010, the building appeared in fair condition, due to weather damage and vandalism. In 2011, the building underwent hazardous material abatement. Transite fiberboard panels were removed, the roof was removed, asbestos-containing exterior coating was abated, and lead paint was stabilized.



Building 112: electrical Power Station, looking southwest.
(Page & Turnbull, February 2010)



Building 112: electrical Power Station, northeast façade,
looking northwest.
(Page & Turnbull, February 2010)



Building 112: electrical Power Station, southwest façade,
looking northeast.
(Page & Turnbull, February 2010)



Building 112: Electrical Power Station, interior view
looking northwest.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Electrical Power Station
- B2. Common name: Generator Building
- B3. Original Use: Electrical Power Station
- B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1960. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: N/A

b. Builder: Indenco Engineers; Warren Bogen & Associates

*B10. **Significance:** N/A

Area Mt. Umuñhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

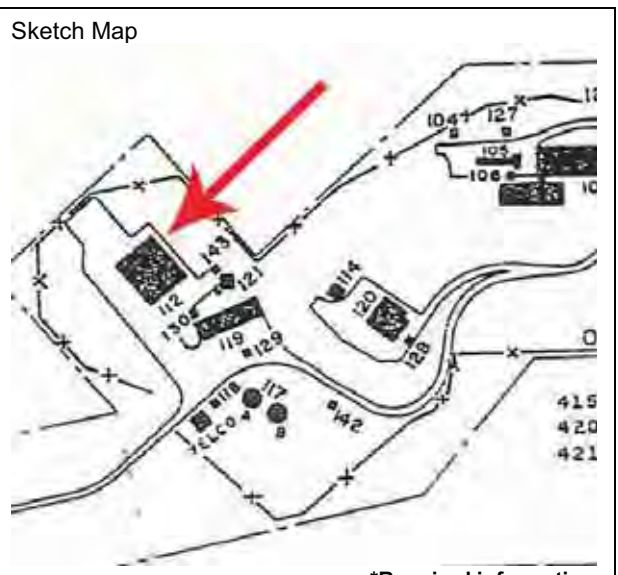
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umuñhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 112: Electrical Power Station was constructed in 1960 at Almaden AFS. The site was engineered by Indenco Engineers and the building was constructed by Warren Bogan & Associates.

Building 112 was not the original power plant at the site. Building 120 (now the Warehouse Supply & Equipment building) was the original generator building that was used to power the AN/FPS-20 search radar and height finder sets. It was converted to a supply room in 1962, when the AN/FPS-20 was decommissioned and removed. Building 112: Electrical Power Station was constructed to support the new AN/FPS-24 radar, which was built in 1959-1962. It consisted of four Nordberg model #9018-0634 Diesel engines rated at 933 hp each. Three of the generators ran in excess of 73,000 hours, and the fourth developed problems after 1500 hours and was then used for parts for the other machines.

Evaluation: Building 112: Electrical Power Station is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the radars, but is not individually representative of important trends in our history. It was also not the first generator building at the station. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 112: Electrical Power Station is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 112: Electrical Power Station is not individually significant under Criterion C (Architecture/Design). It uses common building materials, does not represent the work of a master, or possess high artistic value. It was also not the first or only generator building type on the site.

Building 112: Electrical Power Station is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 112: Electrical Power Station possessed integrity of location, design, setting, materials, workmanship, feeling and association. The building had not been moved or greatly altered, and it retained three generator machines on the interior. The building has since undergone abatement for hazardous materials, which compromises integrity of design and materials.

Conclusion: Building 112: Electrical Power Station has not been found significant, nor does it retain integrity due to hazardous material abatement. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 114: Sheet and Pipe Storage

P1. Other Identifier: Paint Storage; Sheet, Pipe & Paint Storage

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 114: Sheet and Pipe Storage is a rectangular-plan wood frame building. It is located toward the east end of Mt. Umunhum Road in the Operations area on Mt. Umunhum, northwest of Building 120: Warehouse Supply & Equipment. Built in 1965, Building 114 has a concrete footing foundation, plywood walls (mostly removed), and a wood gable roof with exposed rafter tails.

The primary façade faces south and features wood framing studs without wall cladding. The south façade also consists of exposed wood framing. Plywood wall panels and doors lay on the ground at the foot of the façade. The north façade features two fixed six-light steel sash windows with flat board surrounds and full wall cladding. The west façade has partial wall cladding and one hinged wood door, though a plywood wall panel and the other half of the double door is lying on the ground at the foot of the façade.

The interior features a a grid of wood framing to hold metal sheets and pipes (some of which are still located inside).

As of February 2010, the building appeared to be in poor condition due to weathering and partial collapse.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View looking west (February 2010),
prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1965 (Basim Jaber)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued)



**Building 114: South (primary) façade.
(Page & Turnbull, February 2010)**



**Building 114: West façade.
(Page & Turnbull, February 2010)**



**Building 114: North (rear) façade.
(Page & Turnbull, February 2010)**



**Building 114: Sheets and pipes inside.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Sheet and Pipe Storage
- B2. Common name: Sheet, Pipe & Paint Storage; Paint Storage
- B3. Original Use: Storage
- B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1965. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Unknown

b. Builder: Unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 114: Sheet and Pipe Storage was constructed in 1965 near Building 120. As the name suggests, it was used to store sheets of metal and metal pipes on long wood shelves.

Evaluation: Building 114: Sheet and Pipe Storage is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The wood frame building served an ancillary function and does not represent any particular important events that occurred at Almaden AFS. Furthermore, it does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 114: Sheet and Pipe Storage is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 114: Sheet and Pipe Storage is not individually significant under Criterion C (Architecture/Design). The utilitarian building does not represent any distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 114: Sheet and Pipe Storage is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 114: Sheet and Pipe Storage did not possess integrity due to extreme deterioration which removed much of the original material from the building.

Conclusion: Building 114: Sheet and Pipe Storage has not been found historically significant, and it does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Ibid, 50.
DPR 523L

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 114a: Paint Storage

P1. Other Identifier: Paint Storage

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 114a: Paint Storage is an approximately 40 square foot, rectangular-shaped, concrete masonry unit (CMU) building. It is located toward the east end of Mt. Umunhum Road in the Operations area on Mt. Umunhum, northwest of Building 120: Warehouse Supply & Equipment. Built in 1965, Building 114a has a concrete pad foundation, CMU walls, and a flat wood roof with flat eaves that extend on the southwest and northeast facades. The building terminates in metal coping at the roofline.

The primary façade faces southwest and contains a door opening; the remnants of a wood door lay at the foot of the opening. The other three façades do not contain any openings. The southeast façade features faded painted block letters that read: "IDC Paint Storage No Smoking Within 50 Ft."

The interior features a hanging metal incandescent lamp and metal racks for paint storage.

The building appears to be in fair-to-poor condition due to weathering of the wood parts and collapse of the door.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View looking northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 Ca. 1962 (Basim Jaber)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

ive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued)



Southeast façade.
(Page & Turnbull, February 2010)



Interior, looking northeast.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Paint Storage
- B2. Common name: Sheet, Pipe & Paint Storage
- B3. Original Use: Storage
- B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed ca. 1962. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Unknown

b. Builder: Unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 114a: Paint Storage was constructed ca. 1962 near Building 120. The CMU building is nearly identical to Building 303, which was used for sewage (insecticide) storage by the sewage ponds.

Evaluation: Building 114a: Paint Storage is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The small CMU building does not represent any particular important events that occurred at Almaden AFS. Furthermore, it does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 114a: Paint Storage is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 114a: Paint Storage is not individually significant under Criterion C (Architecture/Design). The utilitarian building is not a good example of distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 114a: Paint Storage is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 114a: Paint Storage possessed integrity of location, design, setting, workmanship, feeling, and association since it had not been moved or greatly altered and still retained the paint shelves. Integrity of materials had been compromised due to deterioration of the wood, particularly the door. The paint was stabilized during hazardous materials abatement in 2011, and the building continues to retain integrity.

Conclusion: Building 114a: Paint Storage has not been found historically significant, even though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Ibid, 50.
DPR 523L

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 115: Sentry House

P1. Other Identifier: Sentry House, Guard House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 115: Sentry House is a one-story, approximately 215 square foot, rectangular-plan building. Built in 1964, it is located on the north side of Mt. Umunhum Road, near the western entrance of the operations area on Mt. Umunhum. The building features a concrete slab foundation, metal frame, and metal panel siding. It has a corrugated metal shed roof with a slight overhang at the northwest and southeast ends. It does not appear to have been a pre-fabricated "Butler building" manufactured by the Butler Manufacturing Company, but this conclusion is not definitive.

The primary façade faces southeast. It includes a partially glazed and paneled steel door and a multi-light (two-over-two) steel sash window. The northeast façade does not contain any openings, and the northwest (rear) and southwest façades each have a multi-light steel sash window.

The interior features drywall and tile flooring.

In February 2010, the building appeared in good condition. In 2011, the building underwent hazardous materials abatement which involved the removal of interior materials. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View southwest (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1964 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:** (Continued)



**Building 115: Sentry House, looking northeast.
(Page & Turnbull, February 2010)**



**Building 115: Sentry House at right in bird's eye view, looking southwest.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Sentry House
B2. Common name: Guard House
B3. Original Use: Sentry House
B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building , Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1964. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** mid-1960s **Original Location:** Main Entry Gate on Mt. Umunhum Rd.
*B8. **Related Features:**

B9a. Architect: Unknown

b. Builder: Unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 115: Sentry House was constructed in 1964 at Almaden AFS. It may have originally been located at the main gate on Mt. Umunhum Road, farther southwest from the Operations area. It appears to have been moved to its present location shortly thereafter.

Evaluation: Building 115: Sentry House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility, and is not individually representative of important events in our history. It is also less than 50 years old and is not age-eligible. Furthermore, the building does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 115: Sentry House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 115: Sentry House is not individually significant under Criterion C (Architecture/Design). It uses common building materials, including pre-fabricated steel. The building does not appear to have been a pre-fabricated building manufactured by the Butler Manufacturing Co. Steel buildings were used frequently by the U.S. military during the Cold War because they were mass-produced and moveable; however, the building type was not created as a response to the war. Building 115 also does not represent the work of a master or possess high artistic value.

Building 115: Sentry House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 115: Sentry House possessed integrity of design, materials, workmanship, and feeling because it had not been greatly altered. Integrity of location and setting had been compromised because the building was moved early in its use to its present site. The building has since undergone abatement for hazardous materials, including removal of interiors, which compromises integrity of materials.

Conclusion: Building 115: Sentry House is not age-eligible because it is less than fifty years old, and does not meet the qualifications for extraordinary significance under Criterion G. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
DPR 523L

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 118: Diesel Fuel Pump

P1. Other Identifier: Diesel Fuel Pump

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 118: Diesel Fuel Pump is a one-story, approximately 250 square foot, rectangular-plan building. Built in 1957, it is located on the south side of Mt. Umunhum Road, near the western entrance of the operations area on Mt. Umunhum. Building 118 features a concrete slab foundation, concrete masonry unit (CMU) construction, and a shed roof covered with tar and gravel. The building terminates in a slightly projecting eave and metal coping at the roofline. A metal vent protrudes from the roof.

The primary façade faces southwest toward the TELCO building and features paired flush metal doors. Four-light steel sash windows are located on the northwest and southeast façades. The northeast façade does not contain any openings.

The interior features a concrete floor, CMU walls, and three fuel pumps.

In February 2010, the building appeared to be in good condition. In 2011, the building underwent hazardous materials abatement which stabilized the paint.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View southeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:** (Continued)



Building 118: Diesel Fuel Pump, looking southeast toward northwest and southwest (primary) façades.
(Page & Turnbull, February 2010)



Building 118: Diesel Fuel Pump, looking southwest toward northwest façade.
(Page & Turnbull, February 2010)



Building 118: Diesel Fuel Pump toward the right (in front of TELCO building) in bird's eye view, looking southwest.
(Page & Turnbull, February 2010)



Building 118: Diesel Fuel Pump, interior.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Diesel Fuel Pump
- B2. Common name: Diesel Fuel Pump
- B3. Original Use: Diesel Fuel Pump
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building , Utilitarian style
 *B6. **Construction History:** (Construction date, alterations, and date of alterations)
 Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

***B8. Related Features:**

B9a. Architect: Unknown b. Builder: Unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A
 (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

***B12. References:**

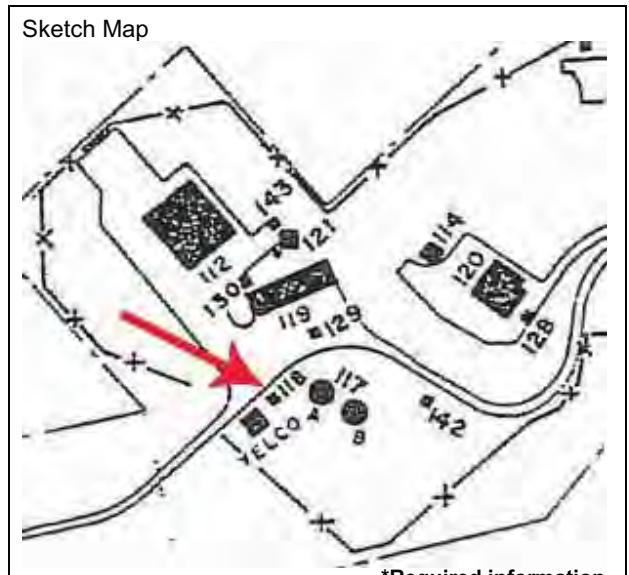
- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
² 682nd Radar Squadron, 2.
³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 118: Diesel Fuel Pump was constructed in 1957 at Almaden AFS. Two 80,000-gallon diesel DF2 tanks were located below, as well as a spill containment earthen dam. This was the site of heavy soil contaminants that were abated by the Army Corps of Engineers in recent years.⁴

Evaluation: Building 118: Diesel Fuel Pump is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was an infrastructural facility and is not individually representative of important events in our history. Furthermore, the building does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 118: Diesel Fuel Pump is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 118: Diesel Fuel Pump is not individually significant under Criterion C (Architecture/Design) because it is not representative of a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value.

Building 118: Diesel Fuel Pump is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 118: Diesel Fuel Pump possessed integrity of location, design, setting, materials, workmanship, feeling, and association. It therefore retained integrity. The building has since undergone abatement for hazardous materials, which did not affect integrity because only paint was stabilized.

Conclusion: Building 118: Diesel Fuel Pump has not been found significant, though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 60.

⁵ *Ibid*, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 119: CE Maintenance Shop

P1. Other Identifier: CE Maintenance Shop

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 119: CE Maintenance Shop is a one-story, approximately 1,920 square foot, rectangular-plan, steel frame Butler building. Built in 1957, it is located on the north side of Mt. Umunhum Road, at the west end of the operations area on Mt. Umunhum. The building is situated immediately southeast of Building 112: Electrical Power Station. Building 119 features a concrete slab foundation, prefabricated rigid-frame steel structure, and corrugated steel siding. It is capped by a corrugated metal gable roof.

The primary façade faces southwest. It includes a projecting entry vestibule with a flush steel door. The south façade has six multi-light (six-over-six) steel-sash windows and a center projecting entry vestibule with recessed, flush metal double doors. The east façade does not include any openings, and the north façade has ten, multi-light steel-sash windows.

The interior features drywall partitions, tile flooring, and fluorescent light fixtures.

In February 2010, the building appeared in fair condition due to deterioration of materials on the interior from weathering and vandalism. In 2011, the building underwent hazardous materials abatement. The interiors were removed, as well as the metal walls and roof. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View north (February 2010)

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:** (Continued)



**Building 119: CE Maintenance Shop, looking northeast toward south and west facades.
(Page & Turnbull, February 2010)**



**Building 119: CE Maintenance Shop interior.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Civil Engineering Quarters; Station Support
- B2. Common name: CE Maintenance Shop
- B3. Original Use: Civil Engineering Quarters (CEQ)
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building, Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** Cold War Military Radar Operation

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance n/a **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

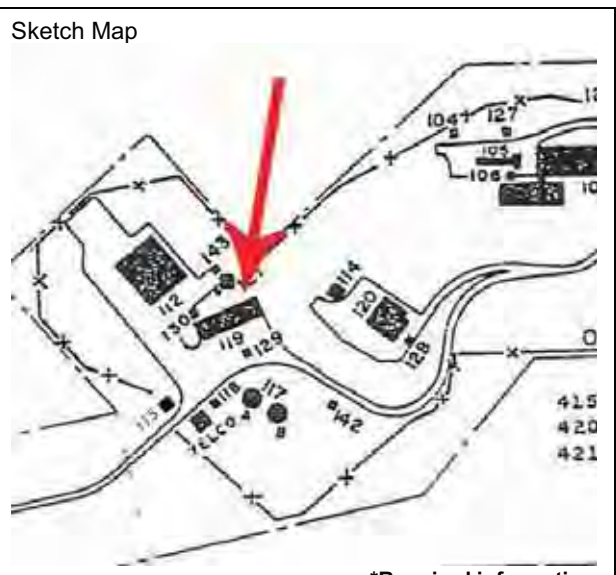
- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 119: CE Maintenance Shop

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 119: CE Maintenance Shop was constructed in 1957 at Almaden AFS, just west of the peak of Mt. Umunhum at a lower elevation. It is a pre-fabricated steel building manufactured by the Butler Manufacturing Co., which was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁴ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Between 1957 and 1962, Building 110 (the Training Building) was used for the Ground to Air Transmitter/Receiver (GATR). The Civil Engineering Supply was located in part of Building 119, the Civil Engineering Quarters (CEQ), also known as Station Support. When GATR moved to Mt. Thayer in 1962, the CEQ moved the supply portion into Building 110 until the new power plant (Building 112) was completed and the original power plant (Building 120) was converted to the D.E. warehouse/supply. "D.E." was the Air Force office symbol at the time for "Civil Engineering."⁵ Despite removal of the supply function, Building 119 continued to be used as the Civil Engineering Quarters and Maintenance Shop.

Evaluation: Building 119: CE Maintenance Shop is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that contained offices, a maintenance shop, and a warehouse supply room. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 119: CE Maintenance Shop is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 119: CE Maintenance Shop is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 119: CE Maintenance Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 119: CE Maintenance Shop possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, including removal of interiors, walls, and roof that contained deteriorating asbestos materials. Thus, building 119 no longer retains integrity.

Conclusion: Building 119: CE Maintenance Shop has not been found historically significant and therefore does not meet the general registration requirements for listing in the National Register.

⁴ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁵ Email correspondence with Basim Jaber, 23 March 2010.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 120: Warehouse Supply & Equipment

P1. Other Identifier: Old Electrical Power Station; Warehouse Supply

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 120: Warehouse Supply & Equipment is a one-story, approximately 2,190 square foot, rectangular-plan building. Built in 1957, the building is located on the north side of Mt. Umunhum Road, in the center tier of three groupings of building in the Operations area on Mt. Umunhum. It features a concrete slab foundation and concrete masonry unit (CMU) walls. The building has three sections: a center double-height section with a flat built-up roof over a metal truss system, and two flanking one-story wings with shed roofs. The building terminates in shallow eaves with wood fascia and metal coping. A metal vent protrudes from the roof by the southern corner.

The primary façade faces northeast, and features two windows in the center section that are partially boarded with plywood and partially infilled with concrete blocks. An entrance to the north includes a partially glazed metal door and concrete entry pad. The northern wing had two two-light steel awning windows. The south wing appears to have had an earlier large opening that has since been infilled with concrete blocks. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View southwest (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

The northwest and southeast façades feature fixed multi-light clerestory windows in the center section. The northwest façade of the north wing does not contain any openings. The southeast façade of the south wing has what appear to be four previous openings that have since been infilled with concrete block. The southeast (rear) façade contains a partially glazed metal door and two-light steel awning window in the north wing; a roll-up metal garage door, partially infilled opening with a three-light steel sash window, and metal vent in the center section; and a wide flush metal door in the south wing. Covered metal cable trays run from Building 120 up the hill to Building 100 (the Operations Building) to the northeast.

The interior features a concrete floor, wood panel walls, acoustic tile ceilings, fluorescent lights, and an interior wood door with metal sheathing.

