



United States Department of the Interior

NATIONAL PARK SERVICE
Golden Gate National Recreation Area
Fort Mason, San Francisco, California 94123

IN REPLY REFER TO:

H30(GOGA-RMPCR)

Mr. Al Kellogg
7595 May Way
San Ramon, California 94583

Dear Mr. Kellogg:

As discussed during our recent meeting, we have scheduled a work session for Wednesday, November 27, 1996, from 9:00 a.m. to 3:00 p.m. to begin the five-year planning for the Fort Barry Nike site. I hope that you will be able to attend although I understand that Wednesday is a work day and the day before Thanksgiving but I wanted to schedule this as soon as possible. We really would like to have your participation in this effort.

We will be meeting in Fort Cronkhite, Building 1050, the World War II Quartermaster building which has recently been renovated to provide Golden Gate with a training room. We will provide coffee throughout the day and ask that you be our guest for lunch. Enclosed are draft goals and objectives for the meeting for your review.

Please let either Bud Halsey or Diane Nicholson know if you will be able to attend. Diane can be reached at (415) 561-4801.

Thank you very much for your continued support of the Nike site and the National Park Service.

Sincerely,

Brian O'Neill
General Superintendent

Enclosure

cc:
Col. Halsey, w/o enc.

D R A F T

NIKE MISSILE SITE WORKSHOP
November 27, 1996

GOALS AND OBJECTIVES

1. Statement of Need:

The Fort Barry Nike Site has been brought to life through meticulous rehabilitation and restoration work provided by highly motivated volunteers giving freely of both time and monetary support. The Nike site project, perhaps the only such project in the nation to achieve such a high level of restoration, has grown to a point where communication and organizational support between the volunteers and the NPS is essential to achieve both project completion and future maintenance of the restored site.

The volunteers providing the restoration work require support from the NPS. To date, the volunteers have achieved project goals through ingenious methods of acquiring surplus equipment and materials for free or for the cost of transportation. While the volunteers provide all work toward the site restoration, the project has grown to a point where it requires both daily maintenance (services, supplies, and equipment) and rehabilitation project (fence replacement, large site equipment repairs, paving, and etc.) support from the NPS.

The NPS needs to understand the project more in order provide the required support and to provide for the future maintenance of the site once the restoration is complete. Site restoration goals, period of interpretation, completed work, planned future work, equipment maintenance schedules, the location of Nike tools and equipment, and even the knowledge of what daily life at the Nike site was like, reside within the minds of the site volunteers. ^{AGREETS} The NPS needs to gain this information from the volunteers in a format that will allow for obtaining monetary support, planning future maintenance needs, and for future site interpretation.

2. Workshop Objectives/Goals:

- A. Develop a common ground for communication between the Nike Site Partners and NPS staff.
- B. Transmit to NPS staff the objectives for the Nike Site that presently exist only in the minds of the Partners.
- C. Develop a basis for line-item funding of "present level" Nike Site daily maintenance and operations activities.
- D. Use the ideas and energy of the Nike Site volunteers and NPS staff to generate an action plan from which large project funding can be sought.

E. Generate a future paradigm for the Nike Site toward which the NPS can begin building now.

3. Workshop Discussion (Agenda) Items:

A. Daily Maintenance Support: Obtain a comprehensive list of the existing daily maintenance needs of the Nike Site. (Although the following list is long, this element of the workshop should be the shortest portion of time.)

- NPS Personnel Support: What types of expertise that are on staff in GOGA does the daily operation/maintenance of the site require?
- Transportation/Equipment: What equipment or transport of materials is required to operate or maintain the site?
- Utilities/Communications: What are the utilities requirements and what are communications (telephone, radio, etc.) needs for the daily operation of the site as it is used now?
- Printing: Are there any needs for large volume xeroxing or production of blueprints that will reoccur each year?
- Services: What services (toilet pumping, mowing, etc.) are required for the existing operations needs?
- Supplies: What operational supplies (paints, toilet paper, etc.) are necessary that could be better obtained by ordering in bulk and retaining onsite?
- Other: What other daily operational needs are there which should be included in an operational budget.

