Final Environmental Assessment for Renovating and Remodeling
the Bravo Central and Charlie Flank Towers
at Avon Park Air Force Range, Florida

November 2004

Prepared by the
Environmental Flight
Avon Park Air Force Range, Florida
**Final Environmental Assessment for Renovating and Remodeling the Bravo Central and Charlie Flank Towers at Avon Park Air Force Range, Florida**

The Bravo Central and Charlie Flank Towers score air-to-ground deliveries of ordnance on bombing and gunnery ranges. In addition to routine maintenance, one or more of the towers have their handrails, roofs, windows, and catwalk walking surfaces replaced. Doors and catwalks are added to the Charlie Flank Towers while the window awnings are replaced. All of the towers' interiors are remodeled to house new electronic equipment. The Florida State Historic Preservation Office (SHPO) concurs with APAFR in that all three towers appear to meet the criteria for listing in the National Register of Historic Places.
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the Bravo Central and Charlie Flank Towers
at Avon Park Air Force Range, Florida

Proposed Actions: Renovate and remodel three range scoring towers located on two ranges at Avon Park Air Force Range, Florida

Type of statement: Environmental Assessment

Cooperating agencies: None

For further information: Paul Ebersbach
18 ASOG, DET 1, OL A/CEV
29 South Blvd.
Avon Park Air Force Range, FL 33825-5700
863-452-4119, ext 301

Abstract: The Bravo Central and Charlie Flank Towers score air-to-ground deliveries of ordnance on bombing and gunnery ranges. In addition to routine maintenance, one or more of the towers have their handrails, roofs, windows, and catwalk walking surfaces replaced. Doors and catwalks are added to the Charlie Flank Towers while the window awnings are replaced. All of the towers’ interiors are remodeled to house new electronic equipment. The Florida State Historic Preservation Office (SHPO) concurs with APAFR in that all three towers appear to meet the criteria for listing in the National Register of Historic Places.
FINDING OF NO SIGNIFICANT IMPACT

The Environmental Flight at Avon Park Air Force Range (APAFR) has prepared an Environmental Assessment to analyze potential impacts associated with renovation and remodeling of three range scoring towers located on the Range. This analysis was conducted in accordance with the Regulations For Implementing The Procedural Provisions Of The National Environmental Policy Act (40 CFR Parts 1500-1508, July 2003) and Environmental Impact Analysis Process (32 CFR 989, July 2003).

1.0. NAME OF ACTION

Renovate and remodel three range scoring towers located on two ranges at Avon Park Air Force Range (APAFR), Florida.

2.0. DESCRIPTION OF PROPOSED ACTION

The proposed action is to renovate and remodel three range towers in a single effort under separate contracts. Renovate is defined as repairing or replacing in a manner that does not reconfigure portions of a structure, while remodel is defined as repairing, replacing, and adding in a manner that does reconfigure any portion of a structure. The first tower, the Bravo Central Tower, is located on the North Conventional Range. It is renovated by replacing the steel butt plates at the base foundation, removing and replacing existing antenna structural supports, replacing all light fixtures, removing old carpet and replacing with new, removing the cab door and frame and replacing with new, replacing portions of corroded cab siding, painting the exterior cab, and replacing all catwalk walking surfaces. Remodeling includes replacing the existing casework (desks, tables, and shelves) to accommodate new weapon scoring and aircraft controlling equipment, replacing individual electric outlets with a raceway system, replacing all windows with single pane windows, adding interior roll down sun screens to the windows, replacing and enlarging skylights, replacing and reconfiguring the roof to fit new skylights, reinforcing the cab floor, replacing stair and catwalk handrails with stronger steel, replacing and relocating the air conditioning/heating system, and replacing the obstruction and warning light static mast with a fold down mast.