Partially attached at the east corner is an unnumbered wood frame building with a rectangular plan, corrugated metal siding, and a corrugated metal gable roof. This building has a concrete slab floor, wood ceiling trusses, and aluminum sash casement windows. The building is attached to Building 120's northwest façade by a metal duct.

In February 2010, the buildings appeared to be in fair-to-poor condition, due to weather damage and vandalism. In 2011, the building underwent hazardous material abatement. Asbestos coating was removed and lead-based paint was stabilized on Building 120; the addition was not altered.



**Building 120, partial view of primary façade.
(Page & Turnbull, February 2010)**



**Building 120, southeast façade, looking northwest.
(Page & Turnbull, February 2010)**



**Building 120, southwest façade, looking northeast.
(Page & Turnbull, February 2010)**



**Semi-attached unnumbered building, looking northwest.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 120: Warehouse Supply & Equipment

- B1. Historic name: Electrical Power Station
B2. Common name: Warehouse Supply
B3. Original Use: Electrical Power Station
B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Constructed in 1957. Openings infilled with CMU (date unknown). Addition constructed (date unknown). Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: N/A

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



DPR 523B (1/95)

*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. Building 120: Warehouse Supply & Equipment was constructed in 1957 at Almaden AFS, and was the original generator building that was used to power the AN/FPS-20 search radar and height finder sets. It contained three or four Cummins Turbo-diesel generators. The building was converted to a supply room in 1962, when the AN/FPS-20 was decommissioned and removed. The generators were removed from the building at this time, and the building was converted to a supply room.

Evaluation: Building 120: Warehouse Supply & Equipment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the radars by supplying power during the first five years of operations, but is not individually representative of important trends in our history. It was used as a supply warehouse during most of the station's operating years. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 120: Warehouse Supply & Equipment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 120: Warehouse Supply & Equipment is not individually significant under Criterion C (Architecture/Design). It uses common building materials, does not represent the work of a master, or possess high artistic value. It was also not the only or longest-used generator building type on the site.

Building 120: Warehouse Supply & Equipment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 120: Warehouse Supply & Equipment possessed integrity of location, design, setting, workmanship, feeling and association. Integrity of materials was compromised due to infilled openings and general deterioration. The building has since undergone abatement for hazardous materials, but it still retains integrity.

Conclusion: Building 120: Warehouse Supply & Equipment has not been found significant, though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
DPR 523L

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 200: Water Pump Station

P1. Other Identifier: Water Pump Station

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 200: Water Pump Station is a one-story, approximately 240 square foot, rectangular-plan, pre-engineered building. Built in 1957, the building is located on the south side of Mt. Umunhum Road, at the east end of the Cantonment area. It is situated at the northeast corner of a paved surface parking lot by Building 205: Bachelor Officers' Quarters and Building 207: Squadron Headquarters. Building 200 features a concrete slab foundation, steel structure, and steel panel siding. It is capped by a standing seam metal gable roof. The building terminates in metal fascia at the gable ends.

The primary façade faces south and contains paneled hinged steel double doors. The east façade features a large metal vent covered with a window screen and a small metal vent at the gable apex. The north façade does not contain any openings, and the east façade was inaccessible due to the presence of heavy foliage. A log retaining wall is located to the north.

In February 2010, the building appeared to be in fair condition. In 2011, the building underwent hazardous material abatement, and the walls, roof, and structure were removed because of deteriorating asbestos-containing materials. Only the interior equipment remains.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**



**Building 200: Water Pump Station, view of entrance.
(Page & Turnbull, February 2010)**



**Building 200: Water Pump Station, north and east
façades, looking southeast.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 200: Water Pump Station

- B1. Historic name: Water Pump Station
- B2. Common name: Water Pump Station
- B3. Original Use: Water Pump Station
- B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: N/A

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

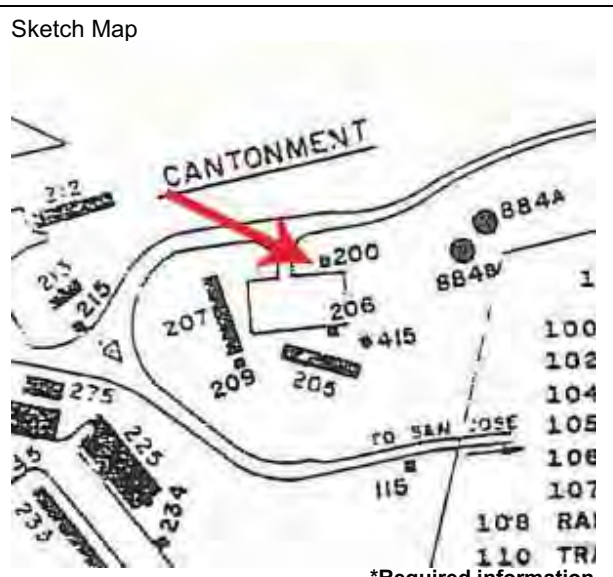
- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 200 was used to pump water from the "upper" and "lower" pump houses on the final route to the water tanks, which were located up on a hill to the east of Building 200. The other water pump stations, storage tanks, and three earthen dam facilities were located off-site on lands that are now owned by the San Jose Water Company. The building was also used for pressurization of the fire hydrants at the station. The building does not appear to have been manufactured by the Butler Manufacturing Co., which made many of the pre-fabricated metal buildings on site.

Evaluation: Building 200: Water Pump Station is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by pumping water to the pump houses and water tanks, but is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 200: Water Pump Station is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 200: Water Pump Station is not individually significant under Criterion C (Architecture/Design). It uses common building materials and was a pre-fabricated design, does not represent the work of a master, and does not possess high artistic value.

Building 200: Water Pump Station is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 200: Water Pump Station possessed integrity of location, design, setting, materials, workmanship, feeling, and association. The building has since undergone abatement for hazardous materials, which removed all of the building except the equipment within. It therefore does not retain integrity.

Conclusion: Building 200: Water Pump Station has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA09999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 205: Bachelor Officers' Quarters

P1. Other Identifier: Bachelor Officers' Quarters

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 205: Bachelor Officers' Quarters is a one-story, approximately 1,920 square foot, rectangular-plan, steel-frame Butler building. Erected in 1957, it is located within the loop of Mt. Umunhum Road where it turns north to climb to the operations area. The building is situated south of a paved parking lot and east of Building 207: Squadron Headquarters. Building 205 features a concrete perimeter foundation, prefabricated steel structure, and corrugated steel siding. It has a corrugated metal gable roof. Because the building is on a sloped site, corrugated metal skirting covers the openings to the crawl space beneath the building on the downward slope.

The primary façade faces north toward the parking area. At the western end, it includes a projecting wall with corrugated metal siding and a shed roof that continues the angle of the gable roof of the main building. This projecting section includes a recessed vestibule with a flush wood door sheathed in sheet metal. The primary façade also features multi-light steel-sash pivot windows. The west façade contains one window of identical type and an exterior air conditioning unit in a boarded window opening. The south (rear) façade contains eight windows of identical type. The east façade features two windows of identical type. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View south (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

sive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (August 2010 and March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

The interior features drywall partitions, tile flooring, fluorescent light fixtures, a lounge, and a long wood kitchen bar.

In February 2010, the building appeared in fair condition due to deterioration of materials from weathering and vandalism. In 2011, the building underwent hazardous material abatement. The interiors were removed, as well as the metal siding, walls and roof.



Building 205: Bachelor Officers' Quarters, looking northeast toward the west and south facades.
(Page & Turnbull, February 2010)



Building 205: Bachelor Officers' Quarters, view of south and east facades.
(Page & Turnbull, February 2010)



Building 205: Bachelor Officers' Quarters, detail of the west facade. Note shed-roofed section at left.
(Page & Turnbull, February 2010)



Building 205: Bachelor Officers' Quarters, interior lounge area and bar.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Visiting Airmen Quarters (VAQ), the Transient Lodging Facility (TLF), Bachelor Airmen Quarters (BAQ)
- B2. Common name: Bachelor Officers' Quarters
- B3. Original Use: Residential
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building, Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 205: Bachelor Officers' Quarters was constructed in 1957 at Almaden AFS, toward the east end of the Cantonment area. It is a pre-fabricated steel rigid-frame building designed by site engineers Sverdrup & Parcel and manufactured by the Butler Manufacturing Co.. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁵ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

In its earliest years, the Almaden AFS commander lived in the Bachelor Officers' Quarters. The building has also been known as the Visiting Airman Quarters (VAQ), the Transient Lodging Facility (TLF), and the Bachelor Airmen Quarters (BAQ). As the names suggest, this building was mostly used as temporary housing and included four hotel-style rooms, a bar and lounge.

Evaluation: Building 205: Bachelor Officers' Quarters is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a residential facility that contained rooms for visiting airmen. It supported operation of the Air Force Station, but was not directly related to the primary radar operation of the station. It is therefore not individually representative of important events in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 205: Bachelor Officers' Quarters is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 205: Bachelor Officers' Quarters is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 205: Bachelor Officers' Quarters is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 205: Bachelor Officers' Quarters possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, including removal of interiors, walls, and roof. Building 205 no longer retains integrity.

Conclusion: Though Building 205: Bachelor Officers' Quarters retained integrity in February 2010, has not been found significant. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 207: Squadron Headquarters/Orderly Room

P1. Other Identifier: Squadron Headquarters; Orderly Room

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 207: Squadron Headquarters/Orderly Room is a one-story, approximately 1,920 square foot, rectangular-plan, pre-engineered Butler building. It is located in the cantonment area within the loop of Mt. Umunhum Road where it turns north to climb to the operations area. The building is situated west of a paved parking lot, and northwest of Building 205: Bachelor Officers' Quarters. Building 207 features a concrete perimeter foundation, a prefabricated rigid steel frame, and corrugated steel siding. It has a corrugated metal gable roof. Because the building is on a hill, corrugated metal skirting covers the openings to the crawl space under the concrete footings on the downward slope.

The primary façade faces east. It includes two projecting metal vestibules with shed roofs. The vestibule to the south has a sign reading "Personnel Entrance." The doors inside the vestibules are wood sheathed in flush metal. The primary façade also features six-light steel-sash pivot windows and one infilled window with an air conditioning unit. The north and south façades contain two windows identical to the primary façade. The west (rear) façade has seven multi-light steel-sash pivot windows and one larger replacement aluminum sliding window at the north end. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View northwest of the east facade
(February 2010), prior to
abatement.

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

The interior features drywall partitions, tile flooring, and fluorescent light fixtures.

In February 2010, the building appeared in fair to poor condition due to deterioration of materials from weathering and vandalism. In 2011, the building underwent hazardous materials abatement. The interiors were removed, as well as the metal siding and roof.



**Building 207: Squadron Headquarters/Orderly Room, west facade.
(Page & Turnbull, February 2010)**



**Building 207: Squadron Headquarters/Orderly Room, south and west facades.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 207: Squadron Headquarters/Orderly Room

- B1. Historic name: Squadron Headquarters
B2. Common name: Orderly Room
B3. Original Use: Squadron Headquarters B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building, Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer) b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area:** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance: N/A **Property Type:** Support Facility **Applicable Criteria:** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

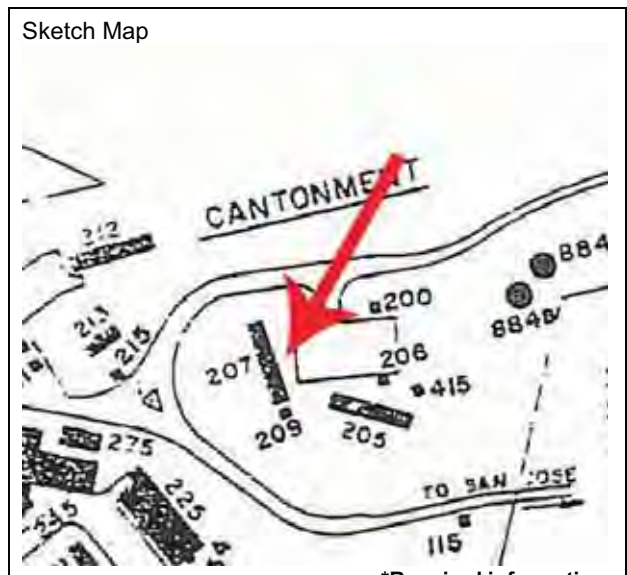
- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- ¹"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 207: Squadron Headquarters/Orderly Room was constructed in 1957 at Almaden AFS, toward the east end of the Cantonment area. It is a pre-fabricated steel rigid-frame building designed by site engineers Sverdrup & Parcel and manufactured by the Butler Manufacturing Co. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁵ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 207 housed administrative functions. It included the Commander's Office, administration assistant to the commander, Office of the First Sergeant, Personnel Office, and Mail Room.

Evaluation: Building 207: Squadron Headquarters/Orderly Room is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that contained rooms for administrative purposes. It supported general operation of the Air Force Station, but was not directly related to the primary function of the site as a radar installation. It is therefore not individually representative of important events in our history. The building is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that it was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 207: Squadron Headquarters/Orderly Room is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 207: Squadron Headquarters/Orderly Room is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 207: Squadron Headquarters/Orderly Room is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 207: Squadron Headquarters/Orderly Room possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, including removal of interiors, walls, and roof. Building 205 no longer retains integrity.

Conclusion: Building 207: Squadron Headquarters/Orderly Room retained has not been found historically significant and does not possess integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 211: Auto Maintenance Shop

P1. Other Identifier: Auto Maintenance Shop; Motor Pool

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 211: Auto Maintenance Shop is a one-story, approximately 1,984 square foot, rectangular-plan building. It is located at the north end of the Cantonment area. Building 211 features a concrete slab foundation, prefabricated steel structure, and corrugated steel siding. It has a corrugated metal gable roof with protruding metal vents.

The primary façade faces south. It features three partially glazed roll-up metal garage doors. The east façade contains three multi-light steel-sash awning windows and a metal vent pipe. The north (rear) façade has a center ribbon window of three sections, flanked by two windows on either side. All of the windows are multi-light steel sash awning windows. The west façade has two windows of indential type to the others on the building, as well as a partially glazed steel pedestrian door.

The interior features drywall, a smooth concrete floor, incandescent lights, and a mezzanine floor in the northwest corner that is accessed by wood stairs.

In February 2010, the building appeared in fair condition due to deterioration of materials from weathering and vandalism. In 2011, hazardous materials were abated- the roof and windows were removed.

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and**

Sources: historic
1960 (MROSD)

***P7. Owner and Address:**

Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**

Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**

September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)



**Building 211: Auto Maintenance Shop, looking west.
(Page & Turnbull, February 2010)**



**Building 211: Auto Maintenance Shop interior, looking west.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

B1. Historic name: Auto Maintenance Shop

B2. Common name: Motor Pool

B3. Original Use: Motor Pool

B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building, Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1960. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

-¹"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

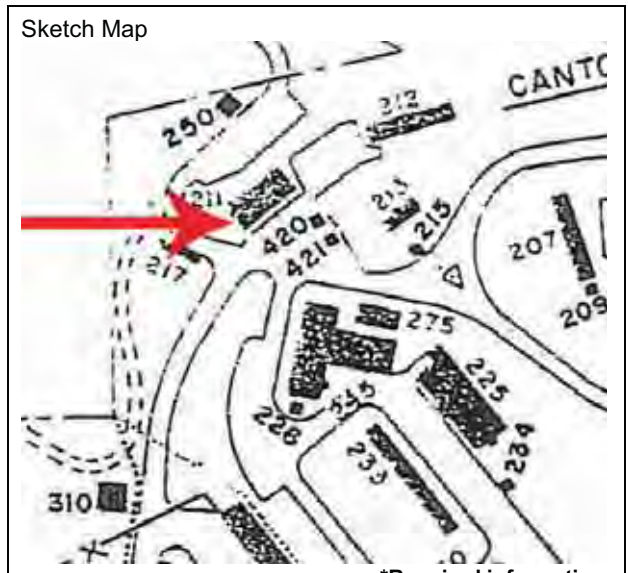
B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

Page 4 of 4 Resource Name or # (Assigned by recorder) Building 211: Auto Maintenance Shop
*Recorded by Christina Dikas, Page & Turnbull *Date September 2011 Continuation Update

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 211: Auto Maintenance Shop was constructed in 1960 at Almaden AFS, toward the north end of the Cantonment area. It is a pre-fabricated steel building that was likely manufactured by the Butler Manufacturing Co. The company was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were " ... built to be inexpensive and easily modified or moved."⁵ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Evaluation: Building 211: Auto Maintenance Shop is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that serviced automobiles. It supported general operation of the Air Force Station, but was not directly related to the primary function, which was radar operation. It is therefore not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 211: Auto Maintenance Shop is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 211: Auto Maintenance Shop is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 211: Auto Maintenance Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 211: Auto Maintenance Shop possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, which compromises integrity of materials.

Conclusion: Though Building 211: Auto Maintenance Shop retained integrity in February 2010, it has not been found significant. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 212: NCO Open Mess

P1. Other Identifier: Non-commissioned Officers' Open Mess; Dining Hall

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 212: NCO Open Mess is a one-story, 3,640 square foot, rectangular-plan building. It is located at the north end of the Cantonment area, northeast of Building 211: Auto Maintenance Shop. Building 212 is a Butler building that features a concrete slab foundation, prefabricated steel structure, and corrugated steel siding. It has a corrugated metal gable roof. The building includes two sections: a 1,950 square foot original building and a 1,690 square foot addition.

The primary façade faces west. It features a projecting exterior vestibule with a shed roof. The entry contains a flush wood door. The entry is flanked by multi-light steel-sash windows covered with metal grilles. The south façade features another projecting vestibule and wood door, and ten multi-light steel-sash awning windows. The east façade has a projecting entry vestibule and wood door, flanked by multi-light steel-sash windows. The north window is covered with a metal grille. The north façade contains two shed-roof additions that are clad in corrugated metal. The north façade also features multi-light steel-sash awning windows and one larger replacement window of fixed sash. The majority of windows are painted over. A brick outdoor oven is located to the east.

In February 2010, the building appeared in fair condition due to deterioration of materials from weathering and vandalism. In 2011, hazardous materials were abated- the interior materials, metal siding walls, and roof were removed.

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)



Building 212: NCO Open Mess, looking west toward east facade.
(Page & Turnbull, February 2010)



Building 212: NCO Open Mess, looking east at north addition.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: NCO Open Mess
- B2. Common name: Non-Commissioned Officers' Open Mess
- B3. Original Use: Dining hall
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building , Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Addition in 1975 by William Kelley & Associates. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- ¹"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 212: NCO Open Mess was constructed in 1957 at Almaden AFS, toward the north end of the Cantonment area. It is a pre-fabricated steel building that was manufactured by the Butler Manufacturing Co. The company was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁵ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 212: NCO Open Mess was used as a dining hall for non-commissioned officers. It received an addition on the north façade in 1975, which was designed by William Kelley & Associates of Novato, California.

Evaluation: Building 212: NCO Open Mess is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that provided meals for non-commissioned officers. It supported general operation of the Air Force Station, but was not directly related to the primary function, which was radar operation. It is therefore not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 212: NCO Open Mess is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 212: NCO Open Mess is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 212: NCO Open Mess is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 212: NCO Open Mess possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, which compromises integrity of design and materials. Building 205 does not retain integrity.

Conclusion: Building 212: NCO Open Mess has not been found historically significant and does not possess integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 6 Resource name(s) or number (assigned by recorder) Building 213: Dispensary

P1. Other Identifier: Dispensary

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 213: Dispensary is an approximately 1,000 square foot, rectangular-plan Butler building erected in 1957. It is located north of the fork in Mt. Umunhum Road where it branches off to the east toward the summit of Mt. Umunhum. It is south of Building 212: NCO Open Mess and east of Building 211: Auto Maintenance Shop. Building 213: Dispensary is a prefabricated steel-frame structure, featuring a concrete slab foundation and corrugated steel siding. It is capped by a corrugated metal gable roof featuring shallow eaves and two metal pipe vents.

The primary facade faces southwest and is approached by a long concrete staircase with metal pipe railings leading up from Mt. Umunhum Road. It features a projecting center entry vestibule capped by a shed roof and flanked by two three-over-three steel sash windows with awning mechanisms. A curved metal pipe light fixture is located on the north side of the vestibule. The primary entrance is recessed in the vestibule and includes a flush wood door.