B. Steps and Information Needed for Completing Restoration: Develop a chronology (timeline) of the events/work that must occur between now and when the goal of site restoration is achieved. (Essentially equivalent to a "5 Year Plan", this should be the majority of the workshop time. This information resides primarily in the minds of the volunteers. The NPS needs to pull the information out and get it into whatever planning document we think is appropriate.)

Information needed from the participants:

- What is the period of interpretation toward which the restoration is heading?
- What equipment/objects are missing from the existing collection that are seen as essential to provide a fully restored Nike Site?
- What research/information needs are there?
- What projects remain to be accomplished in the overall restoration scheme?
- What are the dollar estimates for remaining projects and remaining acquisitions?
- Are there any events that should be scheduled at key points of the project? (e.g. Grand Opening at completion, Coffee for the GGNPA Board, another workshop at a later date, etc.)
- What is the timeline for completion of the above items? The

*clean up Puck
Road to open*

*clear allways
French owned
Cunich area*

Warden Park

group should "order" the information obtained from discussion into a timeline for restoration completion.

C. **Managing Property:** Develop a program for both accountability of property already obtained and planning for property to be acquired in the future for completion of the Nike Site restoration.

Discussion topics:

- Inventorying and accessioning all items to be considered museum property
 - Program to gain basic accountability
 - catalog items on exhibit
 - determine excess and disposal means
 - scope of Collection Statement - need to identify what has been acquired and what needs to be acquired
- Inventorying and getting onto property books all items to be considered equipment
- Provide a system for acquisition
 - NPS has final approval on all acquisition
 - Both museum and personnel property

D. **Future Maintenance/Interpretation Needs:** Thinking toward the future when the restoration is complete, develop a "general" list of known maintenance/interpretation issues that the NPS/volunteers should plan for now.

Information needed from participants:

- Are there any maintenance schedules for the equipment that has been brought onto the site?
- Can the volunteers create maintenance schedules for equipment where none exists?
- What "standard" cyclic maintenance needs can be foreseen for the site?
 - Paint cycles
 - Replacement cycles
 - Grounds maintenance
 - etc.
- What "special" maintenance needs will there be?
 - The computer and radar equipment
 - Cyclic maintenance of elevators/doors
 - The missiles and vehicles
 - etc.
- Are there any future research sources/issues that can be foreseen for the site?
- Is there a target "audience" for future docents/volunteers to help the NPS with interpretation and maintenance of the site?

Nike Site SF 88L Project List

Critical/Now

- Correct PG&E Voltage
- Replace door to Warhead Building
- Get all perimeter lights working & install three-way switch for detectors
- Repair water lines
- Water proof elevator doors for winter
- Clean interior of Generator Building for efficient maintenance use
- Remove all debris and brush piles from Site
- Demolish and remove remains of metal flammable storage enclosure
- Complete hydraulic repairs on B Pit elevator and make it operational
- Move excess dollies, test sets, packing crates, etc. into B Pit
- Move air compressors into Battery Wallace
- Change lock on Guard Shack #1 to FP-3
- Acquire better locks for LCTs

Within Next Quarter

- Reconstruct interior office walls in Assembly Building
- Outfit an office for VIPs in Assembly Building
- Repaint interior of Assembly Building
- Repaint interior of Warhead Building
- Repaint interior of Generator Building
- Acquire a wrecker or a cherry picker vehicle with a crane
- Test, identify and replace "hydraulic fluid" in elevators
- Rehang and rebuild main gates, including latches to hold gates open
- Assemble Lowry AFB missile and put in A Pit
- Assemble Ft. Bliss missile and put in A Pit