The second two towers, the Charlie Flank Towers, are located on the South Conventional Range. Renovation for the Charlie Flank Towers includes replacing the existing electrical, replacing grounding, and lightning protection systems, replacing all light fixtures, replacing portions of rusted conduit and electrical boxes, replacing portions of cab siding, repairing floors, and replacing the counter top. Renovation also includes removing the window awnings and replacing the roofs with like material and original design. Remodeling includes relocating fixed ladders, adding steel catwalks around the entire perimeter of the cabs, replacing the windows on the back side of the cabs with a wall and cutting doors in the same location, replacing and relocating air conditioning/heating units, adding electrical outlets to the walls, adding interior sheet rock and insulation to the walls and ceilings, adding scoring cameras into the cabs, and replacing partitioned windows with solid fixed glass. All towers would be continuously maintained in the future after the contract work is complete.
2.1. DESCRIPTION OF THE ALTERNATIVES

2.1.1 Alternative Action

The alternative action only renovates the towers; no remodeling is carried out and no structural changes are made to the towers. Renovation is not a single effort, but rather maintains the condition and current appearance of the towers over time through ongoing maintenance efforts as priority and funding become available. Certain renovation requires coordination with the State Historic Preservation Office (SHPO). There is no remodeling to allow for equipment upgrades. The older weapon scoring system continues to be used in the towers.

2.1.2. No Action Alternative

The no action alternative only renovates the towers as priority and funding allow. There is no remodeling. No renovation takes place that requires consultation with the SHPO, therefore renovation work is limited. The older weapon scoring system continues to be used in all the towers.

3.0 SUMMARY OF ENVIRONMENTAL IMPACTS

3.1 Proposed Action

The proposed action improves the safety of the Bravo Central Tower by rectifying immediate safety concerns. The proposed action proactively repairs infrastructure on all the towers that will become a safety concern in the future. The proposed action does adversely affect the historic character of the Charlie Flank towers by removing the window awnings. As mitigation, APAFR is therefore conducting an Historic American Buildings Survey at Level II Standards with a survey approach offered by the SHPO. Also, as per SHPO guidance, APAFR is storing the window awnings in curation. The Bravo Central Tower may have exterior lead based paint; precautions need to be taken when removing the paint.

3.2 Alternative Action

The alternative action does not add new infrastructure or upgrade existing infrastructure with different materials to any of the three towers. This results in the Bravo Central Tower retaining unsafe conditions. The alternative action does not adversely affect the historic character of any of the towers, nor is an Historic American Buildings Survey performed. The Bravo Central Tower may have exterior lead based paint; precautions need to be taken when removing the paint.

3.3 No Action Alternative

The no action alternative limits the long term renovation of the towers. The Bravo Central Tower retains unsafe conditions. All towers maintain their historical integrity in the short term, but in the long term the towers are adversely impacted due to weathering. The Bravo Central Tower may have exterior lead based paint; precautions need to be taken when removing the paint.
4.0. FINDING OF NO SIGNIFICANT IMPACT

The attached Environmental Assessment (EA) was prepared and evaluated pursuant to the National Environmental Policy Act (Public Law 91-190, 42 U. S. C. 4321 et seq.) and in accordance with 32 CFR 989, July 2003 Environmental Impact Analysis Process. Based on the analysis presented in this EA, I conclude that the renovation and remodeling of the Bravo Central and Charlie Flank Towers as outlined in the proposed action does not constitute a “major Federal action significantly affecting the quality of the human environment.” An Environmental Impact Statement will not be prepared.

Date

MICHAEL O. BEALE, Colonel,
USAF Chairperson, 20FW
Environmental Leadership Board
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1.0. PURPOSE AND NEED FOR ACTION

1.1. Introduction

Avon Park Air Force Range (APAFR) proposes to renovate and remodel the Bravo Central Tower located on the North Conventional Range and the two Charlie Flank Towers located on the South Conventional Range at Avon Park Air Force Range, Florida. The purpose of the renovation is to repair and replace worn or deteriorating structural components of the towers. The purpose of remodeling is to create functional towers. The need for renovation is to maintain the towers so that they remain serviceable. The need for remodeling is to provide casework and structural changes that accommodate upgraded electronic weapon scoring and communication equipment in the Bravo Central Tower and remodeled cabs and structural changes on the Charlie Flank Towers that house internal, weapon scoring cameras. The upgrades are made to accommodate the more modern Weapon Impact Scoring Set (WISS).