The north facade of the building features three three-over-three steel sash windows with awning mechanisms, as well as a smaller, one-over-one steel sash window.

(Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



***P5b. Photo:** (view and date)
North and west facades (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The east facade is approached from the north by a long concrete stair with metal pipe railings that leads up from Building 212: NCO Open Mess. It features a projecting center entry vestibule capped by a shed roof and flanked by two three-over-three steel sash windows with awning mechanisms. A curved metal pipe light fixture is located on the south side of the vestibule. The primary entrance is recessed in the vestibule and includes a flush wood door.

The south facade features three three-over-three steel sash windows with awning mechanisms. An air conditioning unit elevated on a metal platform abuts the eastern-most window.

The interior of the building was not inspected, but views through various windows revealed sheetrock walls and partitions and composite tile flooring (possibly linoleum). Visible interior doors featured two panels above a slat vent base.

In February 2010, the building appeared in fair condition with areas of rust due to lack of exterior maintenance. In 2011, the building underwent hazardous materials abatement, which involved the removal of the metal siding, walls and roof down to the framework. The interior was also removed.



**Building 213: Dispensary, primary (west) facade
(Page & Turnbull, February 2010)**



**Building 213: Dispensary, north facade
(Page & Turnbull, February 2010)**

P3a. Description (Continued):



Building 213: Dispensary, view southwest of stair leading to rear (east) facade (Page & Turnbull, February 2010)



Building 213: Dispensary, rear (east) facade (Page & Turnbull, February 2010)



Building 213: Dispensary, south facade (Page & Turnbull, February 2010)



Building 213: Dispensary, view of interior door taken through window (Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 4 of 6

*NRHP Status Code 6Z

*Resource Name or # Building 213: Dispensary

- B1. Historic name: Dispensary
- B2. Common name:
- B3. Original Use: Medical and dental services
- B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel Butler building , Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull. *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*. 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011



(This space reserved for official comments.)

DPR 523B (1/95)

*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

⁴ 682nd Radar Squadron, 2.

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. The technical facilities often featured concrete masonry unit or reinforced concrete construction, while the apartment buildings for families were wood-frame construction.

All of the non-residential support buildings, including the Dispensary, were pre-fabricated, rigid-frame "Butler buildings" that were designed by site engineer Sverdrup & Parcel and manufactured by the Butler Manufacturing Company. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁷ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 213: Dispensary was erected in 1957 at Almaden AFS. The building was originally heated, but not air conditioned. Two medical technicians provided routine medical care, and a civilian contract doctor offered services one day a week by appointment. An Air Force dentist visited the station for a period of thirty days every three months to take care of military personnel. Dental care for dependents was provided by local dentists in the San Jose area. A fully equipped ambulance was available on station 24 hours a day for emergencies. Military patients requiring care beyond the capabilities of the station were transported to Moffett Naval Air Station Dispensary, Letterman Hospital in San Francisco, or to Travis Air Force Base Hospital.⁸ The building continued to provide medical and dental services until the base closed in 1980.



Building 213: Dispensary, ca. 1959-1960.

(Source: Online Air Defense Radar Museum, <http://www.radomes.org/museum/>)

⁵ U.S. Army.

⁶ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁸ 682nd Radar Squadron, 6.

***B10. Significance (Continued):**

Evaluation: Building 213: Dispensary is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that provided medical and dental services. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of the Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations, or Cold War era military facilities in Santa Clara County.¹⁰

Building 213: Dispensary is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 213: Dispensary is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 213: Dispensary Commissary Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 213: Dispensary retained historic integrity. However, hazardous material abatement efforts in 2011 removed the metal siding, walls and roof down to the framework. The interior was also removed. Thus, the building no longer retains historic integrity.

Conclusion: Building 213: Dispensary has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

¹⁰ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 215: Fire Hose House

P1. Other Identifier: Fire House House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 215: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a shed roof with shallow eaves. It is located in the southwest portion of Almaden AFS on the north side of the fork of Mt. Umunhum Road, a short distance south of Building 213: Dispensary. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces southeast and originally featured hinged, flush wood double doors that have been detached. The exterior walls consist of plywood, and the roofline features open eaves with flat-board fascia. The plywood roof features remnants of composite roofing material. The interior features simple wood framing and an earth floor. A cast-iron fire hydrant is located toward the front, and two wood shelves are located toward the rear. The detached doors are stored on the upper shelf.

In February 2010, the structure appeared in poor condition due to lack of exterior maintenance and weathering. Portions of the east and west walls had failed and collapsed onto the ground. In 2011, the building underwent hazardous materials abatement, which included paint stabilization. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
 West and south facades (February 2010)

***P6. Date Constructed/Age and Sources:** historic
 Circa 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



Building 215: Fire Hose House, south façade.
(Page & Turnbull, February 2010)



Building 215: Fire Hose House, east façade.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 215: Fire Hose House

- B1. Historic name: Building 215: Fire Hose House
- B2. Common name: Fire Hose House
- B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown b. Builder: unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 215: Fire Hose House

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wood shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 215: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 215: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 215: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 215: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 215: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 215: Fire Hose House is severely deteriorated, which compromises integrity of design, materials, and workmanship. The building therefore does not retain integrity.

Conclusion: Building 215: Fire Hose House has not been found historically significant, nor does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 217: Bowling Alley

P1. Other Identifier: Bowling Alley

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 217: Bowling Alley is a one-story, approximately 1,740 square foot, rectangular-plan building constructed in 1961. It is located in the cantonment area, west of Mt. Umunhum Road and southwest of Building 211: Auto Maintenance Shop. Building 217: Bowling Alley is long and thin, featuring concrete masonry unit (CMU) construction, with concrete block walls and a concrete slab foundation. It is capped by a flat built up roof with sheet metal coping and a projecting metal pipe vent. It is surrounded by overgrown vegetation on all sides.

The primary façade faces northeast toward Mount Umunhum Road and features a projecting CMU entry vestibule near the eastern end capped by an extension of the flat roof. This entry features a flush metal door and is approached by concrete stairs with metal pipe railings leading down from Mt. Umunhum Road. A boarded up window infilled with an exhaust fan is located east of the entry, and the remainder of the facade toward the west includes four projecting exterior CMU "ribs" spaced at regular intervals along the facade. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 Detail of primary entry at east end of north facade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1961 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

ntensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The north facade features flush metal double doors. The west facade features four projecting exterior CMU "ribs" spaced at regular intervals along the facade. A small window opening is located at the southern end of the facade, but no longer retains any glazing due to vandalism. The south facade is unfenestrated.

Only a portion of the interior was inspected through a doorway. It revealed extensive deterioration of materials, including composite tile flooring and flush wood doors. Portions of the roof also appear to have failed.

In February 2010, the building appeared in poor condition due to failure of the roof and extensive damage caused by vandalism and weathering. In 2011, the building underwent hazardous materials abatement, which involved the removal of the interior. Lead paint was also stabilized.



**Building 217: Bowling Alley, detail of primary (east) facade
(Page & Turnbull, February 2010)**



**Building 217: Bowling Alley, north and west facades
(Page & Turnbull, February 2010)**



**Building 217: Bowling Alley, west facade
(Page & Turnbull, February 2010)**



**Building 217: Bowling Alley, south facade
(Page & Turnbull, February 2010)**

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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 217: Bowling Alley

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel and a barber shop.

Recreational facilities included a bowling alley, a swimming pool (Building 275), and a recreation building featuring a half-court gymnasium (Building 245). These were all clustered at the northwestern end of the cantonment area, west-southwest of the fork in Mount Umunhum Road. Although most of the non-residential support buildings and the barracks were pre-fabricated, steel-frame "Butler buildings," Building 217: Bowling Alley and Building 245: Recreation featured CMU construction.

Building 217: Bowling Alley was erected in 1961 at Almaden AFS. It featured a two-lane bowling alley with automatic pin-setters, and was heated by an oil-fired heating and ventilation unit. It also included two small men's and women's restrooms. The building provided recreational opportunities for personnel living at the station, and continued in use as a bowling alley until Almaden AFS closed in 1980.

Evaluation: Building 217: Bowling Alley is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building served as a modest recreational facility, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁷

Building 217: Bowling Alley is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 217: Bowling Alley is not individually significant under Criterion C (Architecture/Design). Although its CMU construction was atypical of other support facilities at Almaden AFS, its design is strictly utilitarian, and does not represent any particular architectural style or building type. Likewise, the building does not represent the work of a master or possess high artistic values.

Building 217: Bowling Alley is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 217: Bowling Alley retained overall historic integrity, although integrity of materials and workmanship had been affected by vandalism and weathering/deterioration. Hazardous material abatement efforts in 2011 removed the building interiors—including the bowling lanes—which compromised integrity of design, materials, workmanship and association. Thus, the building no longer retains historic integrity.

Conclusion: Building 217: Bowling Alley has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁵ U.S. Army.

⁶ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
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PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 6 Resource name(s) or number (assigned by recorder) Building 225: Airman's Dining Hall

P1. Other Identifier: Airman's Dining Hall

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 225: Airman's Dining Hall is a one-story, 4,640 square foot rectangular-plan Butler building erected in 1957. It is located in the cantonment area, east of Building 245: Recreation and northeast of Building 233: Barracks. An unnamed paved road is located to the west, and a graded contour rises to the east. Building 225: Airman's Dining Hall is a prefabricated steel-frame structure, featuring a concrete slab foundation and corrugated steel siding. It is capped by a corrugated metal gable roof with shallow eaves, with a lower corrugated metal shed roof at its north end. Two large boxed metal ductwork air intakes are located on the roof toward the north end, as well as two metal pipe vents. A fixed metal ladder also provides access to the roof where the shed-roofed portion at the north end meets the gable-roofed section.

The primary façade faces southeast and features a center projecting entry vestibule capped by a shed roof. The entry features a concrete slab threshold and is flanked by eight, nine-light steel-sash windows with awning mechanism. These windows are stacked in groups of four on each side. The entrance is recessed in the vestibule and includes a wood door sheathed with sheet metal.

The east façade features thirteen, nine-light steel-sash windows with awning mechanism. An unfenestrated flat- and shed-roofed addition projects from the building near the north end of the facade. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 Partial view of northeast and southeast facades (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The northwest facade is capped by a shed roof and has no door or window openings. The southwest facade includes a loading dock and pedestrian entry at the north end. The loading dock features a wooden bumper, and the opening has been sealed off with sheet metal. The pedestrian entry features a wood door sheathed in sheet metal (detached by vandalism) and four concrete steps recessed within the opening.

The southwest facade features nine three-over-three steel-sash windows with awning mechanisms. Toward the south end, rectangular openings in the perimeter foundation are infilled with corrugated metal skirting. An entry is located toward the north end and features a projecting vestibule capped by a shed roof. The entry is recessed in the vestibule and has been sealed off with corrugated metal. An additional entry is located a short distance to the south on this facade, and features a projecting vestibule capped by a shed roof. The remainder of the west facade features twelve nine-light steel-sash windows with awning mechanisms.

The interior is divided into the three main sections. The south end features the main dining hall, and north of the dining hall is the kitchen. Both feature sheetrock walls with wood panel wainscot. Flooring consists of composite—possibly linoleum—tiles, and the ceilings feature acoustic tiles with boxed fluorescent lighting fixtures. A small office area with a paneled wood door is located near the southwest corner of the dining hall. Banks of metal shelving and a metal cooking exhaust hoods remain in the kitchen.

The north (shed-roofed) portion of the building is accessed from the kitchen through a pair of paneled wood doors. The door is crowned with a curved metal pipe light fixture, and immediately east is a metal ladder providing access to the roof. Adjacent to the ladder are partially glazed double wood doors with slat vents at the base. These doors access boiler room equipment, including an oil-fired Burnham steam boiler and a fuel oil storage tank. Walls in the boiler room are sheetrock, except for the south end which consists of the corrugated metal exterior of the gable-roofed portion of the building. The floor is cement.

In February 2010, the building appeared in poor condition due to lack of exterior maintenance and deterioration of materials on the interior from weathering and vandalism. In 2011, the building underwent hazardous materials abatement, which involved the removal of the metal siding, walls and roof down to the framework. The interior was also removed.



Building 225: Airman's Dining Hall, south and west facades (Page & Turnbull, February 2010)



Building 225: Airman's Dining Hall, detail of primary entrance on south facade (Page & Turnbull, February 2010)

P3a. Description (Continued):



**Building 225: Airman's Dining Hall, east and north facades
(Page & Turnbull, February 2010)**



**Building 225: Airman's Dining Hall, loading dock at
northwest corner (Page & Turnbull, February 2010)**



**Building 225: Airman's Dining Hall, dining hall interior
(Page & Turnbull, February 2010)**



**Building 225: Airman's Dining Hall, kitchen interior
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 4 of 6

*NRHP Status Code 6Z
*Resource Name or # Building 225: Airman's Dining Hall

B1. Historic name: Airman's Dining Hall

B2. Common name: Dining Hall

B3. Original Use: Dining Hall B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel Butler building, Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A

Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

-Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.

-Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.

-“Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station.” Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

-U.S. Army. “Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900” (2 December 1991).

-Wayne Donaldson, “Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, “Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900” (2 December 1991).

⁴ 682nd Radar Squadron, 2.

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. The technical facilities often featured concrete masonry unit or reinforced concrete construction, while the apartment buildings for families were wood-frame construction.

All of the non-residential support buildings, as well as the Airman's Dining Hall, were pre-fabricated, rigid-frame "Butler buildings" specified by site engineers Sverdrup & Parcel and manufactured by the Butler Manufacturing Company. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁷ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 225: Airman's Dining Hall was erected in 1957 at Almaden AFS. The site's utilities and grading were prepared by Sverdrup & Parcel of San Francisco, California. The building was heated and ventilated, but had no air conditioning. It was used by personnel working at the base for food preparation and dining. This use continued until the base was closed in 1980.

Evaluation: Building 225: Airman's Dining Hall is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that provided food preparation and dining facilities. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁹

Building 225: Airman's Dining Hall is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 225: Airman's Dining Hall is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 225: Airman's Dining Hall Commissary Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

⁵ U.S. Army.

⁶Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁹ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

CONTINUATION SHEET

Primary # _____

HRI # _____

Trinomial _____

Page 6 of 6

Resource Name or # (Assigned by recorder) **Building 225: Airman's Dining Hall**

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011

Continuation Update

***B10. Significance (Continued):**

Integrity: As of February 2010, Building 225: Airman's Dining Hall retained historic integrity. However, hazardous material abatement efforts in 2011 removed the metal siding, walls and roof down to the framework. The interior was also removed. Thus, the building no longer retains historic integrity.

Conclusion: Building 225: Airman's Dining Hall has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) Building 226: Fire Hose House

P1. Other Identifier: Fire Hose House

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 226: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a shed roof. It is located in the southwest portion of Almaden AFS, immediately south of Building 245: Recreation. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces west and features hinged, flush wood double doors that have been detached due to vandalism. The exterior walls consist of plywood, and the roofline features open eaves with flat-board fascia. The plywood roof is covered with composite roofing material. The interior features simple wood framing and an earth floor. The cast-iron base of a former fire hydrant connection is located toward the front of the interior, and two wooden shelves are located toward the rear. Portion of a fire hose are also present.

In February 2010, the structure appeared in poor condition due to lack of exterior maintenance, weathering and vandalism. The west side of the building had fallen off its foundation and portions of the roofline fascia were missing. In 2011, the building underwent hazardous materials abatement, which included paint stabilization.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 North and west facades (February 2010)

***P6. Date Constructed/Age and Sources:** historic
 Circa 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 3

*NRHP Status Code 6Z
*Resource Name or # Building 226: Fire Hose House

- B1. Historic name: Building 226: Fire Hose House
B2. Common name: Fire Hose House
B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

-Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

-Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.

-Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.

-"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 226: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 226: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 226: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 226: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 226: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 226: Fire Hose House is badly deteriorated, but still retains sufficient integrity to convey its association as a fire hose house.

Conclusion: Although Building 226: Fire Hose House retains sufficient integrity, it has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource name(s) or number (assigned by recorder) Building 230: Commissary

P1. Other Identifier: Commissary

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 230: Commissary is a one-story, approximately 1,000 square foot, pre-engineered, rectangular-plan Butler building. Constructed in 1957. In 1962 an approximately 535 square foot wood-frame and metal siding addition was made at its northwest corner. It is located in the cantonment area, south of Building 233: Barracks, and is ringed to the east, west and north by an unnamed paved road. Building 230: Commissary features a concrete slab foundation, prefabricated steel-frame structure, and corrugated steel siding. It is capped by a corrugated metal gable roof with shallow eaves and two projecting metal pipe vents.

The primary façade faces east and is painted red and blue. The primary entrance is centered on this facade and features double wood doors sheathed with flush metal. The doors are flanked on either side by six-over-six steel-sash windows with pivot mechanisms. A metal sign beneath the gable peak reads "Commissary" and "Store Hours" in stenciled letters. The south façade features three six-over-six steel-sash windows. The southwest facade features a center projecting vestibule capped by a shed roof and flanked by six-over-six steel-sash windows. A wood door sheathed with flush metal is recessed within the vestibule and features a hinged lower opening.

(Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 West facade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957; addition 1962 / (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The north facade features two six-over-six steel-sash windows, as well as a large rectangular addition at the northwest corner. This addition is wood frame, clad with corrugated metal, and capped by a corrugated metal shed roof with exposed wood rafters. Two wood slat vents are located at the base of the north side of the addition, and two flush wood doors are located to the east. The addition contains two walk-in boxes for refrigeration and freezing of food.

The interior features a bank of steel refrigeration shelves to the south, steel and wood grocery shelves, linoleum flooring, and an acoustic tile ceiling.

In February 2010, the building appeared in fair-to-poor condition due to lack of exterior maintenance and deterioration of materials on the interior from weathering and vandalism. In 2011, the building underwent hazardous materials abatement, which involved the removal of the metal siding walls and roof down to the framework. The interior was also removed.



**Building 230: Commissary, detail of primary entrance
(Page & Turnbull, February 2010)**



**Building 230: Commissary, south facade
(Page & Turnbull, February 2010)**



**Building 230: Commissary, north facade with addition
(Page & Turnbull, February 2010)**



**Building 230: Commissary, detail of interior
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 5

*NRHP Status Code 6Z
*Resource Name or # Building 230: Commissary

- B1. Historic name: Commissary
- B2. Common name: Commissary
- B3. Original Use: Commissary B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel Butler building , Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. In 1962, a 535 square foot wood-frame and metal siding addition was made at its northwest corner.
Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer) b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011



(This space reserved for official comments.)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

⁴ 682nd Radar Squadron, 2.

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DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

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Resource Name or # (Assigned by recorder) Building 230: Commissary

*Recorded by Jonathan Lammers, Page & Turnbull
DPR 523B (1/95)

*Date September 2011 Continuation Update

*Required information

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. The technical facilities often featured concrete masonry unit or reinforced concrete construction, while the apartment buildings for families were wood-frame construction.

However, all of the non-residential support buildings, including the Commissary, were pre-fabricated, rigid-frame "Butler buildings" specified by site engineers Sverdrup & Parcel and manufactured by the Butler Manufacturing Company. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁷ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 230: Commissary was erected in 1957 at Almaden AFS. The building was heated via a fuel oil burner, but not air conditioned. The Commissary at Almaden AFS was supported by Travis Air Force Base, and offered grocery shopping opportunities for personnel and their families who lived at the base. The store maintained a supply of canned goods, dairy products, frozen foods, produce, and other foodstuffs. The commissary was open during the weekdays but not on weekends. The 1962 addition at the northwest corner was made to install two walk-in boxes for refrigeration and freezing of food. The Commissary remained in use until the base closed in 1980.

Evaluation: Building 230: Commissary is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that provided on-base shopping opportunities for Air Force personnel and their families. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁹

Building 230: Commissary is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 230: Commissary is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a

⁵ U.S. Army.

⁶Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁹ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

***B10. Significance (Continued):**

response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 230: Commissary Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 230: Commissary Shop retained historic integrity, although integrity of design was somewhat compromised by the 1962 addition at its northwest corner. Hazardous material abatement efforts in 2011 removed the metal siding, walls and roof down to the framework. The interior was also removed. Thus, the building no longer retains historic integrity.