Get estimate for Pac Bell to provide phone service

Clean and repaint interior of both Guard Shacks

Replace rotted electrical equipment in both Guard Shacks

Within Next Year

Contract for a historian to write Historic Structure Report for site

Replace elevator doors

Transport rail sections from storage area in Chamizal NM

Scrape and repaint remaining areas of A Pit below elevator doors

Replace and paint acoustic tiles in panel rooms

Repaint yellow gates on north and south perimeters

Repaint exteriors of warhead and generator buildings

Remove broken concrete sidewalk in front of Guard Shack

Install new sidewalks on north and south sides of Guard Shack

Replace metal flammable storage building

Reglaze all plexiglass windows with regular glass

Rent sprayer and repaint both LCTs

Prepare and repaint missiles as needed

Reglaze windows in Warhead Building

Remove plywood covers over Warhead Building windows

Replace personnel doors on B Pit stairway

On-Going Work Projects

Trim grass and brush around all buildings

Trim grass and brush in drainage channels and on slopes

Lubricate and treat all exposed metal surfaces

Wire brush, prepare, prime and paint all exposed metal surfaces

Patrol perimeter fences and repair as needed

Continue repairing lighting and electrical circuits

Long-Term Projects

Develop an Interpretive Prospectus for Site

Develop interpretive/museum facility for Assembly Building

Fabricate portable wayside exhibits

Acquire 440 KW (?) generator and cables for launchers

Rebuild at least one launcher and make it operational

Replace 6" pipes at former shower sites at both pits

Replace shower heads at B Pit, aboveground and in pit

Scrape and repaint interior of B Pit in existing colors

Repair exterior lights in Ajax fueling area

Interpretive Themes & Outlines FOR
"Stationed" Interpretive Program
Site SF 88L, Ft. Barry

The interpretive programs at Site SF 88L have three goals: explain the significance of the site in its context as the last link in the long chain of fortifications reaching back to the Spanish discovery of California; explain the technology of the Nike system and relate the site's history; and inform the public of the importance and need of preserving history.

The opportunities for stimulating and provoking visitors' interests are overwhelming: the recent history reflected by the site, the nature of one's reactions to the Cold War, and even the classic question "what is history?" all come into play. The "Compare and Contrast" method of interpretation can be very powerful here, especially when comparing such features as enemy threats to the Bay over the last two hundred years, and the range and cost differences between a cannonball from Fort Point and a Nike-Hercules missile!

A good deal of debate has been generated regarding interpreting the presence of nuclear weapons. The official policy of the Army was to neither confirm nor deny their presence at any specific site, but rather to refer to the Nike-Hercules as a 'nuclear capable' system and defer being any more specific. It is up to the interpreters to present available facts objectively yet honestly and to use their good judgment in answering visitor questions.

Following are the primary Themes for Site 88L:

- The Site as the last link in a 200 year chronology of development of defensive systems, beginning with the Spanish in 1776 and ending here in 1974.
- The technology of the Nike system and the history of SF 88L.

- The Army's role in the defense of San Francisco and, consequently, in preserving the lands which became GGNRA.

- The preservation role of the National Park Service and how this goal is exemplified by the protection of the Marin Headlands, and especially by the restoration of the Nike Site, stressing the volunteers' efforts.

Visitors are here to experience the site, meet personnel who lived the NIKE story, and gain an understanding of the site's importance and our preservation role.

Some points to remember while giving your presentations:

1. Total time spent on the tour should not exceed one hour.
2. Visitors are very interested in the human element. If you are a NIKE vet, they'll want to hear your personal experiences while serving at a NIKE site.
3. Visitors will receive lots of information at the various stations, so don't try to tell them everything at just one stop.
4. The person giving the introductory talk at the Assembly Building should only provide the broadest of overviews, recognizing that more details will be provided at the other interpretive stations along the way.
5. Don't try to squeeze every possible detail into your presentation. Leave time for questions, but if people want in-depth information, offer to spend additional time with them *after the tour*.
6. We should strive to give an accurate picture of the Nike technology and the site's history, but we are not here to turn visitors into Air Defense experts.

7. SAFETY! Constantly keep safety in mind -- there are lots of hazards to trip over or get caught under. Use the visitors' knowledge to bring up the topic ("Anyone know why you paint something yellow?"), offer them reminders along the way ("watch out for that gutter"), and keep an eye on your group. Do not let them get so strung out along the route that you can't see everyone at once.

Be especially careful of safety inside the launcher area. The SOP for elevator safety is that all passengers must stand on the flat deck surface, and keep one hand on the missile and the other by their side. Warn visitors about irregular surfaces in the deck, inform them of the motions to expect, and caution them to remain stationary until the elevator has come to a full stop. The operator will face the passengers while the elevator is in motion, keeping one hand on the emergency STOP button at all times.

1. Missile Assembly Building. (10 minutes) Welcome the visitors, introduce yourself, and explain the tour procedure and length.