1.2 Background

Avon Park Air Force Range (APAFR) is located in Polk and Highlands Counties in central Florida (Figure 1.2-1). The range complex covers approximately 106,073 acres and is about 10 miles east of Avon Park and 15 miles northeast of Sebring, Florida. The major highways serving the range are US Highway 27 and State Route 64.

APAFR is the largest bombing and gunnery range east of the Mississippi River. The mission of APAFR is to provide a training infrastructure that allows U.S. air and ground forces to practice the latest combat training techniques and procedures safely, efficiently, and realistically, and to design training facilities that meet training needs. The 18th Air Support Operations Group (ASOG) at Pope Air Force Base, North Carolina, is responsible for the operation and maintenance of APAFR, which is assigned to the Air Combat Command (ACC). The range is used for bombing practice by U.S. Air Force units from throughout the southeast.

The Bravo Central Tower currently serves as the central tower for scoring the North Conventional Range. This tower houses personnel and equipment used for scoring weapons systems and for communicating to aircraft that are training on the range. The Charlie Flank Towers serve as flank towers that support scoring cameras used to observe and record weapon systems.

The towers were built in 1945. The towers have had alternations made to their cabs since the time of their original construction. They maintain, however, the context of their historical use (USAF 1997). The Bravo Central Tower was refurbished and relocated to its present location in 1968. The tower is located on the center of the southwest border of the North Conventional Range (Figure 1.2-2). The original locations and dates of refurbishing work for the Charlie Flank Towers are not known. They occupy the left and right flanks of the southwest border of the South Conventional Range (Figure 1.2-3).
Figure 1.2-1. Avon Park Air Force Range’s location in Florida.
Figure 1.2-2. The Bravo Central Tower located on the North Tactical Range at Avon Park Air Force Range, Florida.
Figure 1.2-3. The Charlie Flank Towers located on the South Conventional Range at Avon Park Air Force Range, Florida.
2.0. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

There is a proposed action, an alternative action, and a no action alternative. The proposed action renovates and remodels all three towers as a single effort under contracts that start and end with specific times. The alternative action leaves the towers in their current status and renovates the towers in several unrelated efforts over time as determined by need and funding. Some renovation work requires consultation with the SHPO. The no action alternative entails future renovation work over time that is limited to routine maintenance of the sort that has been determined not to affect the site’s historical significance and therefore does not require SHPO consultation.

2.1. Proposed Action

Bravo Central Tower

The proposed action renovates and remodels the Bravo Central Tower. The tower is a one story control tower with an enclosed cab (Figure 2.1-1). The cab is 13 feet square. The floor of the cab is plywood on wood joists, while the sides and roof are sheet metal. The windows are single pane glass. The windows also consist of a skylight that travels along the entire perimeter of the roof. Exterior lights and antennas are located on the roof of the cab as well as exterior lights along the cab’s sides. A steel catwalk encompasses the cab all the way around. Antennas are attached to the catwalk. The cab is accessed from the catwalk via a door located on the east side of the cab. The catwalk also supports an air conditioning/heating unit that enters the side of the cab from the west. The air conditioning condenser is located at the northwest corner of the cab. The floor of the cab is approximately 30 feet above the ground. The cab is supported by a tower frame below made of galvanized, structural angled steel. The base of the tower frame is 18 feet square while the top, supporting the cab, is 13 feet square. The tower’s steel angle columns and web members are interconnected by gusset plates and bolts. Lights are located on the tower. The tower’s foundation consists of four concrete pyramidal footings, one footing for each of the tower’s steel angle columns. Three runs of galvanized steel stairs travel from the ground to the catwalk.

The cab interior consists of lights, electrical outlets, thermostat, communication wiring, and built in casework to include desks, shelves, and tables. The floor is carpeted.

Under the tower is a small storage building. Just south of the tower is a building that serves the tower crew. The building houses a small kitchen, a toilet, and a plot room for planning. The tower is accessed by a paved road. The immediate surrounding area is vegetated with introduced grass species that is frequently mowed.
Figure 2.1-1. The Bravo Central Tower on the North Conventional Range at Avon Park Air Force Range, Florida.
The proposed action performs the following remodels:

1. The existing casework is removed and replaced with new casework. The casework is designed to accommodate the new, upgraded weapon scoring and aircraft controlling equipment. The casework allows for electrical wiring and communication wiring.