Conclusion: Building 230: Commissary Shop has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 232: Fire Hose House

P1. Other Identifier: Fire Hose House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 232: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation. It is located in the southwest portion of the Almaden AFS on the east side of an unnamed road, a short distance to the west of Building 230: Commissary. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces southwest and originally featured hinged, flush wood double doors that have been detached by vandalism. The exterior walls consist of plywood, and the original shed roof has been removed. The interior features simple wood framing and an earth floor. A cast-iron "IOWA" fire hydrant is located toward the front, and a wooden shelf is located toward the rear. Collapsed portions of the roof are visible in the interior.

In February 2010, the structure appeared in very poor condition due to lack of exterior maintenance, weathering and vandalism. In 2011, the building underwent hazardous materials abatement, which included paint stabilization.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

West and north facades (February 2010)

***P6. Date Constructed/Age and**

Sources: historic
 Circa 1957 (MROSD)

***P7. Owner and Address:**

Midpeninsula Regional Open Space
 District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**

Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**

September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

Page 2 of 4

Resource Name or # (Assigned by recorder) Building 232: Fire Hose House

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

P3a. Description (Continued):



**Building 232: Fire Hose House, south and west facades
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 232: Fire Hose House

- B1. Historic name: Building 232: Fire Hose House
B2. Common name: Fire Hose House
B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown b. Builder: unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

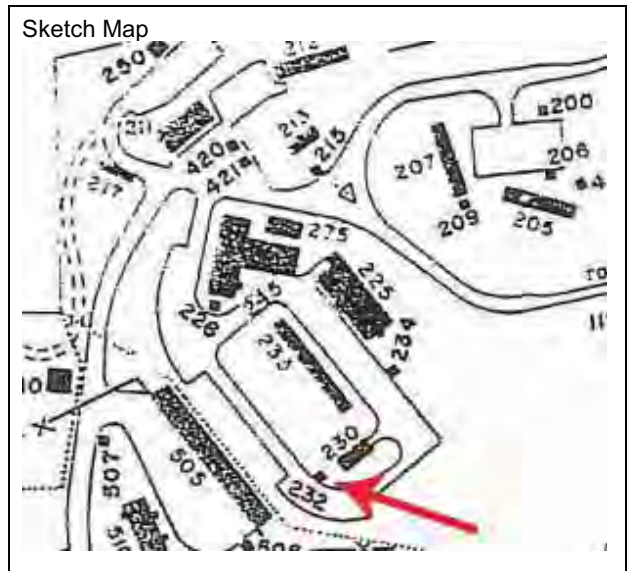
- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 232: Fire Hose House

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 232: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 232: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 232: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 232: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 232: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 232: Fire Hose House has lost its roof and doors, compromising integrity of design, materials, and workmanship. It therefore does not retain integrity.

Conclusion: Building 232: Fire Hose House has not been found historically significant, nor does it retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
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PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource name(s) or number (assigned by recorder) Building 233: Barracks

P1. Other Identifier: Airman's Dormitory; Chapel; Photo Hobby Shop; Ceramics Workshop

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 233: Barracks (a.k.a. Airman's Dormitory and Chapel) is a one-story, approximately 2,920 square foot, rectangular-plan Butler building constructed in 1957. It is located in the cantonment area, southeast of Building 245: Recreation and southwest of Building 225: Airman's Dining Hall. It is ringed on the north, east, west and north by an unnamed paved road. Building 233: Barracks is a prefabricated steel-frame structure, featuring a concrete pier perimeter foundation and corrugated steel siding. It is capped by a corrugated metal gable roof with shallow eaves and five projecting metal pipe vents.

The primary façade faces northwest and features a center projecting vestibule capped by a shed roof and flanked by two three-over-three steel-sash windows. The entry is approached by straight concrete steps with metal pipe railings. The primary entrance is recessed in the vestibule centered on this facade and features a wood door sheathed with flush metal.

The east façade features nine three-over-three steel-sash windows with awning mechanisms. An entry is located near the center of the facade and features a concrete step and a wood door sheathed with flush metal (detached by vandalism). A carved wooden sign above the entry reads "Photo Hobby Shop," and is flanked by the remains of a metal pipe light fixture. An additional entry is located near the southeast corner. It features a projecting vestibule capped by a shed roof and is approached by concrete steps with metal pipe railings. A plastic sign with stenciled lettering above the door reads "Ceramic Shop." **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
 North and east facades (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The south facade features a center entry approached from the east by a straight run of open-tread concrete stairs with metal pipe railings. It features a wood door sheathed with flush metal, and is flanked by two three-over-three steel-sash windows. The lower base of the stair landing, as well as rectangular openings in the perimeter foundation, are covered with corrugated metal skirting.

The west facade features nine three-over-three steel-sash windows with awning mechanisms. Toward the south end, rectangular openings in the perimeter foundation are infilled with corrugated metal skirting. An entry is located toward the north end and features a projecting vestibule capped by a shed roof. The entry is recessed in the vestibule and has been sealed off with corrugated metal.

The interior features sheetrock wall partitions, composite—possibly linoleum—tile flooring, and a drop fiberboard ceiling.

In February 2010, the building appeared in fair-to-poor condition due to lack of exterior maintenance and deterioration of materials on the interior from weathering and vandalism. In 2011, the building underwent hazardous materials abatement, which involved the removal of the metal siding, walls and roof down to the framework. The interior was also removed.



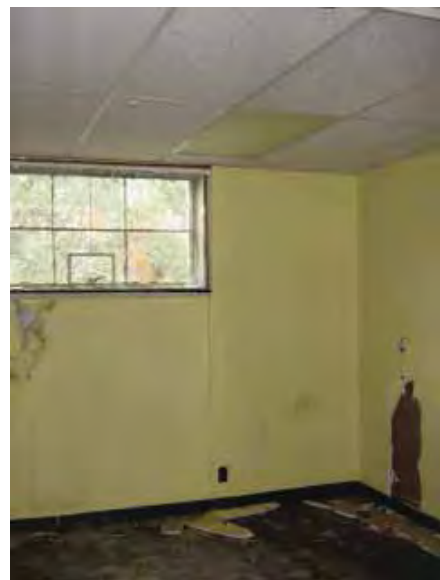
Building 233: Barracks, south and west facades
(Page & Turnbull, February 2010)



Building 233: Barracks, detail of entrance on south facade
(Page & Turnbull, February 2010)



Building 233: Barracks, entry near southeast corner
(Page & Turnbull, February 2010)



Building 233: Barracks, detail of interior
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

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*NRHP Status Code 6Z
*Resource Name or # Building 233: Barracks

B1. Historic name: Airman's Dormitory

B2. Common name: Barracks

B3. Original Use: Barracks

B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel Butler building , Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Sverdrup & Parcel (site engineer)

b. Builder: Gresham Construction

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

-Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

-Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.

-Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.

-"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

⁴ 682nd Radar Squadron, 2.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 5

Resource Name or # (Assigned by recorder) Building 233: Barracks

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. The technical facilities often featured concrete masonry unit or reinforced concrete construction, while the apartment buildings for families were wood-frame construction.

All of the non-residential support buildings, including the Barracks, were pre-fabricated, rigid-frame "Butler buildings" Specified by site engineer Sverdrup & Parcel and manufactured by the Butler Manufacturing Company. Butler was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "... built to be inexpensive and easily modified or moved."⁷ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 233: Barracks was erected in 1957 at Almaden AFS. The building was originally one of six steel Butler barracks buildings used to house single male enlisted personnel. In 1974, the commander of Almaden AFS condemned the old barracks buildings because they were leaking, moldy, and no longer habitable. Five of the six barracks buildings were purchased by the U.S. Forest Service and dismantled. Only their concrete footings remain today. Personnel without families moved to leased quarters off-base, and the single remaining barracks building (Building 233) was converted for multiple uses as a chapel/photo hobby shop/ceramics workshop.⁸ These uses continued at the building until the base closed in 1980.

Evaluation: Building 233: Barracks is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was originally a residential facility, and later provided space for a chapel and craft activities. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.¹⁰

Building 233: Barracks is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 233: Barracks is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

⁵ U.S. Army.

⁶ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁸ Telephone interview with Basim Jaber, chronicler of the former Almaden AFS, 2 March 2010.

¹⁰ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

***B10. Significance (Continued):**

Building 233: Barracks Commissary Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 233: Barracks retained overall historic integrity, although its integrity of association was somewhat compromised by its conversion from a dormitory to a chapel/hobby workshop. Hazardous material abatement efforts in 2011 removed the metal siding, walls, and roof down to the framework. The interior was also removed. Thus, the building no longer retains historic integrity.

Conclusion: Building 230: Commissary Shop has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 234: Fire Hose House

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted

*a. County Santa Clara

*b. USGS 7.5' Quad Los Gatos "Digital Map – Beta" Date: 2009

*c. Address Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

*e. Other Locational Data: Assessor's Parcel Number Block: 562-08 Lot: 003

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 234: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a shed roof with shallow eaves. It is located in the southwest portion of Almaden AFS on the east side of an unnamed road, a short distance south of Building 225: Airmen's Dining Hall. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces west and originally featured hinged, flush wood double doors that have been detached by vandalism. The exterior walls consist of plywood, and the roofline features open eaves with flat-board fascia. The plywood roof is covered with composite roofing material. The interior features simple wood framing and an earth floor. The cast-iron base of a former fire hydrant connection is located toward the front, and two wooden shelves are located toward the rear. The upper shelf is stenciled with black letters: "Built by 115 CET Wisconsin ANG." A coiled fire hose is also present.

In February 2010, the structure appeared in fair condition due to lack of exterior maintenance and vandalism. In 2011, the building underwent hazardous materials abatement, which included paint stabilization. **(Continued)**

*P3b. Resource Attributes: (list attributes and codes) HP4. Ancillary building

*P4. Resources Present: Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

West and south facades (February 2010)

*P6. Date Constructed/Age and

Sources: historic
Circa 1957 (MROSD)

*P7. Owner and Address:

Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

*P8. Recorded by:

Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

*P9. Date Recorded:

September 2011

*P10. Survey Type:

ensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

*Attachments: None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



Building 234: Fire Hose House, detail of entry
(Page & Turnbull, February 2010)



Building 234: Fire Hose House, detail of interior
(Page & Turnbull, February 2010)



Building 234: Fire Hose House, south and east facades
(Page & Turnbull, February 2010)



Building 234: Fire Hose House, detail of interior shelf
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 234: Fire Hose House

- B1. Historic name: Building 234: Fire Hose House
B2. Common name: Fire Hose House
B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

-Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

-Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.

-Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.

-"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 234: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 234: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 234: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 234: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 234: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 234: Fire Hose House retains sufficient historic integrity to convey its association as a fire hose house.

Conclusion: Although Building 234: Fire Hose House retains integrity, it has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 6 Resource name(s) or number (assigned by recorder) Building 245: Recreation

P1. Other Identifier: Recreation; Post Exchange

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 245: Recreation is a one-story, approximately 4,660 square foot, T-shaped building designed with International style influences. Constructed in 1957, it is located in the cantonment area, southwest of the fork in Mt. Umunhum Road. Immediately to the north is Building 275: Swimming Pool, and the east end of building is attached to Building 276: Bath House, which was built in 1966 and is described on a separate form.

Building 245: Recreation is comprised of two wings. The eastern section features the gym and is one story (double-height) with concrete masonry unit (CMU) walls and a metal truss roof. The western end of the gymnasium is partially wrapped on the north and south by a long one-story west wing with CMU walls and low-pitched gable roof with shallow eaves. Both of these wings rest on a concrete slab foundation, and fenestration consists almost exclusively of multi-light steel-sash windows with concrete sills.

To simplify the description of the building, each wing will be described individually. The north facade of the gymnasium faces the pool and features a large bank of multi-light steel-sash awning windows with a concrete sill. Beneath the southern end of these windows is a flush metal double door. The south facade of the gymnasium features a similar bank of windows. The roofline includes shallow eaves with flat board fascia. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View of south and east facades
(February 2010), prior to
abatement.

***P6. Date Constructed/Age and Sources:** historic
1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ntensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):

The west end of the gym is wrapped by the west wing, which has a long north-south orientation. The west facade of the west wing (long axis) faces an unnamed road and features a recessed entry vestibule near the center with partially glazed metal double doors and a large plate glass transom. To the north of this entry is a large bank of multi-light steel-sash awning windows with a base comprised of flush composite board paneling. To the north of the windows is an additional entry comprised of a partially-glazed flush metal door crowned with a plate-glass transom. The remainder of the west facade includes multi-light steel-sash awning windows with concrete sills.

The east facade of the west wing is divided into two halves by the gymnasium. The southern half includes a projecting entry vestibule at center with a vertical ribbon of steel-sash awning windows. The doorway is located on the south side of the vestibule and includes a flush metal door that has been detached by vandalism. A thin horizontal ribbon of steel-sash awning windows with a concrete sill is located to the north, and a larger bank of steel-sash awning windows to the south. These latter windows have been largely removed due to vandalism. North of the gymnasium, the east facade of the west wing faces the pool and includes a horizontal ribbon of steel-sash windows.

The south facade of the west wing (short axis) includes a flush metal door near the center. To the west is a large steel-sash awning window. The north facade of the west wing (short axis) faces Mt. Umunhum Road and includes a large multi-light steel-sash window. The roofline features shallow eaves and flat board fascia.

Only selected portions of the interior were accessible. The gymnasium features wood tongue-in-groove floor, as well as a wood tongue-in-groove wall at its eastern end with an attached basketball backboard. The windows were protected with a chain-link screen. Typical interior finishes elsewhere included metal or wood doors (some partially glazed), composite tile flooring, and boxed fluorescent light fixtures. One room near the southern end of the west wing had walls with wood paneling.

In February 2010, the building appeared in fair condition due to failure of the roof and extensive damage caused by vandalism and weathering. In 2011, the building underwent hazardous materials abatement, which involved the removal of the asbestos exterior coating, friable asbestos pipe wrappings, the windows, roof, and lead paint stabilization.



**Building 245 Recreation: central (gym) wing, north facade
(Page & Turnbull, February 2010)**



**Building 245 Recreation: central (gym) wing, south and
east facades. Note Building 276: Bath House is attached at
lower right. (Page & Turnbull, February 2010)**

P3a. Description (Continued):



Building 245 Recreation: west wing, detail of entry
(Page & Turnbull, February 2010)



Building 245 Recreation: west wing, detail of west facade
(Page & Turnbull, February 2010)



Building 245 Recreation: west wing, east facade
(Page & Turnbull, February 2010)



Building 245 Recreation: west wing, east facade entry
(Page & Turnbull, February 2010)



Building 245 Recreation: west wing, southwest corner
(Page & Turnbull, February 2010)



Building 245 Recreation: west wing, southeast corner
(Page & Turnbull, February 2010)

P3a. Description (Continued):



Building 245 Recreation: gymnasium interior
(Page & Turnbull, February 2010)



Building 245 Recreation: detail of gymnasium ceiling
(Page & Turnbull, February 2010)



Building 245 Recreation: interior detail
(Page & Turnbull, February 2010)



Building 245 Recreation: interior room
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 5 of 6

*NRHP Status Code 6Z
*Resource Name or # Building 245: Recreation

- B1. Historic name: Recreation Building
B2. Common name: Recreation; Gymnasium; Post Exchange
B3. Original Use: Recreation and Post Exchange B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian with International Style influences
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials removal in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: Indenco Engineers

b. Builder: Unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

⁴ 682nd Radar Squadron, 2.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 6 of 6

Resource Name or # (Assigned by recorder) Building 245: Recreation

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel and a barber shop.

Recreational facilities included a bowling alley (Building 217), a swimming pool (Building 275), and a recreation building (Building 245). These were all clustered at the northwestern end of the cantonment area, west-southwest of the fork in Mount Umunhum Road. Although most of the non-residential support buildings and the barracks were pre-fabricated, steel-frame "Butler buildings," Building 217: Bowling Alley, Building 245: Recreation, and Building 276: Bath House featured CMU construction.

Building 245: Recreation was erected in 1957 at Almaden AFS. It featured a half-court gymnasium, as well as recreational amenities that included a pool table, weight room, ping pong tables, a foosball table, and a small library. Building 245: Recreation also housed the Post Exchange, which sold both necessities and consumer items, such as cameras, radios, stereos, calculators, and a small selection of clothing. The building provided recreational and limited shopping opportunities for personnel living at the station, and continued in that capacity until Almaden AFS closed in 1980.

Evaluation: Building 245: Recreation is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building served as a recreational facility, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁷

Building 245: Recreation is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 245: Recreation is not individually significant under Criterion C (Architecture/Design). Although its design does feature mild International style influences (evidenced primarily by ribbon windows), it is not a particularly strong or noteworthy example of the style. The building does not possess high artistic values, nor does it appear the work of a master.

Building 245: Recreation is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 245: Recreation retained overall historic integrity, although integrity of materials and workmanship had been affected by vandalism and weathering/deterioration. Hazardous material abatement efforts in 2011 removed all windows and the interior, which comprised integrity of design. Thus, the building no longer retains historic integrity.

Conclusion: Building 245: Recreation has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁵ U.S. Army.

⁶"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 5 Resource name(s) or number (assigned by recorder) Building 250: Auto Maintenance Storage

P1. Other Identifier: Auto Maintenance Storage

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 250: Auto Maintenance Storage is a one-story, 360 square foot, rectangular-plan Butler building. Erected in 1958, it is located on the west side of Mt. Umunhum Road, northwest of Building 211: Auto Maintenance Shop. Building 250: Auto Maintenance Storage is a prefabricated steel-frame structure, featuring a concrete slab foundation and corrugated steel siding. It is capped by a corrugated metal gable roof featuring shallow eaves and a metal pipe vent.

The primary façade faces south and includes a center entry with wood double doors sheathed in sheet metal. A faint stenciled sign on the doors reads "FLAMMABLES." A curved metal pipe light fixture is installed above the door, and a metal badge reading "Butler Mfg. Company" is located at the gable peak. The east and north facades have no entries or windows, although a single light switch projects from the wall on the north facade. The center of the west facade features a single three-over-three steel sash window with pivot mechanism. The interior, as inspected through the window, revealed unfinished walls and a concrete floor. A concrete pad is located a short distance to the east.

In February 2010, the building appeared in fair condition with numerous areas of rust due to lack of exterior maintenance. In 2011, the building underwent hazardous materials abatement, which involved the removal of the metal siding, walls and roof down to the framework. The interior was also removed. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP14. Government Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



***P5b. Photo:** (view and date)
South and west facades (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1958 / (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



Building 250: Auto Maintenance Storage, south and east facades (Page & Turnbull, February 2010)



Building 250: Auto Maintenance Storage, detail of Butler Mfg. Company badge (Page & Turnbull, February 2010)



Building 250: Auto Maintenance Storage, west facade (Page & Turnbull, February 2010)



Building 250: Auto Maintenance Storage, north (rear) facade (Page & Turnbull, February 2010)

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 5 Resource Name or # (Assigned by recorder) **Building 250: Auto Maintenance Storage**
*Recorded by Jonathan Lammers, Page & Turnbull *Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.⁴ It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).⁵

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁶ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. The technical facilities often featured concrete masonry unit or reinforced concrete construction, while the apartment buildings for families were wood-frame construction.

All of the non-residential support buildings were pre-fabricated, rigid-frame "Butler buildings" with specifications by site engineer Sverdrup & Parcel. They were manufactured by the Butler Manufacturing Company, which was established in Kansas in 1901, primarily as a manufacturer of agricultural storage structures. In 1910, the company began producing automobile garages, and later began offering numerous galvanized steel structures and buildings for commercial, industrial, institutional, and agricultural uses. In 1940, Butler Manufacturing began offering pre-engineered rigid frame buildings that used less steel and could be easily erected. During World War II, several hundred Butler buildings were used by the Army for medical operating rooms and Signal Corps housing. It was not until the Cold War era, however, that Butler buildings came into widespread use at U.S. military facilities, as they were "...built to be inexpensive and easily modified or moved."⁷ The Butler buildings at Almaden AFS are all long and narrow, with concrete foundations, corrugated metal siding, divided-light steel-sash windows, and metal gable roofs. The company continues to manufacture prefabricated buildings today, including buildings for the U.S. General Services Administration through a subsidiary, BlueScope Construction.