Intro talk should provide a basic explanation Site 88's significance as the last link in the long chain of fixed defenses of San Francisco. Chronological description of various defenses of SF Bay; the Spanish Castillo, Plan of 1850, the Civil War, the Endicott years, and World War II. Use interaction with visitors, relating what they may have already seen in the Headlands with these generations of defense.

Explain in more detail how, starting in World War II, the need for air defense became critical and why missiles replaced fixed guns by the 1950s.

Provide visitors with a *very* simplified explanation of the role and technology of the Nike system (i.e. surface to air, guided anti-aircraft missile system; "last line" of defense; site active for twenty years; no missiles ever fired here), but don't go into details which will be explained at length at other stations.

Explain that visitors will be viewing the site as it appeared at the time of its closing in the Spring of 1974, and about our restoration efforts. Describe tour route and the stations where visitors will meet veterans who served at Nike sites.

Summary statement: Site 88L is a museum of the "Cold War", and has been preserved and restored through combined efforts of the National Park Service and the Volunteers in Parks.

Emphasize a Safety message, and escort to next stop . . .

2. LOPAR and MTR Radar Display. (10 minutes) Welcome the visitors and introduce yourself.

Overview: NIKEs were a guided missile system. Unlike a bullet, which has no direction once its fired, a NIKE was guided to its target by a complex system of radars, communications and computers, operated by highly-trained personnel.

Point out the various components on display: vans, MTR, LOPAR, etc. Explain concept of "IFC" -- Integrated Fire Control -- and describe how IFC functioned to acquire, identify, and track a target, and then to direct a NIKE from the launch area to that target.

Describe where was the radar site actually located. Point out Hill 88 (if visible) and how there were three components to a NIKE site: the IFC, the Launcher Area, and the Admin Area at today's YMCA Pt. Bonita Center.

Points to stress: Nike was a mobile system; everything was portable; NIKE and its role in total NORAD air defense (i.e. integrated with other Army sites and Air Force command); this equipment was state-of-the-art when new, and is still effective today: system stayed in use with U.S. forces overseas until the 1980s, and is still used by numerous allied countries.

Describe next stop on tour and escort visitors to Warhead Building . . .

3. Warhead Building. (10 minutes) Welcome the visitors and introduce yourself.

Explain the technology of a Nike missile, using the cutaway Ajax on display. Identify the parts of a missile, its internal arrangement, armament, guidance technology, etc. Include details such as range, speed, altitude, theory of interception and destruction. Hazards of Fuming Red Nitric Acid. Compare to solid fuel in the booster, and how a major improvement in the Hercules was its total use of solid fuel

The building was built to fuel and assemble a complete Ajax. Point out the special ramp and crane for fueling and assembling Ajax sections. Make a brief statement about the use of the structure as a warhead building for the Hercules, where the guidance sections and warheads would be attached to main body section. Tight security restrictions on who could enter.

Explain duties of Launcher personnel assigned to site. Maintain missiles, bring to surface and prepare for firing. Daily maintenance and training; states of preparedness (DEFCON system); "duty" battery; ready room; alerts and drills; etc. "SNAP" drills, and live firing experiences at MacGreggor Range.

Points to stress: Launcher crew worked in close conjunction with IFC, even though separated by a great distance. NIKE was a mobile system; everything was portable, from the radar equipment to the launchers and missiles. These permanent launch sites were basically flat, developed areas with weatherproof buildings and magazines where the mobile system could be permanently bolted down.

4. Sentry Dog Kennels. (10 minutes) Welcome the visitors and introduce yourself.

Discuss security at a NIKE site and the role of the MPs: sentry dogs, guard posts, electric gates, patrols. Access to the launch site was very limited, with special authorization and passes required, and repeated identification checks.

Dogs were a critical part of the security system. 24-hour patrols. Training for dogs and their handlers. Types of dogs. Equipment uses. Explain parts of kennel area, names of dogs, daily routine, etc. Describe how dogs were not trained to "kill" but to attack and immobilize potential enemies.

If you're a former dog handler, relate personal experiences about your K-9, the trainings you went through, and your duties and experiences.

Describe uses of various jumps, and why they were designed a certain way (i.e. window openings, hurdles, cyclone fencing.) Demonstration (if possible) of security dog going through his paces at the training area.