2. All windows are replaced with single pane windows.

3. New interior roll down tinted sun screens are installed on the windows.

4. The cab skylights are replaced and enlarged by 12 inches further up on the roof.

5. The existing flat sheet metal roof is replaced with like materials and modified to accommodate larger skylights.

6. The cab floor is reinforced to achieve 80 pounds per square feet loading as per the Standard Building Code (SBCCI 1997). The floor is currently rated at 40 pounds per square feet.

7. Hand railings for the stairs and catwalk are all replaced with stronger steel – the current railings do not meet resistance loads as specified in the Standard Building Code (SBCCI 1997).

8. The existing outlet electrical service will be replaced with an electrical raceway going around the interior perimeter of the cab with outlets every two feet.

9. The heating, venting, and air conditioning (HVAC) is removed from its current location. A new condenser is located on the ground at the base of the tower on a newly poured concrete slab. The new air handler is located on the roof of the tower. The hole created by removing the old air handler from the side of the cab wall is patched for both the interior and exterior walls.

10. The existing obstruction and warning light mast that is secured on the catwalk is replaced with a fold down mast allowing for easier light maintenance.

The proposed action performs the following renovations:

1. All light fixtures are replaced.

2. The old carpet is removed and replaced with new carpet.

3. The cab door and door frame are replaced.

4. Highly corroded portions of the metal siding of the cab are replaced with new metal siding, less corroded areas are treated chemically for corrosion. The entire exterior cab is pressure washed and repainted.
5. The catwalk walking surface is entirely replaced with new metal.

6. Corroded steel on the catwalk framework and tower framework is replaced with new, especially for the steel located beneath the current AC condenser.

7. The existing antenna structural supports are removed and replaced.

8. Steel butt plates at the base of the tower foundation are replaced.

Charlie Flank Towers

The proposed action renovates and remodels the Charlie Flank Towers. The towers are two stories high with enclosed cabs (Figure 2.1-2). The floors of the cabs are plywood on wood joists, while the sides and roofs are sheet metal. The windows are single pane glass. Exterior lights, antennas, and cameras are located on platforms above the roofs of the cabs. The cab is accessed through a trap door located on the floor. Air conditioning/heating unit are located on the sides of the cabs. The cabs are supported below by tower frames made of galvanized, structural angled steel. The towers’ steel angle columns and web members are interconnected by gusset plates and bolts. The towers’ foundations consist of four concrete pyramidal footings, one footing for each of the towers’ steel angle columns. Four runs of galvanized steel stairs travel from the ground to the trap door. The cab interior consists of lights, electrical outlets, thermostat, communication wiring, and built in casework to include desks. The floor is tiled. The ground below the towers is vegetated with introduced grass species that is frequently mowed.

The proposed action performs the following renovations:

1. Replace the existing electrical system, tower electrical ground, and lightning protection system.

2. All light fixtures are replaced.

3. Rusted conduit and junction boxes are replaced.

4. Exterior sheet metal around the base of the cabs are replaced.

5. Repair existing floor and replace floor coverings.

6. The exterior of the cabs are pressure washed.

7. Remove and replace the existing cab counters.

8. Existing window awnings are removed.

9. The roofs replaced with like materials and within the existing design.
The proposed action performs the following remolds:

1. New scoring cameras are placed inside the cabs (existing ones are on platforms located above the cab roof).

2. Three of the four windows are replaced for each cab. The new windows replace the partitioned windows with solid fixed glass windows.

3. The existing fixed ladder for each tower is relocated. The existing ladder attaches from the stairs to the platforms above the roofs of each tower. These ladders will be reattached on a new catwalks and on the platforms.

4. New steel catwalks are placed completely around each cab floor.

5. The back wall of each cab is transformed from windows to a solid wall with a door cut out of the wall to access the catwalk.

6. The air conditioning/heating units are replaced and relocated to the back of the cabs, units to rest on the new catwalks.