Building 250: Auto Maintenance Storage was erected in 1958 at Almaden AFS. It is a pre-fabricated steel building manufactured by the Butler Manufacturing Co. The building was used for auxiliary storage (likely of flammable materials) for Building 211: Auto Maintenance Shop. This use appears to have continued until the base was closed in 1980.

Evaluation: Building 250: Auto Maintenance Storage is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was a support facility that provided auxiliary storage. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS found that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁹

Building 250: Auto Maintenance Storage is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 250: Auto Maintenance Storage is not individually significant under Criterion C (Architecture/Design). As a pre-engineered Butler building, it represents a common, utilitarian design manufactured for a wide range of purposes, including commercial, industrial, and agricultural uses. The U.S. military regularly erected Butler buildings on its bases during the Cold War because they featured a simple, mass-produced design, were moveable, and relatively inexpensive. However, the building type was not created as a response to the Cold War, and other building types were also used on the same bases. In addition, the building does not represent the work of a master or possess high artistic values.

Building 250: Auto Maintenance Storage Commissary Shop is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

⁵ U.S. Army.

⁶"Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁷ Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.

⁹ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

CONTINUATION SHEET

Primary # _____

HRI # _____

Trinomial _____

Page 5 of 5

Resource Name or # (Assigned by recorder) **Building 250: Auto Maintenance Storage**

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011

Continuation Update

***B10. Significance (Continued):**

Integrity: As of February 2010, Building 250: Auto Maintenance Storage retained historic integrity. However, hazardous material abatement efforts in 2011 removed the metal siding, walls and roof down to the framework. The interior was also removed. Thus, the building no longer retains historic integrity.

Conclusion: Building 250: Auto Maintenance Storage has not been found historically significant, nor does it retain historic integrity. It therefore does not meet the general registration requirements for listing in the National Register.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 275: Swimming Pool

P1. Other Identifier: Swimming Pool

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 275: Swimming Pool is a rectangular-shaped, concrete swimming pool constructed in 1957. It is loosely oriented on an east-west axis and is nine feet deep at its eastern end. The Swimming Pool is located immediately north of Building 245: Recreation and Building 276: Bath House. Mt. Umunhum Road is located a short distance to the north.

The pool is surrounded by a concrete pool deck and features a decorative tile lip with concrete tile coping. Primary access is provided by two metal pipe ladders fixed along its southern side. A metal pipe diving platform is located at its eastern end, although the diving board is no longer present. The pool's circulation pump and water heater are located in a wood enclosure at the southeast end of the pool. The enclosure features board-and-batten cladding and a shed roof. The hinged doors of this enclosure have been removed by vandalism, and a metal pipe vent for the water heater projects through the roof.

At its eastern end, the pool is enclosed by wood and wire fencing. Its northern edge is enclosed by a concrete retaining wall topped with chain link fencing. In February 2010, the pool appeared in poor condition due to lack of maintenance and vandalism. The pool was filled with rainwater and aquatic plants were established at the eastern end. The concrete deck and coping tiles were also cracked.

***P3b. Resource Attributes:** (list attributes and codes) HP39. Other

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View toward the east (February 2010)

***P6. Date Constructed/Age and**

Sources: historic
 1957 (MROSD)

***P7. Owner and Address:**

Midpeninsula Regional Open Space
 District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**

Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**

September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record

Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record

Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



Building 275: Swimming Pool, view to the east with Building 245: Recreation adjacent. (Page & Turnbull, February 2010)



Building 275: Swimming Pool, diving platform at east end (Page & Turnbull, February 2010)



Building 275: Swimming Pool, Detail of wood enclosure for pump and water heater. (Page & Turnbull, February 2010)



Building 275: Swimming Pool, detail of east end (Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 275: Swimming Pool

- B1. Historic name: Swimming Pool
- B2. Common name: Swimming Pool
- B3. Original Use: recreation B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown b. Builder: unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

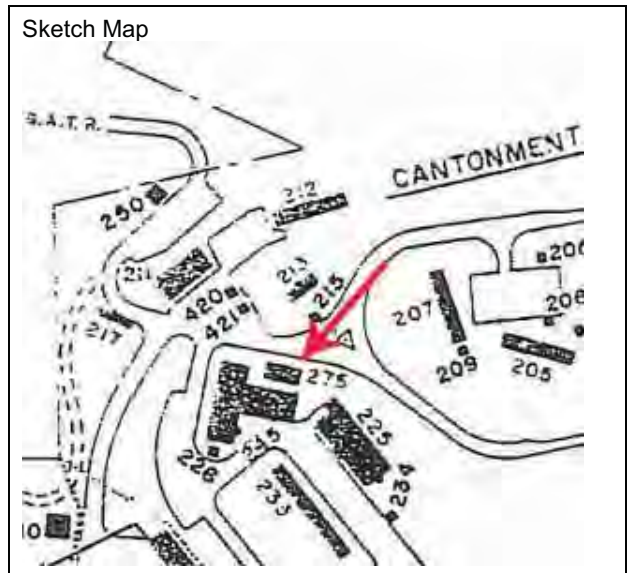
- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel and a barber shop.

Recreational facilities included a bowling alley (Building 217), a swimming pool (Building 275), and a recreation building (Building 245). These were all clustered at the northwestern end of the cantonment area, west-southwest of the fork in Mt. Umunhum Road. Although most of the non-residential support buildings and the barracks were pre-fabricated, steel-frame "Butler buildings," Building 217: Bowling Alley, Building 245: Recreation, and Building 275: Swimming Pool featured CMU construction.

Building 275: Swimming Pool was erected in 1957. It provided swimming and sunbathing opportunities for military personnel and continued in that use until Almaden AFS closed in 1980.

Evaluation: Building 275: Swimming Pool is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was a recreational amenity that provided swimming and sunbathing opportunities for Air Force personnel and their families. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 275: Swimming Pool is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 275: Swimming Pool is not individually significant under Criterion C (Architecture/Design). It is a conventional swimming pool and its design is utilitarian. The pool does not represent the work of a master or possess high artistic values.

Building 275: Swimming Pool is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 275: Swimming Pool retained integrity.

Conclusion: Building 275: Swimming Pool retains integrity, but has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 276: Bath House

P1. Other Identifier: Bath House

***P2. Location:** Not for Publication Unrestricted ***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum **City** Los Gatos **Zip** 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 276: Bath House is a one-story, approximately 400-square-foot concrete masonry unit (CMU) building constructed in 1966. It features a concrete slab foundation and is capped by a shed roof with sheet metal coping and two metal pipe vents. The building is attached to the east end of Building 245: Recreation, and is located immediately south of Building 275: Swimming Pool.

The primary facade faces north onto the pool area. It includes two flush metal doors with slat vents at the base. These are separated by a wood partition attached to the CMU wall with two tie rods. Each entry is also partially enclosed by a wood frame screen attached to the CMU wall with a tie rod. The south facade is unfenestrated. The west facade includes three flush metal doors and a projecting section at center. All the doors have slat vents at the base, while the central door is located in the projecting section and includes an additional slat vent at the top. The interior was not inspected.

In February 2010, the building appeared in fair condition due to lack of exterior maintenance. In 2011, the building underwent hazardous materials abatement, which involved the removal of the interior materials and lead paint stabilization.

(Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
 North facade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1966 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



Building 276: Bath House, North and south facades adjacent to pool. (Page & Turnbull, February 2010)



Building 276 Bath House, south façade. (Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 276: Bath House

- B1. Historic name: Bath House
B2. Common name: Bath House
B3. Original Use: Changing area and restrooms B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1966. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011



(This space reserved for official comments.)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4

Resource Name or # (Assigned by recorder) Building 276: Bath House

*Recorded by Jonathan Lammers, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel and a barber shop.

Recreational facilities included a bowling alley (Building 217), a swimming pool (Building 275), and a recreation building (Building 245). These were all clustered at the northwestern end of the cantonment area, west-southwest of the fork in Mount Umunhum Road. Although most of the non-residential support buildings and the barracks were pre-fabricated, steel-frame "Butler buildings," Building 217: Bowling Alley, Building 245: Recreation, and Building 276: Bath House featured CMU construction.

Building 276: Bath House was erected in 1966. It featured restrooms and a changing area for personnel using the adjacent pool. It continued in that use until Almaden AFS closed in 1980.

Evaluation: Building 276: Bath House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building is less than 50 years old, and does not appear to possess exceptional importance. It was a minor support facility that provided changing areas and restrooms for Air Force personnel and their families. It is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 276: Bath House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 276: Bath House is not individually significant under Criterion C (Architecture/Design). Although its CMU construction was atypical of other support facilities at Almaden AFS, its design is strictly utilitarian, and does not represent any particular architectural style or building type. Likewise, the building does not represent the work of a master or possess high artistic values.

Building 276: Bath House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: As of February 2010, Building 276: Bath House Shop retained integrity. Hazardous material abatement efforts in 2011 removed the interiors, which compromised its integrity of design, materials and association.

Conclusion: Building 276: Bath House Shop is not age-eligible and has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 300: Oxidation Pond Treatment Building

P1. Other Identifier: Building 300c; Sewage Treatment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 300: Oxidation Pond Treatment Building is a rectangular-shaped, pre-fabricated metal building. It is located at the south side of the west sewage treatment pond. Built in 1974, Building 300 has a concrete pad foundation, corrugated steel walls, and a standing seam metal gable roof.

The primary façade faces east and contains flush metal door with a vent toward the top and three switches. The other three facades do not contain any openings, though pipes are attached to the walls.

The building appears to be in fair condition due to weathering and collapse of the door.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View looking south (2011), after abatement.

***P6. Date Constructed/Age and Sources:** historic
1974 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

sive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

Page 2 of 4 Resource Name or # (Assigned by recorder) Building 300: Oxidation Pond Treatment Building
*Recorded by Christina Dikas, Page & Turnbull *Date September 2011 Continuation Update

***P3a. Description:**



East and south façades.
(MROSD, 2011)

BUILDING, STRUCTURE, AND OBJECT RECORD

- B1. Historic name: Building 300c: Sewage Treatment Building
- B2. Common name: Sewage Treatment Building
- B3. Original Use: Sewage Treatment
- B4. Present use: Vacant

*B5. Architectural Style: Utilitarian

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed in 1974. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: N/A Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. References:

- 682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. Evaluator: Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
² 682nd Radar Squadron, 2.
³ U.S. Army.

***B10. Significance (Continued):**

The sewage treatment facilities, including sewage oxidation ponds, treatment building, chlorination, and septic tanks, are located at the east end of Almaden AFS, south of the road to Mt. Thayer. The underground pump station (Building 300e), underground chlorination facility (Building 300d), and treatment building (Building 300c) were all lined up on the south side of the ponds; only the treatment building is an actual building and therefore is referred to commonly as Building 300. The metal building was used to treat the oxidation ponds. It does not appear that the building was manufactured by the Butler Manufacturing Company, which produced many of the larger pre-fabricated steel buildings at Almaden AFS.

Evaluation: Building 300: Oxidation Pond Treatment Building is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The small metal building was part of the sewage treatment pond system, and does not represent any particular important events that occurred at Almaden AFS. Also, it is not yet 50 years of age and is not age eligible, nor does it possess exceptional significance. Furthermore, it does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 300: Oxidation Pond Treatment Building is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 300: Oxidation Pond Treatment Building is not individually significant under Criterion C (Architecture/Design). The utilitarian building does not exemplify the distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 300: Oxidation Pond Treatment Building is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 300: Oxidation Pond Treatment Building possessed integrity of location, design, setting, workmanship, feeling, and association since it had not been moved or greatly altered. Hazardous materials abatement in 2011 changed little about the building, so it continues to retain integrity.

Conclusion: Building 300: Oxidation Pond Treatment Building has not been found historically significant and is not age-eligible, even though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Ibid, 50.
DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 303: Oxidation Pond Storage Building

P1. Other Identifier: Sewage Storage

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 303: Oxidation Pond Storage Building is an approximately 60 square foot, rectangular-shaped, concrete masonry unit (CMU) building. It is located at the northwest corner of the sewage treatment pond area and is accessed by a dirt trail. Built in 1958, Building 303 has a concrete pad foundation, CMU walls, and a flat wood roof with flat eaves that extend on the south and north facades. The building terminates in metal coping at the roofline.

The primary façade faces south and contains a door opening; the remnants of a wood door with metal sheathing lay at the foot of the opening. The other three façades do not contain any openings.

The interior features wood shelving.

The building appears to be in fair condition due to weathering and collapse of the door.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View looking northeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1958 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**



**East and north façades.
(Page & Turnbull, February 2010)**



**Interior, looking north.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 303: Oxidation Pond Storage Building

- B1. Historic name: Insecticide Storage
- B2. Common name: Sewage Storage
- B3. Original Use: Storage
- B4. Present use: Vacant

*B5. Architectural Style: Utilitarian

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1961, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. References:

-682nd Radar Squadron, *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

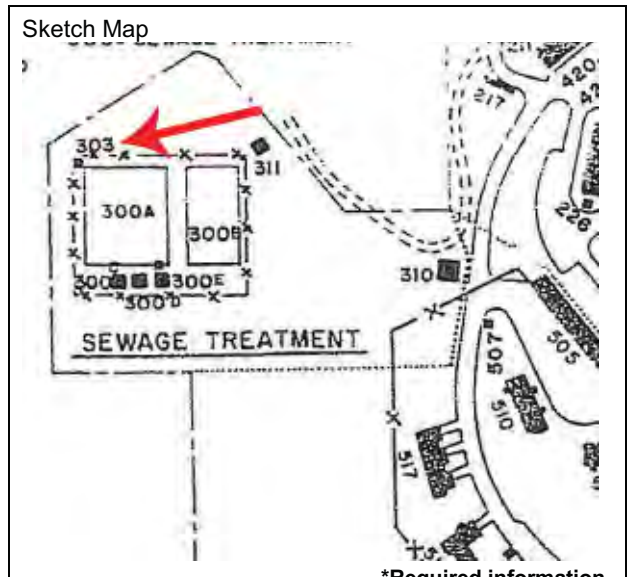
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. Evaluator: Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The sewage treatment facilities, including sewage oxidation ponds, treatment building, chlorination, and septic tanks, are located at the east end of Almaden AFS, south of the road to Mt. Thayer. The CMU building is similar to Building 114: Paint Storage near the peak of Mt. Umunhum, though Building 303 is slightly larger. According to a map from the 1960s or 1970s, the building was used to store insecticides. Later maps incorrectly labeled the building "paint storage."

Evaluation: Building 303: Oxidation Pond Storage Building is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The small CMU building was used for insecticide storage near the sewage treatment ponds, and does not represent any particular important events that occurred at Almaden AFS. Furthermore, it does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁴

Building 303: Oxidation Pond Storage Building is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 303: Oxidation Pond Storage Building is not individually significant under Criterion C (Architecture/Design). The utilitarian building does not exemplify the distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 303: Oxidation Pond Storage Building is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 303: Oxidation Pond Storage Building possessed integrity of location, design, setting, workmanship, feeling, and association since it had not been moved or greatly altered. Integrity of materials had been compromised due to deterioration of the wood, particularly the door. The lead paint was stabilized during hazardous materials abatement in 2011, and the building continues to retain integrity.

Conclusion: Building 303: Oxidation Pond Storage Building has not been found historically significant, even though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Ibid, 50.
DPR 523L

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 505: Carport

P1. Other Identifier: Carport

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 505: Carport is a one-story, approximately 4,879 square foot, rectangular-plan structure. Built in 1958, it is located in the Cantonment area, west of Mt. Umunhum Road and east of the apartment buildings. Building 505 features a concrete slab foundation, wood frame, and flat roof covered with tar and gravel. The wood roof sits on steel beams supported by pipe columns. The roofline terminates in metal flashing and a wood guard rail along the southeast side. The back (northeast) wall is poured-in-place concrete, which also functions as a retaining wall for the slope behind. The northwest and southeast walls are stone. The southwest side is open to a paved surface parking lot to allow cars to enter. Plywood storage lockers are placed against the back wall and feature flush wood doors, several of which lay on the ground in front of the openings.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary Building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View southeast (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1958 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**



**Building 505: Carport, looking southeast.
(Page & Turnbull, February 2010)**



**Building 505: Carport, northeast stone wall.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 505: Carport

- B1. Historic name: Carport
B2. Common name: Carport
B3. Original Use: Carport
B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO)

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 505 was used as a carport for the residential area at the west end of the Cantonment. It serviced the five fourplexes (Buildings 510, 511, 512, 513, and 514) and two duplexes (515 and 517), which were all built in 1958. The carport structure was designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the apartment buildings. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 505: Carport is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing parking for the on-site residents who lived in the apartment buildings at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 505: Carport is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 505: Carport is not individually significant under Criterion C (Architecture/Design). It is not representative of a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was an ancillary structure for apartment buildings that were mass-produced, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 505: Carport is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 505: Carport possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous materials, which removed the built-up roofing material but left the rock walls intact. The building continues to retain integrity.

Conclusion: Building 505: Carport has not been found significant, though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA09999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) Building 506: Fire Hose House

P1. Other Identifier: Fire Hose House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 506: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a shed roof. It is located in the southwest portion of Almaden AFS, at the southern end of the parking area for Building 505: Carport. To the south is Building 511: Fourplex Apartment. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces northwest and features a hinged, flush wood door toward the west (the other door has been detached due to vandalism). The exterior walls consist of plywood, and the roofline features open eaves with flat-board fascia. The roof is covered with composite roofing material. A small rectangular portion of the east wall has been cut out, but is unglazed. The interior features simple wood framing and an earth floor. A cast-iron "IOWA" fire hydrant is located toward the front, and a wooden shelf toward the rear is stenciled with black letters: "Built by 115 CET Wisconsin ANG."

In February 2010, the structure appeared in fair condition due to lack of exterior maintenance and vandalism. In 2011, the building underwent hazardous materials abatement, which included paint stabilization.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 Northwest and southwest facades
 (February 2010)

***P6. Date Constructed/Age and Sources:** historic
 Circa 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space
 District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 3

*NRHP Status Code 6Z
*Resource Name or # Building 506: Fire Hose House

- B1. Historic name: Building 506: Fire Hose House
- B2. Common name: Fire Hose House
- B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

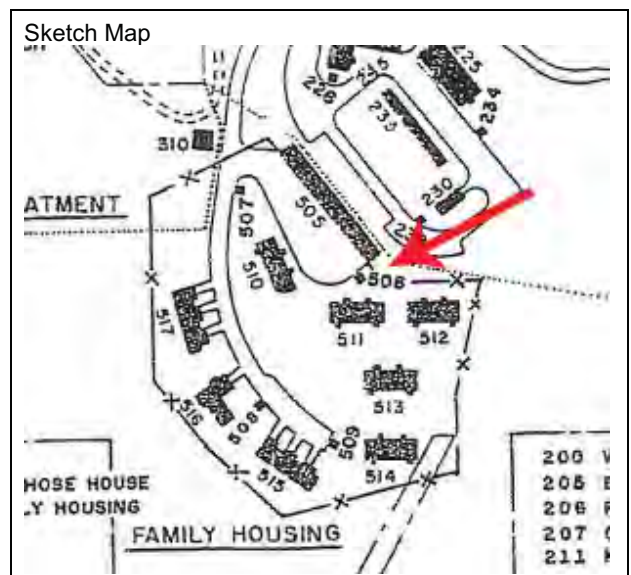
- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 506: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 506: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 506: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 506: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 506: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 506: Fire Hose House retains historic integrity, and appears to be among the better-preserved of the remaining fire hose houses at Almaden AFS.

Conclusion: Although Building 506: Fire Hose House retains integrity, it has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 3 Resource name(s) or number (assigned by recorder) Building 507: Fire Hose House

P1. Other Identifier: Fire Hose House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 507: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation. It is located in the southwest portion of Almaden AFS, on the south side of the entry drive to Building 505: Carport. A short distance to the south is Building 510: Fourplex Apartment. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces west. The majority of the building has collapsed due to weathering and vandalism. Only portions of the north, east and south walls remain, and consist of simple wood framing clad with plywood. A cast-iron "IOWA" fire hydrant is located toward what would have been the front of the original structure, and the remains of the roof are scattered on the ground.