CONCLUSION

~~The conclusion suggests that by accepting the history of the site, and asking visitors to~~ 767Y

thought it was closed. This can lead into a brief discussion of the growing 1960s threat from ICBM missiles, and the inability of the NIKEs to effectively counter them.

The final concluding thought should be that in the Spring of 1974 the last fixed fortifications in the Bay Area were closed when a terse Army order closed Site 88 and several other Nike batteries in the West. The visitors should be left with the concept of the transitory nature of those defenses, the end of nearly two centuries of fortifications, how the land was preserved through the efforts of both military and citizen efforts, and how today the Park Service and the VIPs are preserving and restoring this site.

AREA A

Area A consists of the two LCTs and the land directly behind them to the West fence line extending from the main gate to an imaginary line drawn from the North end of the assembly building to the West fence.

OLD LCT

The old LCT must be raised and railroad ties placed on the asphalt pad and the LCT lowered on to the ties. This is to provide ventilation and to prevent anymore water damage to the bottom of the trailer. Exterior paint of the trailer is to be removed down to bare metal. Damaged exterior areas of the trailer are to be repaired. The exterior is to be primed with an automotive grade primer then repainted in flat olive drab. The interior paint of the trailer must be totally removed. All damaged interior metal is to be repaired then painted the existing color in a semi-gloss finish. Prior to interior renovation, the door and emergency escape hatch must be left open to allow airing and proper drying of water soaked wooden floor panels. Some spare parts, i.e. light fixtures, switches, etc. may be obtained from the spare radar control trailer being acquired from Pueblo Army Depot. Once the trailer has been restored the interior will be used for storage of spare parts or small equipment. The exterior of the trailer will require a low level of preventive maintenance. The trailer will be interpreted as the original LCT on the site.

NEW LCT

The new LCT will remain in its present location in Area A. Preventive maintenance is presently required in the form of removing rust spots, from exterior areas of the trailer, and these areas spot painted in an olive drab flat finish. The metal trailer wheels need to be cleaned with water and a strong TSP solution then painted in a flat olive drab finish. The tires must be protected from ultra violet rays by covering them with cloth boots. The boots are to be removed during interpretative sessions. A wooden platform must be constructed to the same height as the trailer's front porch. A ramp must facilitate access to the platform allowing for viewing by handicapped visitors. Platform and ramp construction must conform to all existing regulations governing such a structure. The platform and ramp must be so constructed to allow for the movement of visitors, both up and down, at the same time. The interior of the LCT will be interpreted from the front porch with no general visitors allowed to enter the trailer. Cabling will be installed from the generator power source to the LCT then to the A pit SCG, and LCIs. Cabling will also be connected from the LCT to the Battery Control Trailer. (LCT and Battery Control Van cabling will be mainly for visual interpretation. There is a possibility that status lights can be controlled along with telephone communications. All other electronic functions between these two

trailers will be inoperative due to the battery control van missing internal electronic components.

EXTRA RADAR CONTROL VAN

An extra Radar Control Van has been acquired from Pueblo Army Depot. This van's exterior is totally intact with the exception of the front porch and ladder missing. This trailer is to be temporarily stored in Area A between the new LCT and the Assembly Building. The interior of the trailer has mostly been removed. All existing interior parts remaining in the trailer will be removed and used as spare parts, or to rebuild the old LCT and other vans. The interior of this trailer will be used for storage of parts and equipment. At present, no preventive maintenance is required to the exterior of the trailer except for protecting the tires from ultra violet rays with cloth boots. This trailer will be moved to Area C once the above has been completed. Once in Area C, routine exterior preventive maintenance must be performed.

BAROMETER

The galvanized metal legs behind the original LCT supported a wooden louvered cabinet. A barometer was housed in this cabinet. The wooden cabinet was painted a gloss white. The roof of the cabinet was flat and angled with the high end of the roof at the front and the low end at the rear. The door of the cabinet was single piece and opened to the left. The door was also louvered. Reconstruction of this cabinet can be accomplished by using louvered bi-fold door panels for the sides and door. Half inch exterior plywood is to be used to construct the bottom and roof. Measurements can be acquired from measuring the metal legs and constructing the cabinet to fit with the height of the cabinet to be three feet at the front and 2 and one half feet at the rear. Preventive maintenance will consist of washing with soap and water and annual painting.