7. Interior electrical outlets are placed on each wall.

8. Interior walls and roof are finished in sheet rock, insulated, and painted.

Both towers continue to receive routine and replacement maintenance after the proposed remodeling and renovation work is finished.

2.2 Alternative Action

The alternative action only renovates the Bravo Central and Charlie Flank Towers. Renovation is not performed in a single effort with contracts; rather it is performed over time as priority and funding becomes available. The alternative action does allow for renovation work to include routine maintenance (no SHPO consultation) and replacement maintenance (requires SHPO consultation). Typical routine maintenance includes interior and exterior painting, replacing individual elements of features (such as some segments of angled steel in a tower), replacing light fixtures, caulking and weather stripping, replacing mechanical features, and removing immediate life threatening deficiencies. Replacement maintenance replaces entire features such as a roof, all windows, and the entire walking surface of the catwalk. The alternative action does not initiate any new features to the towers and does not strengthen existing structures (handrails and floors).

The older weapon scoring system continues to be used because the casework and electrical system are not upgraded to accommodate the new technology for the Bravo Central Tower nor are the required new cameras placed in the Charlie Flank Towers. The existing roof mounted cameras on the Charlie Flank Towers are used with the old scoring system.
Figure 2.1-2. The Charlie Right Flank Tower on the South Conventional Range at Avon Park Air Force Range, Florida.
2.3  No Action Alternative

The no action alternative renovates the Bravo Central and Charlie Flank Towers only to maintain their condition. No renovation takes place that requires consultation with the SHPO. Renovation takes place over time as priority and funding becomes available.

The older weapon scoring system continues to be used because the casework and electrical system are not upgraded to accommodate the new technology for the Bravo Central Tower nor are the required new cameras place in the Charlie Flank Towers. The existing roof mounted cameras on the Charlie Flank Towers are used with the old scoring system.

3.0.  AFFECTED ENVIRONMENT

The towers occupy very small land areas. For this reason, the only environments addressed are those that the towers encompass.

3.1.  Safety

The Bravo Central Tower is serviceable, but it currently does not meet Standard Building Code (SBCCI 1997) safety standards for the stair and catwalk hand rails, nor for weigh loads for the floor of cab. The corrosion on the catwalk surface will become a safety concern later on. Corrosion on the cab and tower are a concern, but currently have not progressed enough to become immediate safety concerns. Other safety features, such as lighting and general visibility, are currently met.

The Charlie Flank Towers are serviceable and meet safety standards.

3.2.  Hazardous Materials and Waste

The towers were inventoried for asbestos containing material in 1994 and 2003 (USAF 1994, USAF 2003). The test results indicate that there is no asbestos containing material in any of the towers. The interior paint in the cabs and exterior paint of Bravo Central Tower (flanks tower exteriors are unpainted) may contain lead based paint but they have not been tested.

3.3.  Cultural Resources

A cultural resources inventory and assessment conducted for APAFR in 1997 (USAF 1997) recommended that the towers be considered for listing in the National Register of Historic Places. The Florida State Historic Preservation Officer (SHPO) concurred with this recommendation based on National Register Criterion A Military and Politics/Government and Criterion C Architecture. APAFR and SHPO entered into a programmatic agreement in 2000 that designated the towers as potentially eligible for the National Register (USAF 2000). This programmatic agreement outlined actions to potentially eligible historic structures that require consultation between APAFR and the SHPO. APAFR initiated a written Section 106 consultation with the SHPO on 4 August 2004 regarding the proposed renovations and remodeling efforts to the Bravo
Central Tower. A written Section 106 consultation was also initiated on 12 August 2004 for the Charlie Flank Towers.

4.0. ENVIRONMENTAL CONSEQUENCES

4.1. Safety

4.1.1 Proposed Action

The proposed action improves the safety and functionality of the Bravo Central Tower. The floor of the cab is strengthened and the handrails are replaced with stronger steel on the catwalk and stairs. These upgrades meet required safety standards. The walking surface of the catwalk is replaced. Removing the condenser and air handling unit from the catwalk removes obstructions on the catwalk. Replacing the current obstruction and warning light mast with a folding mast makes replacing the warning lights safer. While the current corrosion does not make the tower and cab unsafe, the proposed restoration and repair work is proactive and avoids potentially unsafe conditions in the future. Routine and replacement maintenance keeps the Bravo Central Tower in safe condition.