In February 2010, the structure appeared in extremely poor condition and in danger of complete collapse. In 2011, the building underwent hazardous materials abatement, which included paint stabilization.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 West facade (February 2010)

***P6. Date Constructed/Age and Sources:** historic
 Circa 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 3

*NRHP Status Code 6Z
*Resource Name or # Building 507: Fire Hose House

- B1. Historic name: Building 507: Fire Hose House
- B2. Common name: Fire Hose House
- B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

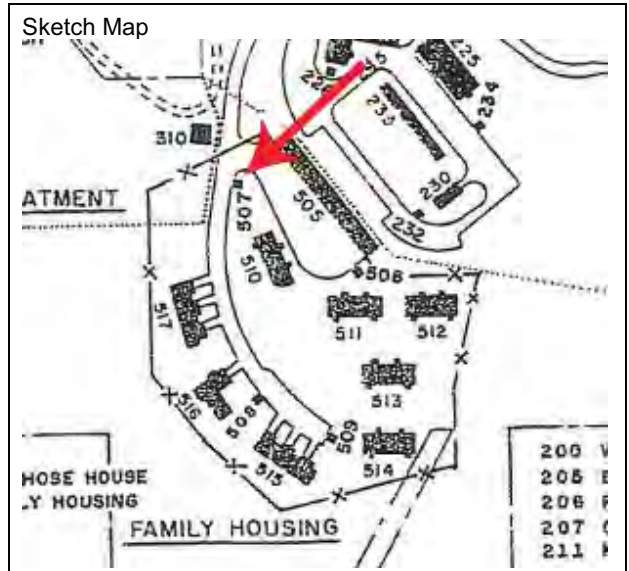
- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- “Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station.” Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. “Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900” (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



¹ U.S. Army, “Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900” (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 507: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 507: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 507: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 507: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 507: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 507: Fire Hose House has almost completely collapsed, and due to the loss of key components including the roof, entry, portions of the exterior walls and interior shelving, it is no longer able to convey its association as a fire hose house. It therefore does not retain integrity.

Conclusion: Building 507: Fire Hose House has not been found historically significant and no longer retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 508: Fire Hose House

P1. Other Identifier: Fire Hose House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 508: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a partially collapsed shed roof. It is located in the southwest portion of Almaden AFS on the south side of an unnamed road between Building 515: Triplex Apartment and Building 516: Commander's House. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces northeast. It originally featured hinged, flush wood double doors but they have been detached by vandalism. The exterior walls consist of plywood, and the remains of the roofline features open eaves with flat-board fascia. The northwest side of the structure includes metal supports, as well as an attached section of PVC pipe. The interior features simple wood framing and an earth floor. A metal pipe connection for a fire hydrant is located toward the front, and two wood storage shelves are located toward the rear. The upper shelf is stenciled with black letters: "Built by 115 CET Wisconsin ANG." A PVC pipe with shut-off valve bisects the center of the structure, but does not appear to have exterior connections. Sections of PVC pipe were also present.

In February 2010, the structure appeared in poor condition due to weathering and vandalism. The roof had partially collapsed, the wood doors were detached, and the fire hydrant had been removed. In 2011, the building underwent hazardous materials abatement, which included paint stabilization. **(Continued)**

***P3b. Resource Attributes:** (list attributes and codes) HP4. Ancillary building

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
Northeast and southeast facades
(February 2010)

***P6. Date Constructed/Age and Sources:** historic
Circa 1957 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



**Building 508: Fire Hose House, view looking south.
Note Building 515: Triplex Apartment to the southeast.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 508: Fire Hose House

- B1. Historic name: Building 508: Fire Hose House
B2. Common name: Fire Hose House
B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 508: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 508: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 508: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 508: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 508: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 508: Fire Hose House is severely deteriorated, which has negatively affected integrity of design, materials and workmanship. This includes loss of the fire hydrant itself. The structure therefore does not retain integrity.

Conclusion: Building 508: Fire Hose House has not been found historically significant, nor does it retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
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PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 509: Fire Hose House

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted *a. County Santa Clara

*b. USGS 7.5' Quad Los Gatos "Digital Map – Beta" Date: 2009

*c. Address Former Almaden Air Force Station, Mount Umunhum City Los Gatos Zip 94033

*e. Other Locational Data: Assessor's Parcel Number Block: 562-08 Lot: 003

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 509: Fire Hose House is a small, one-story, rectangular wood-frame structure featuring a concrete perimeter foundation and a shed roof with shallow eaves. It is located in the southwest portion of Almaden AFS at the end of an unnamed cul-de-sac, immediately west of Building 514: Fourplex Apartment, and northeast of Building 515: Triplex Apartment. It is one of nine surviving fire hose houses at Almaden AFS (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509).

The primary facade faces northwest and features hinged, flush wood double doors. The exterior walls consist of plywood, and the roofline features open eaves with flat-board fascia. The plywood roof is covered with composite roofing material. The interior features simple wood framing and an earth floor. A cast-iron "IOWA" fire hydrant is located toward the front, and a wooden shelf toward the rear is stenciled with black letters: "Built by 115 CET Wisconsin ANG." A coiled fire hose and plastic gasoline storage container were also present.

In February 2010, the structure appeared in fair condition due to lack of exterior maintenance. In 2011, the building underwent hazardous materials abatement, which included paint stabilization. **(Continued)**

*P3b. Resource Attributes: (list attributes and codes) HP4. Ancillary building

*P4. Resources Present: Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
Northwest and southwest facades
(February 2010)

*P6. Date Constructed/Age and Sources: historic
Circa 1957 (MROSD)

*P7. Owner and Address:
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

*P8. Recorded by:
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

*P9. Date Recorded:
September 2011

*P10. Survey Type:

ensive

*P11. Report Citation: (Cite survey report and other sources, or enter "none")
Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

*Attachments: None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

P3a. Description (Continued):



**Building 509: Fire Hose House, Detail of entry
(Page & Turnbull, February 2010)**



**Building 509: Fire Hose House, detail of interior equipment
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # Building 509: Fire Hose House

- B1. Historic name: Building 509: Fire Hose House
- B2. Common name: Fire Hose House
- B3. Original Use: Fire protection B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed circa 1957. Hazardous materials abatement in 2011.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. **Related Features:**

B9a. Architect: unknown

b. Builder: unknown

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹ **(Continued)**

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

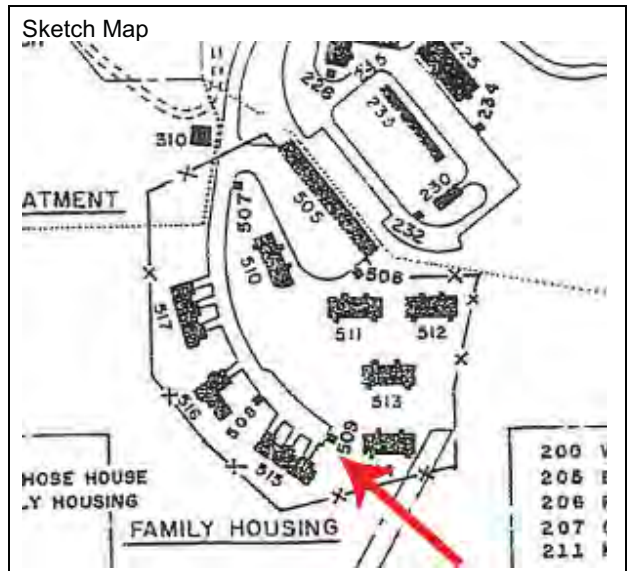
- 682nd Radar Squadron. Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.
- Wayne Donaldson, "Perspectives in the Preservation of Cold War Era Cultural Resources, California Office of Historic Preservation, 4/9/2010, <http://www.denix.osd.mil/tools/user-mgt.cfm?reqID=doSearch> accessed 7 September 2011.
- Gould Architects, *Mt. Umunhum Facilities Inventory and Evaluation*, 1994.
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011.
- "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

B13. Remarks:

*B14. **Evaluator:** Jonathan Lammers, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

***B10. Significance (Continued):**

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings typically feature CMU construction and included the radar towers, operations building, and generator buildings. The support buildings and residential facilities were located at a lower elevation in the cantonment area at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ Because of its isolated location, it was necessary for the station to include basic support facilities for water and sewage, fire protection, heating and refrigeration, vehicle repair and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary, chapel and barber shop. Recreational facilities included a bowling alley, swimming pool, and a recreation building with a post exchange.

Given Mount Umunhum's forested topography, the threat of wild fires meant that fire protection was a critical aspect of living on the mountain. Fire hose houses were installed throughout the site, including sixteen fire hose houses with 1 ½ inch and 2 ½ inch pre-connected fire hoses in the cantonment area. These structures featured a standardized design, composed of a rectangular wood-frame shelter with hinged wood doors and a shed roof. Each included a cast iron "Iowa" fire hydrant just inside the door, with wooden shelves to the rear providing storage for the fire hoses, as well as other fire-fighting supplies. Most of the nine surviving fire hose houses (Buildings 206, 215, 226, 232, 234, 506, 507, 508, 509) are marked on the interior with a stencil that reads "Built by 115 CET Wisconsin ANG," which appears to indicate they were fabricated by the 115th Fighter Wing of the Wisconsin Air National Guard. In addition to the hose houses, the site had a 1,500 gallon water distributor.⁵

Building 509: Fire Hose House was erected circa 1957 to provide fire protection for the station. It included a fire hydrant, and storage for fire hoses and other fire-fighting equipment. It continued in use until Almaden AFS closed in 1980.

Evaluation: Building 509: Fire Hose House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It was one of numerous support structures that housed fire-fighting equipment, and is not individually representative of important events in our history. The building also does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 509: Fire Hose House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individuals significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 509: Fire Hose House is not individually significant under Criterion C (Architecture/Design). It features a simple, standardized utilitarian design, and does not represent the work of a master or possess high artistic values.

Building 509: Fire Hose House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: Building 509: Fire Hose House retains historic integrity, and appears to be the best-preserved of the remaining fire hose houses at Almaden AFS.

Conclusion: Although Building 509: Fire Hose House retains integrity, it has not been found historically significant. It therefore does not meet the general registration requirements for listing in the National Register.

² 682nd Radar Squadron, 2.

³ U.S. Army.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ 682nd Radar Squadron, Welcome to 682nd Radar Squadron, Almaden AFS, California (n.d.; post-1976) 2.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
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PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 510: Fourplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 510: Fourplex Apartment is a two-story, approximately 4,880 square foot, rectangular-plan, multi-family residence. Built in 1958, it is located at the west side of a cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. There are four other identical fourplex apartment buildings in the Cantonment area. Building 510 features a concrete slab foundation, wood frame structure, smooth stucco cladding, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces northeast and features two entrances with concrete stairwells and wood railings that lead to two units each. The primary entries are recessed up the stairs, set behind projecting screens of vertical wood members, and include flush wood doors with vents at the bottom. The rear (southwest) façade has two entrances at the outer ends of the façade. These include concrete stairwells with concrete masonry unit (CMU) walls, wood railings, and wood screen enclosures. The doors are flush wood. Windows throughout the building are horizontal casement aluminum sash with either flat board surrounds or no surrounds. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
1958 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include vinyl tile and wood flooring, flush wood interior doors, and plastered drywall interior walls. The units typically include three bedrooms and one bathroom.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



**Building 510: Fourplex Apartment, looking northeast toward rear façade.
(Page & Turnbull, February 2010)**



**Building 510: Fourplex Apartment, looking southwest toward primary façade.
(Page & Turnbull, February 2010)**



**Building 510: Fourplex Apartment, looking south toward northwest façade.
(Page & Turnbull, February 2010)**



**Building 510: Fourplex Apartment, kitchen.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 510: Fourplex Apartment

- B1. Historic name: Apartment
- B2. Common name: Apartment
- B3. Original Use: Residential
- B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO)

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility

Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 510 is one of five fourplexes (Buildings 510, 511, 512, 513, and 514) and two triplexes (515 and 517), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 510: Fourplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 510: Fourplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 510: Fourplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 510: Fourplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 510: Fourplex Apartment possessed integrity of location, design, setting, materials, workmanship, feeling, and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and removing all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 510: Fourplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 511: Fourplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 511: Fourplex Apartment is a two-story, approximately 4,880 square foot, rectangular-plan, multi-family residence. Built in 1958, it is located at the end of a cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. There are four other identical fourplex apartment buildings in the Cantonment area. Building 511 features a concrete slab foundation, wood frame structure, smooth stucco cladding, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces north and features two entrances with concrete stairwells and wood railings that lead to two units each. The primary entries are recessed up the stairs, set behind projecting screens of vertical wood members, and include flush wood doors with vents at the bottom. The rear (south) façade has two entrances at the outer ends of the façade. These include concrete stairwells with concrete masonry unit (CMU) walls, wood railings, and wood screen enclosures. The doors are flush wood. Windows throughout the building are horizontal casement aluminum sash with either flat board surrounds or no surrounds. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5a. Photo

P5b. Photo: (view and date)
 View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include vinyl tile and wood flooring, flush wood interior doors, and plastered drywall interior walls. The units typically include three bedrooms and one bathroom.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 511: Fourplex Apartment, looking north toward rear façade.
(Page & Turnbull, February 2010)



Building 511: Fourplex Apartment, looking east toward west façade.
(Page & Turnbull, February 2010)



Building 511: Fourplex Apartment, looking southeast toward primary façade.
(Page & Turnbull, February 2010)



Building 511: Fourplex Apartment, interior.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 511: Fourplex Apartment

- B1. Historic name: Apartment
B2. Common name: Apartment
B3. Original Use: Residential
B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO)

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 511 is one of five fourplexes (Buildings 510, 511, 512, 513, and 514) and two triplexes (515 and 517), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 511: Fourplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 511: Fourplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 511: Fourplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 511: Fourplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 511: Fourplex Apartment possessed integrity of location, design, setting, materials, workmanship, feeling, and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 511: Fourplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 512: Fourplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 512: Fourplex Apartment is a two-story, approximately 4,880 square foot, rectangular-plan, multi-family residence. Built in 1958, it is located at the end of a cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. There are four other identical fourplex apartment buildings in the Cantonment area. Building 512 features a concrete slab foundation, wood frame structure, smooth stucco cladding, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces north and features two entrances with concrete stairwells and wood railings that lead to two units each. The primary entries are recessed up the stairs, set behind projecting screens of vertical wood members, and include flush wood doors with vents at the bottom. The rear (south) façade has two entrances at the outer ends of the façade. These include concrete stairwells with concrete masonry unit (CMU) walls, wood railings, and wood screen enclosures. The doors are flush wood. Windows throughout the building are horizontal casement aluminum sash with either flat board surrounds or no surrounds. (Continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
View southeast toward primary façade
(February 2010), prior to
abatement.

***P6. Date Constructed/Age and Sources:** historic
1958 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include vinyl tile and wood flooring, flush wood interior doors, and plastered drywall interior walls. The units typically include three bedrooms and one bathroom.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 512: Fourplex Apartment, looking north toward rear façade.
(Page & Turnbull, February 2010)



Building 512: Fourplex Apartment, looking south toward primary façade.
(Page & Turnbull, February 2010)



Building 512: Fourplex Apartment, looking north toward ground floor of rear façade.
(Page & Turnbull, February 2010)



Building 512: Fourplex Apartment, interior.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 512: Fourplex Apartment

- B1. Historic name: Apartment
B2. Common name: Apartment
B3. Original Use: Residential
B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO) b. Builder: N/A

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 512 is one of five fourplexes (Buildings 510, 511, 512, 513, and 514) and two triplexes (515 and 517), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 512: Fourplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 512: Fourplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 512: Fourplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 512: Fourplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 512: Fourplex Apartment possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included abating the roof, removing stucco, and removing all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 512: Fourplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 513: Fourplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 513: Fourplex Apartment is a two-story, approximately 4,880 square foot, rectangular-plan, multi-family residence. Built in 1958, it is located at the end of a cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. There are four other identical fourplex apartment buildings in the Cantonment area; Building 513 is situated south of Buildings 511 and 512. Building 513 features a concrete slab foundation, wood frame structure, smooth stucco cladding, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces north and features two entrances with concrete stairwells and wood railings that lead to two units each. The primary entries are recessed up the stairs, set behind projecting screens of vertical wood members, and include flush wood doors with vents at the bottom. The rear (south) façade has two entrances at the outer ends of the façade. These include concrete stairwells with concrete masonry unit (CMU) walls, wood railings, and wood screen enclosures. The doors are flush wood. Windows throughout the building are horizontal casement aluminum sash with either flat board surrounds or no surrounds. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

sive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include vinyl tile and wood flooring, flush wood interior doors, and plastered drywall interior walls. The units typically include three bedrooms and one bathroom.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 513: Fourplex Apartment, looking northwest toward rear façade.
(Page & Turnbull, February 2010)



Building 513: Fourplex Apartment, looking west toward east façade.
(Page & Turnbull, February 2010)



Building 513: Fourplex Apartment, looking south to unit entrance.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 513: Fourplex Apartment

- B1. Historic name: Apartment
B2. Common name: Apartment
B3. Original Use: Residential
B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO)

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 513 is one of five fourplexes (Buildings 510, 511, 512, 513, and 514) and two triplexes (515 and 517), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 513: Fourplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 513: Fourplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 513: Fourplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 513: Fourplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 513: Fourplex Apartment possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 513: Fourplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 514: Fourplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 514: Fourplex Apartment is a two-story, approximately 4,880 square foot, rectangular-plan, multi-family property. Built in 1958, it is located at the end of a long cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. There are four other identical fourplex apartment buildings in the Cantonment area; Building 514 is situated south of Building 513. Building 514 features a concrete slab foundation, wood frame structure, smooth stucco cladding, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces north and features two entrances with concrete stairwells and wood railings that lead to two units each. The primary entries are recessed up the stairs, set behind projecting screens of vertical wood members, and include flush wood doors with vents at the bottom. The rear (south) façade has two entrances at the outer ends of the façade. These include concrete stairwells with concrete masonry unit (CMU) walls, wood railings, and wood screen enclosures. The doors are flush wood. Windows throughout the building are horizontal casement aluminum sash with either flat board surrounds or no surrounds. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other



P5b. Photo: (view and date)
 View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include vinyl tile and wood flooring, flush wood interior doors, and plastered drywall interior walls. The units typically include three bedrooms and one bathroom.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



**Building 514: Fourplex Apartment, looking northeast toward rear façade.
(Page & Turnbull, February 2010)**



**Building 514: Fourplex Apartment, looking east toward entrance on primary façade.
(Page & Turnbull, February 2010)**



**Building 514: Fourplex Apartment, interior.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 514: Fourplex Apartment

- B1. Historic name: Apartment
- B2. Common name: Apartment
- B3. Original Use: Residential
- B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO) b. Builder: N/A