FLIGHT SIMULATOR DISPLAY

Three extra flight simulators have been acquired from Pueblo Army Depot. Two of these units will be stored for future use of museum displays. The third unit will be displayed on a small table in front of the new LCT and will be interpreted to visitors. The Flight Simulator housed in the new LCT will not be touched. The display Flight Simulator will be housed in the new LCT when not on display. No preventive maintenance of this simulator will be required except for routine cleaning.

AREA B

Area B consists of the Missile Assembly Building, the Generator Building, and the asphalt paved area in front of these buildings extending to the inner roadway.

ASSEMBLY BUILDING

The assembly Building is in the process of renovation. Two rooms have been rebuilt at the North end of the building. The East room will be used as the site office and has been completed with the exception of telephone lines being run. The West room requires floor underlayment to be installed and a tile floor. This room will serve as a locker room, meeting room, and break room. Lockers have to be obtained and installed in this room for the regular volunteers to store clothing and tools. This room will be furnished with amenities such as a coffee port, microwave oven, etc. The main room in the Assembly building is currently in the process of restoration. Portions of the interior paneling are being removed due to water damage and replaced with new paneling. The four windows in this room are being rebuilt as close as possible to the originals. There are four ceiling mounted electric heaters which are beyond repair. The outer casings are intact and will be cleaned and repainted in the original silver color. Internal heater components will be replaced with small heater units. The newer units will produce equal or greater BTUs that the original heater cores. The interior heater replacement presently has been given a low priority level. The main room also contains eight foot florescent fixtures. These fixtures will be cleaned and repainted in there original colors and defective light tubes will be replaced. The interior walls and ceiling of the Assembly Building are to be painted in a gloss white latex finish. The electrical panel will be repainted in its original blue color. Stenciling on the panel will be masked, prior to painting, to preserve the original lettering. The sink and counter area will be cleaned and repaired, where needed. The area under the sink counter will be thoroughly cleaned and sealed to prevent entry of vermin. The electric water heater under the counter will be inspected, and replaced, if necessary. The exterior of the Assembly Building requires painting. The building exterior will be power washed and damaged metal sheeting will be repaired. All holes placed in the sheeting, for various reasons, through the years will be patched using fiberglass filler. All required areas will be primed with and exterior metal primer then the building will be repainted in its existing green color. The finish is to be a semi-gloss latex. An interior hasp is to be install on the double sliding doors for extra security. Future work will be to install gutters on the East and West sides of the building with down spouts to direct water away from the building. The rock landscaping on the side of the building will be refinished and the ARADCOM shield will be repainted. A low garden fence is recommended, to be installed around the rock landscaping to discourage visitors from walking on the rocks and disturbing the rock art work.

A Nike Hercules missile presently being acquired from Pueblo Army Depot will be displayed in the Assembly Building on a missile dolly. The missile will be displayed without the warhead section and will have its rear actuator area panels removed. Respective

missile test equipment will be attached to the missile and will also be displayed in the building to interpret how the missiles were tested in this building. The Assembly Building will also temporarily house a few important Hipar Radar counsels, if room permits, for interpretation until a permanent museum can be established for this purpose. The Assembly Building will also house the cutaway Nike Ajax missile when the site is closed, When open, the Nike Ajax missile will be moved outside of the Assembly building for interpretation and display.

Maintenance of the Assembly Building will consist of periodic cleaning and washing as well as painting of the interior and exterior, when need. The control of weed in the rock landscaped area will be and ongoing process.

BATTERY CONTROL TRAILER

The Battery Control Trailer, currently being acquired from Pueblo Army Depot, will be temporarily stored on the asphalt area to the immediately West of the Assembly Building main doors. Two railroad ties must be placed on the asphalt and the trailer lowered on to these ties. The ties are to keep the bottom of the trailer off the ground, and to protect the electronic and electrical components housed between the bottom and interior floor of the trailer. Most of the interior electronic components have been removed from the trailer making it inoperable, but all the exterior components of the counsels, computer, plotting boards, etc. are intact allowing for an accurate interpretive display. The interior of the trailer has to be re-assembled and cleaned. Additional interior components for the Battery Control Van have also been acquired from Pueblo Army Depot. These components will serve to replace missing parts as well as a spare parts reserve. Low voltage will be provided to the trailer for the purpose of interior lighting and to supply power to panel lights. The radar scopes will be inoperable as well as the computer and plotting boards. Once restored, the interior of the van will require routine cleaning. It has not yet been decided how the trailer will be interpreted to visitors. The exterior of the trailer currently is painted in a gloss white finish and contains a painted White Sands Missile Range emblem on it. It has to be decided whether to repaint the trailer a flat olive drab or leave the existing white. Exterior maintenance will consist of periodic washing along with spot painting. Cabling will be run from the trailer to the Radar Control Van, The Launcher Control Van (LCT), and the Acquisition Radar Antenna. Interior access to this trailer will have to be controlled due to its complexity. The keys for the door lock of this trailer must have limited distribution and visitors to the trailer must have and authorized escort.