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

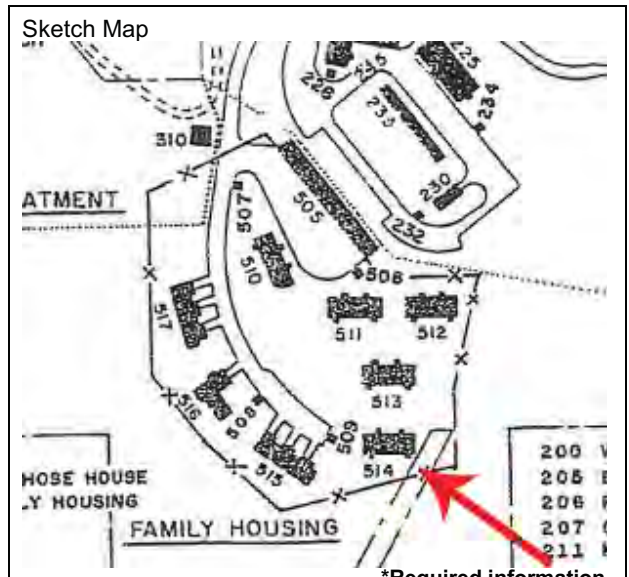
- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 514 is one of five fourplexes (Buildings 510, 511, 512, 513, and 514) and two triplexes (515 and 517), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 514: Fourplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 514: Fourplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 514: Fourplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 514: Fourplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 514: Fourplex Apartment possessed integrity of location, design, setting, materials, workmanship, feeling and association because it had not been moved or greatly altered. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 514: Fourplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 515: Triplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 515: Triplex Apartment is a two-story, approximately 3,870 square foot, rectangular-plan multi-family residence. Built in 1958, it is located on the west end of a long cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. Building 517, to the northeast, is an identical triplex apartment building. Building 515 features a concrete perimeter foundation, wood frame structure, concrete masonry unit (CMU) walls and smooth stucco cladding on plywood, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces east and features three entrances with flush wood doors that are slightly recessed within ground floor-level carports. Paired wood doors with vents within the carports access utility closets, and CMU storage closets have flush wood doors and fixed square windows. A flat awning divides the ground floor from the second floor and projects further toward the street over the carport entrances. Typical fenestration on the second floor includes horizontal and vertical aluminum sash casement windows. The north and south facades contain aluminum-sash casement windows toward the outer corners. The rear (west) façade has aluminum-sash casement windows with flat board surrounds and three back porches with flush wood doors, concrete stoops and stairs, and flat roofs supported by wood posts. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

ntensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include wood flooring, wood stairs, flush wood interior doors, and plastered drywall interior walls, and drop ceilings. The units had two floors with a living room and kitchen on the ground floor and two bedrooms and one bathroom on the second floor.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 515: Triplex Apartment, looking northwest toward the north end of the primary façade.
(Page & Turnbull, February 2010)



Building 515: Triplex Apartment, looking south toward north façade.
(Page & Turnbull, February 2010)



Building 515: Triplex Apartment, looking north toward south façade.
(Page & Turnbull, February 2010)



Building 515: Triplex Apartment, interior.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 515: Triplex Apartment

- B1. Historic name: Apartment
- B2. Common name: Apartment
- B3. Original Use: Residential
- B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO)

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 515 is one of two triplexes (515 and 517) and five fourplexes (Buildings 510, 511, 512, 513, and 514), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 515: Triplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 515: Triplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 515: Triplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 515: Triplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 515: Triplex Apartment possessed integrity of location, design, setting, feeling, and association. However, it did not retain integrity of materials and workmanship because severe damage caused by weathering had removed a large amount of interior materials and some exterior materials. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 515: Triplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 516: Commander's House

P1. Other Identifier: Commander's House

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 516: Commander's House is a one-story, approximately 1,527 square foot, rectangular-plan, single-family residence. Built in 1958, it is located on the west side of a long cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. It is flanked on either side by triplexes (Buildings 515 and 517). Building 516 features a concrete perimeter foundation, wood frame structure, plywood walls clad in stucco, and a low gable roof covered with tar and gravel. The building terminates in wood fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces east and features a primary entrance with a wood door and metal screen door and a sidelight. A second wood door with vents is located to the south and likely led to a utility closet. The primary entrance is located under an overhang that extends from a carport on the north side of the façade. A large storage closet is located at the back of the carport. Typical fenestration on the primary façade includes aluminum-sash casement windows. The north and south façades feature windows of the same type, though with flat board trim. A sliding aluminum-sash window was installed at the back of the storage closet on the north façade at a later date. The rear (west) façade contains aluminum-sash casement windows with flat board trim and a back porch with a flat awning supported by wood posts. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP2. Single family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View northwest toward primary façade
 (February 2010), prior to
 abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space
 District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

nsive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include wood flooring and plastered drywall interior walls. The house contains three bedrooms and one bathroom.

In February 2010, the structure appeared to be in fair condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 516: Commander's House, looking west toward the primary entrance.
(Page & Turnbull, February 2010)



Building 516: Commander's House, looking southwest toward north façade.
(Page & Turnbull, February 2010)



Building 516: Commander's House, looking northeast toward rear (west) façade.
(Page & Turnbull, February 2010)



Building 516: Commander's House, interior.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 516: Commander's House

- B1. Historic name: Commander's House
B2. Common name: Commander's House
B3. Original Use: Residential
B4. Present use: Vacant

*B5. **Architectural Style:** Ranch style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Constructed in 1958. Window added to storage unit at an unknown date. Deck replaced at an unknown date (post-1980). Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO) b. Builder: N/A

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 516 is part of a residential area that includes two triplexes (515 and 517) and five fourplexes (Buildings 510, 511, 512, 513, and 514), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. All of the residential buildings, including the Commander's House, were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

In later years, after the Air Force Station closed, the house was occupied by a site caretaker. The back deck was replaced during this period.

Evaluation: Building 516: Commander's House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for the commander and his family at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 516: Commander's House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 516: Commander's House is not individually significant under Criterion C (Architecture/Design). It is a typical Ranch house constructed of inexpensive and mass-produced materials. It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value.

Building 516: Commander's House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 516: Commander's House possessed integrity of location, design, setting, feeling, and association. However, it did not retain integrity of materials and workmanship because severe damage caused by weathering had removed a large amount of interior materials and some exterior materials. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included removing stucco and all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 516: Commander's House has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California—The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 517: Triplex Apartment

P1. Other Identifier: Apartment

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 517: Triplex Apartment is a two-story, approximately 3,870 square foot, rectangular-plan multi-family residence. Built in 1958, it is located on the west side of a long cul-de-sac in the Cantonment area, west of Mt. Umunhum Road. Building 515, to the south, is an identical triplex apartment building. Building 517 features a concrete perimeter foundation, wood frame structure, concrete masonry unit (CMU) walls and smooth stucco cladding on plywood, and a flat roof covered with tar and gravel. The building terminates in wood boxed eaves with fascia and metal flashing. Metal vent pipes protrude from the roof.

The primary façade faces east and features three entrances with flush wood doors that are slightly recessed within ground floor-level carports. Paired wood doors with vents within the carports access utility closets, and CMU storage closets have flush wood doors and fixed square windows. A flat awning divides the ground floor from the second floor and projects further toward the street over the carport entrances. Typical fenestration on the second floor includes horizontal and vertical aluminum sash casement windows. The north and south facades contain aluminum-sash casement windows toward the outer corners. The rear (west) façade has aluminum-sash casement windows with flat board surrounds and three back porches with flush wood doors, concrete stoops and stairs, and flat roofs supported by wood posts. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP3. Multiple family property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)

View southwest toward primary façade (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1958 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**

Interiors include wood flooring, wood stairs, flush wood interior doors, and plastered drywall interior walls, and drop ceilings. The units had two floors with a living room and kitchen on the ground floor and two bedrooms and one bathroom on the second floor.

In February 2010, the structure appeared to be in poor condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



**Building 517: Triplex Apartment, looking northwest toward the south and east (primary) façades.
(Page & Turnbull, February 2010)**



**Building 517: Triplex Apartment, looking southwest toward north and east façades.
(Page & Turnbull, February 2010)**



**Building 517: Triplex Apartment, looking southeast toward west (rear) façade.
(Page & Turnbull, February 2010)**



**Building 517: Triplex Apartment, looking northeast toward west (rear) façade.
(Page & Turnbull, February 2010)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 517: Triplex Apartment

- B1. Historic name: Apartment
- B2. Common name: Apartment
- B3. Original Use: Residential
- B4. Present use: Vacant

*B5. **Architectural Style:** Mid-Century Modern style
 *B6. **Construction History:** (Construction date, alterations, and date of alterations)
 Constructed in 1958. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Porter, Urquhart, McCreary & O'Brien (PUMO) b. Builder: N/A

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Residential **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply. It also catered to community needs with facilities for medical and dental care, postal services, a commissary and exchange, a chapel, and a barber shop. Nearly all of the non-residential support buildings and the barracks were pre-fabricated Butler buildings, while the apartment buildings for families were of wood-frame construction.

Building 517 is one of two triplexes (515 and 517) and five fourplexes (Buildings 510, 511, 512, 513, and 514), which were all built in 1958. The apartments were used by personnel with dependents, while steel Butler barracks buildings housed personnel without families. The apartments were designed by the architecture and engineering firm of Porter, Urquhart, McCreary & O'Brien (PUMO), who also designed the associated carport. In addition to the residential buildings at Almaden AFS, PUMO designed the Catalina Heights Neighborhood for Oxnard Air Force Base in 1958 as part of the Capehart military housing program. The Capehart and Wherry programs were designed to ease military housing shortages in the 1950s by allowing private sponsors to build units on or adjacent to military installations. The apartments at the former Almaden AFS resemble other Capehart and Wherry projects, including the 1953 Baker Beach apartments at the Presidio of San Francisco. Though not designed by PUMO, the Baker Beach apartments feature wood-frame construction clad in stucco, aluminum-sash windows, and open stairwells with decorative wood lattice screens. It therefore seems a fair assumption that PUMO's designs for the Almaden AFS apartments were influenced by other mass-produced military housing designs of the period.

Evaluation: Building 517: Triplex Apartment is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building supported the function of the station by providing housing for on-site personnel and their dependents at Almaden AFS. It is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 517: Triplex Apartment is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 517: Triplex Apartment is not individually significant under Criterion C (Architecture/Design). It is not individually important as a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value. It was a mass-produced design, much like the developments in the contemporaneous Capehart and Wherry military housing programs.

Building 517: Triplex Apartment is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 517: Triplex Apartment possessed integrity of location, design, setting, feeling, and association. However, it did not retain integrity of materials and workmanship because severe damage caused by weathering had removed a large amount of interior materials and some exterior materials. The building has since undergone abatement for hazardous asbestos-contaminated materials, which included abating the roof, removing stucco, and removing all materials down to the interior wall framing. Due to abatement, the building no longer retains integrity.

Conclusion: Building 517: Triplex Apartment has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 5

Resource name(s) or number (assigned by recorder) Building 700: Communications Transmitter/Receiver (GATR)

P1. Other Identifier: GATR

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-09 Lot: 050

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 700: Communications Transmitter/Receiver (GATR) is a one-story, rectangular-plan building constructed in 1962. It is located at the peak of Mt. Thayer, north of the Cantonment area and Operations area on Mt. Umunhum. Building 700 features a concrete slab foundation, concrete masonry unit (CMU) walls, and a metal shed roof with a slight slope. Two metal vent pipes are located on the roof. A section to the south is slightly taller and wider than the rest of the building.

The primary façade faces southwest and includes two projecting CMU vestibules; the northern vestibule features paired flush steel doors, and the southern vestibule has a single flush metal door. Large metal ducts protrude from the walls. There are no openings on the northeast and southeast façades, but large metal ducts protrude from the walls. The northwest façade features a large roll-up metal garage door within a surround of projecting CMU walls and roof.

The interior features a tile floor, hanging fluorescent lights, and a steel truss roof system. (continued)

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Facility

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



***P5b. Photo:** (view and date)
 View northeast (February 2011), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1962 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update

***P3a. Description:**

The GATR complex is accessed from the main part of the station by a winding paved road. The area around Building 700 is riddled with wood poles for lower-frequency antennae.

In February 2010, the structure appeared to be in fair condition due to weathering and neglect. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.



Building 700: Communications Transmitter/Receiver (GATR), northwest façade, looking southeast.
(Page & Turnbull, February 2011)



Building 700: Communications Transmitter/Receiver (GATR), northeast façade, looking southwest.
(Page & Turnbull, February 2011)



Building 700: Communications Transmitter/Receiver (GATR), interior, looking southeast.
(Page & Turnbull, February 2011)



Wood poles for lower-frequency antennae surrounding Building 700 on Mt. Thayer, looking northwest.
(Page & Turnbull, February 2011)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 5

*NRHP Status Code 6Z
*Resource Name or # Building 700: Communications Transmitter/Receiver (GATR)

- B1. Historic name: Communications Transmitter/Receiver
B2. Common name: GATR
B3. Original Use: GATR communications
B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1962. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: N/A

b. Builder: N/A

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

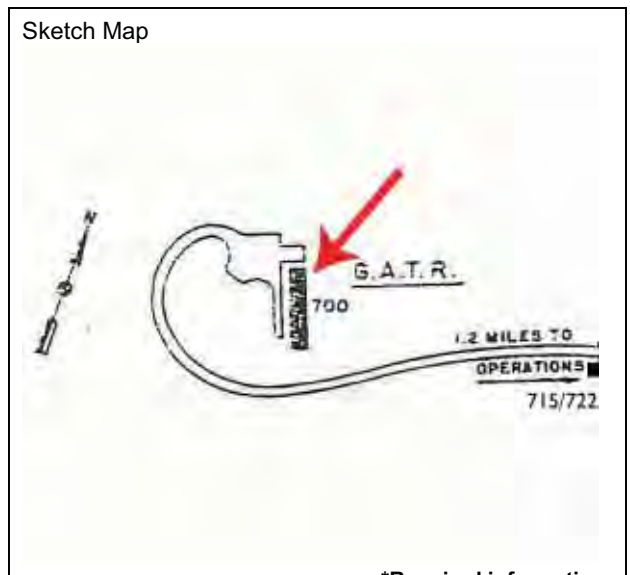
B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update

***B10. Significance (Continued):**

The Ground to Air Transmitter Receiver (GATR), or communications function, was originally located in Building 110 in the Operations area on Mt. Umunhum. The communications equipment was connected to the Operations Building (Building 100) via cable trough. In May 1962, following construction of the AN/FPS-24 radar, the Air Force acquired land on the neighboring peak of Mt. Thayer and moved the Ground-to-Air Transmitter-Receiver (GATR) so that the UHF frequency of the radar would not interfere with the GATR's radio frequency signals.

The primary building erected on Mt. Thayer was the Communications Transmitter/Receiver building, also known as the GATR Building (Building 700). Initially, it contained mostly the same equipment as that used when GATR was in Building 110, but with some improvements. Over the years, the communications equipment grew to include transmitters, receivers, antennae, data links, and a Klystron tube. A power line connected the GATR site to the power plant at the Operations site. Telephone lines came from the phone company to the demarcation point in the TELCO Building, and then local wiring was distributed throughout the facility. Radar Operations used the GATR via the TELCO lines to communicate to intercept and patrol aircraft.⁴

Other enhancements to the GATR site on Mt. Thayer included below-surface water storage and septic tanks (Buildings 711, 712, and 713, which appear no longer extant), antenna arrays, and a small security sentry house (Building 715/722) down the road. The tall wood poles for lower-frequency antennae were placed in a mesh arrangement and sent and received signals from intercept aircraft on patrol for intercept missions. Another type of antenna array was the FRT-49 (no longer extant), a high power data-link transceiver "horizontal ladder array." It protruded out from the east and west sides of Building 700 and had a peak output of 20,000 watts. The FRT-49 was coupled with the GKA-5 data link for sending data to intercept fighters for cockpit on-screen display information. When Almaden AFS was designated as a Semi-Automatic Ground Environment (SAGE) site between January 1961 and Feb 1974, a SAGE Direction Center could communicate to the site via secure telephone lines to Building 700 and were able to communicate with intercept fighters within the Almaden AFS GATR transmission range remotely.⁵

Evaluation: Building 700: Communications Transmitter/Receiver (GATR) is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). Its function was necessary within the station as the communication building that relayed information from the radars to Air Force pilots. However, it was not the first GATR building at Almaden AFS, worked in concert with the antenna arrays and TELCO building, and several other locations in California's network of NORAD stations had very similar GATR buildings. It is therefore not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁶

Building 700: Communications Transmitter/Receiver (GATR) is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 700: Communications Transmitter/Receiver (GATR) is not individually significant under Criterion C (Architecture/Design). It is not representative of a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value.

Building 700: Communications Transmitter/Receiver (GATR) is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 700: Communications Transmitter/Receiver (GATR) did not possess integrity because the GATR equipment, which contributed to its integrity of workmanship, feeling, and association, had been removed. Without the equipment, the shell of the building does not convey the connection to this historic use, and the building resembles other CMU buildings at the facility, which were used in a variety of ways.

Conclusion: Building 700: Communications Transmitter/Receiver (GATR) has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Email correspondence with Basim Jaber, 2 March 2011.

⁵ Ibid.

⁶ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

*Recorded by Christina Dikas, Page & Turnbull

*Date September 2011 Continuation Update



GATR (Building 700) with tall poles for lower-frequency antennae and shorter FRT-49 horizontal array visible, ca. 1964-1965.
(Source: N. McKiethan via B. Jaber Archives)

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 715/722: Security Sentry House

P1. Other Identifier: GATR Guard House, Guard Shack

***P2. Location:** Not for Publication Unrestricted *a. County Santa Clara

*b. USGS 7.5' Quad Los Gatos "Digital Map - Beta" Date: 2009

*c. Address Former Almaden Air Force Station, Mount Umunhum City Los Gatos Zip 94033

*e. Other Locational Data: Assessor's Parcel Number Block: 562-09 Lot: 050

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 715/722: Security Sentry House is a one-story, rectangular-plan building constructed in 1966. It is located at the peak of Mt. Thayer, north of the Cantonment area and Operations area on Mt. Umunhum. Building 715/722 is situated on the south side of the road that leads to the GATR building. It features a concrete slab foundation, wood frame structure, and plywood walls. It is capped by a flat roof with shallow eaves.

The primary façade faces north and features an open entry with a wood surround. The door is missing. A window to the west is boarded up. The west façade features one fixed six-light steel sash window. The south façade does not contain any openings, and the window on the east façade is boarded up.

The interior features a tile floor and plastered interior walls. The security sentry house has been recorded in documents as numbering either Building 715 or 722.

In February 2011, the structure appeared to be in poor condition due to weathering, neglect, and missing materials. In 2011, the structure underwent hazardous material abatement, and remains in poor condition.

***P3b. Resource Attributes:** (list attributes and codes) HP4. Military Facility

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View southeast (February 2011), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1966 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")
 Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**



**Building 715/722: Security Sentry House, north and west
façades, looking southeast.
(Page & Turnbull, February 2011)**



**Building 715/722: Security Sentry House, north and east
façades, looking southwest.
(Page & Turnbull, February 2011)**

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 715/722: Security Sentry House

B1. Historic name: Security Sentry House

B2. Common name: Guard House

B3. Original Use: Security

B4. Present use: Vacant

*B5. **Architectural Style:** Utilitarian style

*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Constructed in 1966. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: N/A

b. Builder: N/A

*B10. **Significance:** N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

-682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.

-U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

- Email correspondence with Basim Jaber, 4 March 2011.

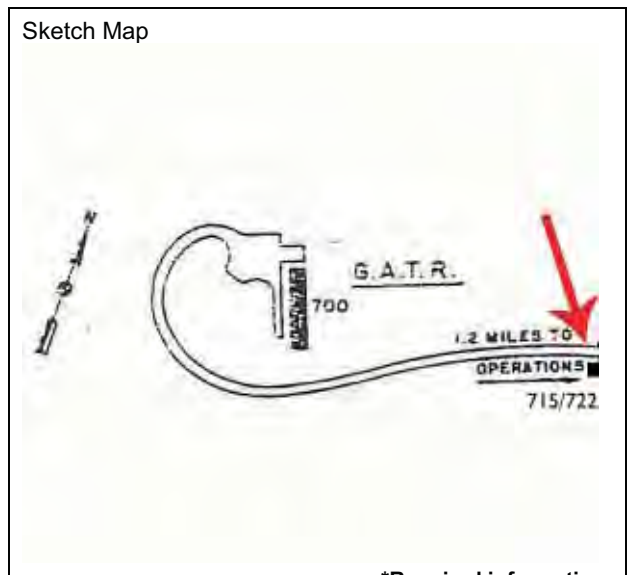
B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

***Date of Evaluation:** September 2011

(This space reserved for official comments.)

Sketch Map



DPR 523B (1/95)

*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The Ground to Air Transmitter Receiver (GATR), or communications function, was originally located in Building 110 in the Operations area on Mt. Umunhum. In May 1962, following construction of the AN/FPS-24 radar, the Air Force acquired land on the neighboring peak of Mt. Thayer and moved the Ground-to-Air Transmitter-Receiver (GATR) so that the UHF frequency of the radar would not interfere with the GATR's radio frequency signals.

The sentry house was installed at the gate in the summer of 1966, possibly as a result of heightened anti-war efforts for those opposing the Vietnam War.⁴ It has been labeled Building 715 and Building 722 in various documents.

Evaluation: Building 715/722: Security Sentry House is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). It functioned as a support building, small guard house, at the gate to the GATR facility on Mt. Thayer. It is therefore not individually representative of important trends in our history. It is also less than 50 years old and is not age-eligible. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 715/722: Security Sentry House is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 715/722: Security Sentry House is not individually significant under Criterion C (Architecture/Design). It is not representative of a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value.

Building 715/722: Security Sentry House is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2011, Building 715/722: Security Sentry House did not possess integrity. Integrity of materials, workmanship, feeling, and association had been compromised since original materials were missing, as was the gate itself, and the building no longer was associated with its former function. Since that time, hazardous materials abatement removed all materials down to the concrete slab foundation.

Conclusion: Building 715/722: Security Sentry House is not age-eligible because it is less than fifty years old, and does not meet the qualifications for extraordinary significance under Criterion G. Further, it has not been found significant, and it also does not retain integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Email correspondence with Basim Jaber, 2 March 2011.

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) Building 884B: Water Tank

P1. Other Identifier: Water Tank

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 003

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

Building 884B: Water Tank is a cylindrical metal water tower with a capacity of 40,000 to 60,000 gallons (data conflicts). Built in 1958, the structure is located on the south side of Mt. Umunhum Road, at the east end of the Cantonment area. It is situated east up a hill from Building 200: Water Pump Station. The water tank features a steel structure, and steel panel siding. It is capped by a flat roof. A metal ladder with circular metal enclosure and a height gage are located on the south side of the tank.

In February 2010, the building appeared to be in fair condition because the interior was rusted.

***P3b. Resource Attributes:** (list attributes and codes) HP39. Other

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
View north (February 2010).

***P6. Date Constructed/Age and Sources:** historic
1958 (MROSD)

***P7. Owner and Address:**
Midpeninsula Regional Open Space
District (MROSD)
330 Distel Circle
Los Altos, CA 94022

***P8. Recorded by:**
Page & Turnbull, Inc.
1000 Sansome Street, Suite 200
San Francisco, CA 94111

***P9. Date Recorded:**
September 2011

***P10. Survey Type:**

ensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:**



Building 884B: Water Tank, view north.
(Page & Turnbull, February 2010)



Building 884B: Water Tank, view northwest.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z

*Resource Name or # Building 884B: Water Tank

- B1. Historic name: Water Tank
- B2. Common name: Water Tank
- B3. Original Use: Water Tank
- B4. Present use: Vacant

*B5. Architectural Style: N/A

*B6. Construction History: (Construction date, alterations, and date of alterations)
Constructed in 1958.

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features:

B9a. Architect: N/A

b. Builder: N/A

*B10. Significance: N/A

Area Mt. Umunhum, Sierra Azul Open Space Preserve

Period of Significance N/A Property Type Support Facility Applicable Criteria N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

***B12. References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA0999inpr.pdf>

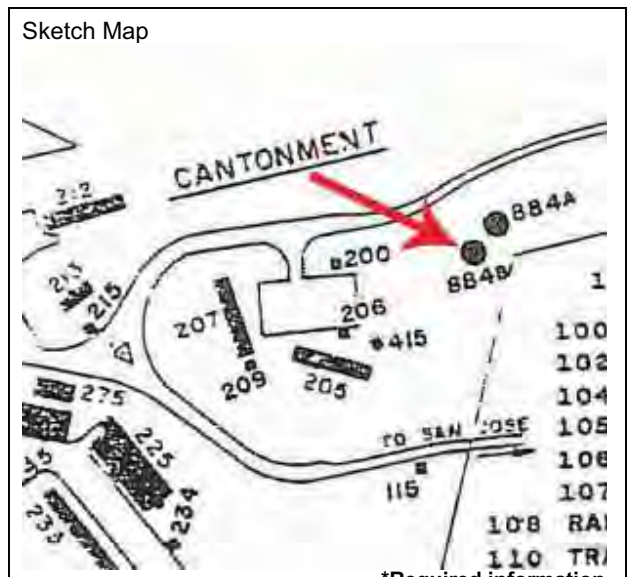
B13. Remarks:

*B14. Evaluator: Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)

Sketch Map



*Required information

DPR 523B (1/95)

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The support buildings and residential facilities at the former Almaden AFS are located at the southwest end of the site. At its peak, Almaden AFS housed approximately 120 people including employees and their families, and counted eighty-four buildings and structures. On average, the facility employed approximately 30 stationed military personnel and 50 to 100 civilian personnel.⁴ To support the radar installation and residential cantonment, the station included basic support facilities for water and sewage, fire protection, administration, heating and refrigeration, and supply.

Building 884B: Water Tank was one of two water tanks located up the hill from Building 200: Water Pump Station. The other water tank, Building 884A, was a wood structure that collapsed many years ago (exact date unknown). Building 200 pumped water from the "upper" and "lower" pump houses on the final route to the water tanks. The other water pump stations, storage tanks, and three earthen dam facilities were located off-site on land that is now owned by the San Jose Water Company.

Evaluation: Building 884B: Water Tank is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The structure supported the function of the station by storing water, but it is not individually representative of important trends in our history. The building also is not eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

Building 884B: Water Tank is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

Building 884B: Water Tank is not individually significant under Criterion C (Architecture/Design). It is not representative of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value.

Building 884B: Water Tank is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, Building 884B: Water Tank possessed integrity of location, design, setting, materials, workmanship, feeling and association.

Conclusion: Building 884B: Water Tank has not been found significant, even though it retains integrity. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ "Site Survey Summary Sheet for DERP-FUDS site No. J09CA099900: Almaden Air Force Station." Corps FUDS. Website accessed on 4 March 2010 from: <http://www.corpsfuds.org/reports/INPR/J09CA09999inpr.pdf>

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

State of California — The Resources Agency
 DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
 HRI # _____
 Trinomial _____
 NRHP Status Code _____

Other Listings _____
 Review Code _____ Reviewer _____ Date _____

Page 1 of 4 Resource name(s) or number (assigned by recorder) TELCO

P1. Other Identifier: Telephone Company building

***P2. Location:** Not for Publication Unrestricted

***a. County** Santa Clara

***b. USGS 7.5' Quad** Los Gatos "Digital Map – Beta" **Date:** 2009

***c. Address** Former Almaden Air Force Station, Mount Umunhum

City Los Gatos

Zip 94033

***e. Other Locational Data:** Assessor's Parcel Number Block: 562-08 Lot: 004

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

TELCO is a one-story, rectangular-plan building. Built in 1957, it is located on the south side of Mt. Umunhum Road, near the western entrance of the operations area on Mt. Umunhum. The building features a concrete slab foundation, concrete masonry unit (CMU) construction, and smooth stucco cladding. It has a flat roof with a metal vent and metal flashing at the roofline.

The primary façade faces northeast, and features a flush wood door with metal sheathing. A flat metal canopy projects over the entry. Four metal ducts protrude from the wall, two on each side of the entrance. The other three facades do not contain any openings, but they each contain metal ducts similar to those on the primary façade.

The interior features a concrete floor, CMU walls, and a concrete pier in the center of the room.

In February 2010, the building appeared to be in good condition. In 2011, the building underwent hazardous materials abatement which stabilized the paint.

***P3b. Resource Attributes:** (list attributes and codes) HP34. Military Property

***P4. Resources Present:** Building Structure Object Site District Element of District Other

P5a. Photo



P5b. Photo: (view and date)
 View south (February 2010), prior to abatement.

***P6. Date Constructed/Age and Sources:** historic
 1957 (MROSD)

***P7. Owner and Address:**
 Midpeninsula Regional Open Space District (MROSD)
 330 Distel Circle
 Los Altos, CA 94022

***P8. Recorded by:**
 Page & Turnbull, Inc.
 1000 Sansome Street, Suite 200
 San Francisco, CA 94111

***P9. Date Recorded:**
 September 2011

***P10. Survey Type:**

tensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none")

Page & Turnbull, Historic Resource Study: Former Almaden Air Force Station (March 2011)

***Attachments:** None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (list)

***P3a. Description:** (Continued)



TELCO, interior.
(Page & Turnbull, February 2010)



TELCO toward the right in bird's eye view, looking southwest.
(Page & Turnbull, February 2010)

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 3 of 4

*NRHP Status Code 6Z
*Resource Name or # TELCO

- B1. Historic name: TELCO
B2. Common name: Telephone Company building
B3. Original Use: Telephone Company demarcation point
B4. Present use: Vacant

*B5. **Architectural Style:** Prefabricated steel building, Utilitarian style
*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1957. Hazardous materials abated in 2011.

*B7. **Moved?** No Yes Unknown **Date:** _____ **Original Location:** _____

*B8. **Related Features:**

B9a. Architect: Unknown

b. Builder: Unknown

*B10. **Significance:** N/A **Area** Mt. Umunhum, Sierra Azul Open Space Preserve
Period of Significance N/A **Property Type** Support Facility **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Historic Context: With the outbreak of the Cold War, as well as the Korean War in 1950, the U.S. Army and U.S. Air Force began reestablishing air defenses to protect the United States against manned bomber attacks from the Soviet Union. Some air defense radar sites that were used in World War II were reactivated, and many new sites were established. Almaden Air Force Station was a U.S. Air Force early warning radar base that operated from 1958 to 1980. It was constructed as part of the North American Aerospace Defense Command (NORAD) to keep watch over Northern California's airspace during the Cold War. In order to develop the site, the U.S. Air Force acquired, between 1957 and 1962, a total of 118.36 acres from several private individuals and the San Jose Water Works (SHWW), a public utility company.¹

Almaden Air Force Station (AFS) was established on 24 July 1957, when the 682nd Aircraft Control and Warning (AC&W) Squadron was assigned to the site. Almaden AFS became fully operational on 21 March 1958 as part of the San Francisco Air Defense Sector.² It was known as Transmitter Site M-96; AC&W Site M-96; Call Mountain Radio Relay Annex; and Almaden Air Force Station (Z-96).³ (Continued)

B11. Additional Resource Attributes: (List attributes and codes) _____

*B12. **References:**

- 682nd Radar Squadron. *Welcome to 682nd Radar Squadron, Almaden AFS, California* (n.d.; post-1976) 2.
- U.S. Army. "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).
- Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.
- Email correspondence with Basim Jaber, 2 March 2011

B13. Remarks:

*B14. **Evaluator:** Christina Dikas, Page & Turnbull

*Date of Evaluation: September 2011

(This space reserved for official comments.)



DPR 523B (1/95)

*Required information

¹ U.S. Army, "Defense Environmental Restoration Program Formerly Used Defense Sites, Findings and Determination of Eligibility, Almaden Air Force Station (Z-96), Santa Clara, California, Site No. J09CA099900" (2 December 1991).

² 682nd Radar Squadron, 2.

³ U.S. Army.

***B10. Significance (Continued):**

The radar facilities were clustered at the east end of the complex on the highest point of the mountain. These buildings included the radar towers, operations building, and generator buildings. TELCO was constructed in 1957 at Almaden AFS. Telephone lines came in from the phone company, and the TELCO building acted as a demarcation point, where local lines extended throughout the facility. Radar Operations communicated with the GATR via the TELCO lines to intercept and patrol aircraft.⁴

Evaluation: TELCO is not individually significant within the former Almaden Air Force Station under National Register Criterion A (Events). The building was an infrastructural facility for telephone lines, and is not individually representative of important events in our history. Furthermore, the building does not appear eligible as a contributor to a historic district, as a prior evaluation of Almaden AFS determined that the station was not eligible for the National Register within the context of either California's network of NORAD stations or Cold War era military facilities in Santa Clara County.⁵

TELCO is not individually significant under National Register Criterion B (Person) because it is not associated with the lives of individual persons significant in our past. No individuals were identified as being instrumental to the function of the radar system at Almaden AFS.

TELCO is not individually significant under Criterion C (Architecture/Design) because it is not representative of a particular type, period or construction style; does not represent the work of a master; and does not possess high artistic value.

TELCO is not individually significant under National Register Criterion D (Information Potential) because it has not yielded, and is not likely to yield, information important in prehistory or history. The evaluation of potential archeological resources is beyond the scope of this report.

Integrity: In February 2010, TELCO possessed integrity of location, design, setting, workmanship, and feeling. Integrity of materials and association had been compromised because the telecom equipment has all been removed and the building had lost the association with its original function. It therefore did not retain integrity. The building has since undergone abatement for hazardous materials, which did not affect integrity because only paint was stabilized.

Conclusion: TELCO has not been found significant, nor does it retain integrity. It therefore does not meet the general registration requirements for listing in the National Register. It therefore does not meet the general registration requirements for listing in the National Register.

⁴ Email correspondence with Basim Jaber, 2 March 2011.

⁵ Page & Turnbull, *Historic Resource Study – Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, California*, 9 March 2011, 50.

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November 09, 2011

Reply in Reference To: DOD110415A

Meredith Manning
Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

RECEIVED

NOV 14 2011

MIDPENINSULA REGIONAL OPEN
SPACE DISTRICT

RE: Mount Umunhum Environmental Restoration and Public Access Project, Santa Clara County, CA

Dear Ms. Manning:

Thank you for consulting with me on the above-referenced undertaking. Pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the United States Navy (Navy) is seeking my concurrence with a number of Determinations of Eligibility and a finding of No Historic Properties Affected.

The Midpeninsula Regional Open Space District proposes to use Department of Defense funds to restore the summit of Mount Umunhum to its pre-development condition. The project area was home to the Alamaden Air Force Station, a radar facility constructed in the late 1950s and decommissioned in the early 1980s. The Area of Potential Effects (APE) for this project, as described in the archaeological survey report, includes the radar installation, associated residential quarters, and the paved surface road ranging from the radar facility to the access gate at Jacques Road. Project components include the following:

- Radar tower: possible actions include retain and seal, 2) removal of most of structure, leaving a remainder as a publically-accessible monument, or 3) removal of entire structure and ecological restoration of footprint
- Demolition of all other former military structures at Mount Umunhum and Mount Thayer
- Construction of multi-use trail connections to existing regional trails, including the Bay Area Ridge Trail
- Construction of parking areas to serve trail connections
- Development of self-guided interpretive features for Native American and military history
- Installation of visitor amenities, such as benches and vault toilets
- Construction of parking lots, ADA drop off point, and ADA trails at summit
- Demolition of foundations and other remnants of development
- Removal of impervious surfaces
- Ecological restoration of disturbed areas

- Installation of safety upgrades
- Repair and repaving of Mt. Umunhum Road in phases
- Construction of an interpretive center
- Development of a backpack camp and associated ADA vehicle-accessible sites

In addition to your letter, you have provided evidence of Native American consultation, and the following studies in support of this undertaking:

- *Negative Archaeological Survey Report: A Finding of No Effect to Archeological Resources, Mount Umunhum Restoration and public Access Project, Santa Clara County, California* (Mark G. Hylkema: January 2011)
- *Section 106 Technical Report: Former Almaden Air Force Station, Mt. Umunhum and Mt. Thayer, Santa Clara County, CA* (Page & Turnbull, Inc.: October 2011)

The reports summarize identification efforts undertaken within the APE. The *Section 106 Technical Report* includes evaluations of fifty two buildings, structures, and objects associated with the former Almaden Air Force Station (see attachment for complete list of properties evaluated). Qualified architectural historians considered all applicable National Register criteria. Additionally, all of the properties were evaluated for potential significance within the broader context of the Cold War and the more narrow focus of North American Aerospace Defense Command (NORAD) radar facilities in California. The report notes that more intact examples are still extant in California and concludes that none of the properties meets the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historic Resources, either individually or as a district.

The *Negative Archaeological Survey Report* includes the results of a pedestrian survey of the project area. A qualified archaeologist walked the access road and grounds of the radar facility. The APE is composed of paved and graded surfaces, and multiple abandoned buildings of the former facility. Occasional areas of Native soil were encountered and these locations were carefully examined for surface indications of either prehistoric or historic elements that might be considered significant. No archeological sites or features were identified.

Having reviewed your submittal, I have the following comments:

- 1) I concur that the APE has been properly determined and documented pursuant to 36 CFR Parts 800.4 (a)(1) and 800.16 (d);
- 2) I further concur that none of the fifty two buildings, structures or objects are eligible for listing on the NRHP within state, local, or national historical contexts;
- 3) I further concur that your Finding of Effect is appropriate pursuant to 36 CFR Part 800.4(d)(1) and that the documentation supporting this finding has been provided pursuant to 36 CFR Part 800.11(d);

- 4) I understand that some aspects of the project have yet to be finalized. If any of these components fall outside of the APE, as described and delineated on Page 3 of the *Negative Archeological Survey Report*, I would like to be consulted;
- 5) Please be reminded that in the case of an inadvertent discovery or a change in project description, you may have additional responsibilities under 36 CFR Part 800.

Thank you for considering historic resources during project planning. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or by email at ttozer@parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

Resource Identifier	Applicable N/R for Historic Significance	Integrity (in February 2010)?
001: Flag Pole (1957)	N/A	Yes
100: Operations (1957, addition in 1959)	A	No
102: Radar Tower FPS-24 (1959-1961)	A, C	No
103: Helicopter Pad (1962)	N/A	No
105: Fallout Shelter (1961)	N/A	Yes
108: Radar Tower MPS-14 (1962)	A, C	No
110: Training (1957)	A	No
112: Electrical Power Station (1960)	N/A	Yes
114: Sheet, Pipe & Paint Storage (1965)	N/A	No
115: Security Sentry House (1964)	N/A	Yes
118: Diesel Fuel Pump (1957)	N/A	Yes
119: CE [Civil Engineering] Maintenance Shop (1957)	N/A	Yes
120: Warehouse Supply & Equipment (1957)	N/A	No
200: Water Pump Station (1957)	N/A	Yes
205: Bachelor Officers' Quarters (1957)	N/A	Yes
206: Fire Hose House (ca. 1957)	N/A	No
207: Squadron Headquarters Orderly Room (1957)	N/A	Yes
211: Auto Maintenance Shop, aka Motor Pool (1960)	N/A	Yes
212: NCO Open Mess (1957, addition 1975)	N/A	Yes
213: Dispensary (1957)	N/A	Yes
215: Fire Hose House (ca. 1957)	N/A	No
217: Bowling Alley (1961)	N/A	Yes
225: Airman's Dining Hall (1957)	N/A	Yes
226: Fire Hose House (ca. 1957)	N/A	Yes
230: Commissary (1957; addition in 1967)	N/A	Yes
232: Fire Hose House (ca. 1957)	N/A	No
233: Barracks, aka Airman's Dormitory and Chapel (1957)	N/A	Yes
234: Fire Hose House (ca. 1957)	N/A	Yes
245: Recreation (1957)	N/A	Yes
250: Auto Maintenance Storage (1958)	N/A	Yes
275: Swimming Pool (1957)	N/A	Yes
276: Bath House (1966)	N/A	Yes
300: Sewage Treatment Building (1958)	N/A	Yes
303: Sewage Area Storage (1958)	N/A	Yes
505: Carport (1958)	N/A	Yes
506: Fire Hose House (ca. 1957)	N/A	Yes
507: Fire Hose House (ca. 1957)	N/A	No
508: Fire Hose House (ca. 1957)	N/A	No
509: Fire Hose House (ca. 1957)	N/A	Yes
510: Fourplex Apartment (1958)	N/A	Yes

Resource Identifier	Applicable NR for Historic Significance	Integrity (in February 2010)?
511: Fourplex Apartment (1958)	N/A	Yes
512: Fourplex Apartment (1958)	N/A	Yes
513: Fourplex Apartment (1958)	N/A	Yes
514: Fourplex Apartment (1958)	N/A	Yes
515: Triplex Apartment (1958)	N/A	No
516: Commander's House (1958)	N/A	Yes
517: Triplex Apartment (1958)	N/A	No
700: Communications Transmitter/Receiver (GATR Building) (1962)	N/A	No
715/ 722: Security Sentry House (1966)	N/A	No
884B: Steel Water Tank (1958)	N/A	Yes
TELCO (1957)	N/A	No
Pipe Storage (post-1962)	N/A	No