RADAR CONTROL TRAILER

The Radar Control Trailer, currently being acquired from Pueblo, is to be placed on railroad ties to the left of the Battery Control Trailer. The same protective measures must be followed with this trailer as with the Battery Control Trailer. The interior electronic components of this trailer are also missing, but the consoles all all intact with the exception of the Target Tracking Radar's. The B Scope is missing from that console. Arrangements have been made with Redstone Arsenal to attempt to locate one. The interior of this trailer also has to be cleaned and reassembled. Access to the interior of this trailer has to be of a controlled nature just like the Battery Control Van.

Cabling from this trailer will run to the Battery Control Van, and to the tracking radar. Low voltage power will be supplied to the trailer in order to make the status lights operational. The radar indicators will not be operational, nor will high voltage power be supplied to the one tracking antenna from this trailer.

The exterior of this trailer is also painted white. The decision whether or not to paint the Battery Control Trailer will also affect it.

Maintenance on this trailer will be the same as the Battery Control Trailer's. Spare parts for this trailer can be acquired from the extra Radar Control Van being acquired. Spare parts will be limited to light fixtures, cabinet frames, doors etc.

TRACKING ANTENNA

Only one tracking antenna has been acquired from Pueblo Army Depot. This antenna will serve interpretive purposes only and will not be made operational. The tracking antenna will be delivered complete with the acception of the canvas radome. Inquiries have been made to Redstone Arsenal who is attempting to locate one. The base a pedestal section of the radar are nested in its trailer, and the reflector lense is mounted in the shipping position on the trailer along with the antenna's legs and foot pads. The lense's hoist is missing from its container but another hoist has been acquired and will be received when the entire equipment shipment is received. Only two sections of the catwalk are strapped to the trailer, but additional catwalk sections are also being shipped. The catwalk supports are also missing. Again, supports have been located and are also being shipped. It is not certain thought if all the catwalk supports will be supplied. Missing supports may have to be manufactured. Fiberglass radome supports are being shipped along with additional supports as spares. The upper section of the tracking antenna is being received separately and is not fix to the pedestal. This is the condition, when found. Extreme care must be taken not to damage the mating surfaces of the pedestal and the upper antenna section. Immediate attention must be given to these

two major components when they are received. They must be tarped and protected from the weather until such time as they are mated. The tracking antenna components will be stored on the asphalt pad in front of the generator building where they will be stored until assembly is completed. The antenna will remain in this location, once assembled, until a permanent pad is constructed. This pad will most likely be located in Area E. Once the antenna is assembled and a radome is acquired very little preventative maintenance will be required. This maintenance will consist of periodic washing of the antenna to remove salt deposits, spot painting of the exposed metal areas of the antenna along with maintaining proper air pressure in the trailer's tires. Fabric boots will be manufactured and placed over the tires to protect them from ultra violet exposure. These boots will be removed and stored in the antenna cabinet during tours.

The antenna will not be made operational due to missing components in the Radar Control Van and also to protect visitors from exposure to radiation if they were to come in contact with the directed beam.

Access to the antenna must be restricted due to the dangers of someone falling off the catwalk and/or being thrown off of the catwalk if the antenna is turned in azimuth. Access to inside the radome will be limited to qualified personnel. The antenna will be locked in elevation for safety. To unlock the antenna's elevation movement one must enter the radome. With the antenna power off the elevation drive motors will not maintain antenna elevation position thus allowing the antenna to move freely in elevation in a 180 degree arch causing the lense to swing and possibly causing serious injury or even death to the occupant.