The routine and replacement maintenance on the Charlie Flank Towers contributes to ongoing safe conditions.

4.1.2 Alternative Action

The alternative action leaves the Bravo Central Tower with the cab floor and handrails not up to Standard Building Code (SBCCI 1997). These conditions remain unsafe. Keeping the condenser and air handler in their current locations retains obstructions on the catwalk. The catwalk surface can be replaced and this will rectify a safety concern that would otherwise arise in the near future.

Routine and replacement maintenance on the Charlie Flank Towers contributes to ongoing safe conditions.

4.1.3 No Action Alternative

The no action alternative leaves the Bravo Central Tower with the cab floor and handrails not up to Standard Building Code (SBCCI 199). The catwalk walking surface is not replaced, can only be patched, and overtime will become dangerous with corrosion. Keeping the condenser and air handler retains obstructions on the catwalk. The no action alternative allows minor repairs in the future, but the repairs that concern safety the most, a weak cab floor, weak handrails, and a corroding catwalk surface are not corrected.

Routine maintenance on the Charlie Flank Towers contributes to ongoing safe conditions. Over time, however, replacement maintenance will be required (such as the floor), but not performed, leaving increasingly unsafe conditions.
4.2. Hazardous Materials and Waste

4.2.1 Proposed Action

The proposed action removes lead based paint that may be found on the exterior of the Bravo Central Tower cab. Precautions should be taken by following applicable federal and state regulations.

Hazardous materials used in renovating the towers would be used and disposed of as listed on their respective directions.

4.2.2 Alternative Action

The no action alternative does not make repairs to the cabs and towers in the immediate future. Minor repairs are allowed later on that allow the handling of lead based paint. These materials would be handled as described in the proposed action in Section 4.2.1.

4.2.3 No Action Alternative

The no action alternative does not make repairs to the cabs and towers in the immediate future. Minor repairs are allowed later on that allow the handling of lead based paint. These materials would be handled as described in the proposed action in Section 4.2.1.

4.3. Cultural Resources

4.3.1 Proposed Action

APAFR determined that the proposed action did not adversely affect the Bravo Central Tower in terms of its potential historic attributes in a Section 106 consultation with the Florida SHPO in a letter dated 4 August 2004. The SHPO concurred with this determination in a letter to APAFR dated 1 September 2004. The proposed action conducts maintenance activities that help to preserve the tower. The minor structural changes do not change the historical integrity of the cab and tower.

APAFR determined that the proposed action did adversely affect the potential historic attributes of the Charlie Flank Towers in terms of structural design. APAFR offered to the SHPO a mitigation measure by conducting an Historic American Buildings Survey (HABS) to Level II Standards in accordance with 36 CFR 800 to the Charlie Flank Towers. This mitigation was offered in a Section 106 consultation letter that was transmitted to the SHPO on 12 August 2004. The SHPO responded by requesting more information and for APAFR to consider possible options other than removing the window awnings and making roof modifications (APAFR’s original proposed action removed the window awnings and reconfigured the roofs). The SHPO response was contained in a letter dated 13 September 2004. APAFR responded to the SHPO in an e-mail dated 16 September 2004. APAFR stated that the window awnings could remain and the roofs replaced with like material with their current design. With these changes to the proposed action, the SHPO determined in a letter dated 22 September 2004 that no adverse affects
occurred to the Charlie Flank Towers. Because APAFR initially offered a HAB Level II survey, the SHPO recommended that if APAFR chose to pursue this survey, that a HABS photographic documentation be completed prior to refurbishment with the remaining HABS criteria being conducted after refurbishment. Later, APAFR learned that the awnings had to be removed to accommodate the new cameras, so the SHPO was reconsulted in a letter dated 27 Oct 2004. SHPO responded that the HABS photographic documentation and placing the awnings in curation would suffice for mitigation in a letter dated 9 November 2004. The purpose of curation for the awnings was that if the camera technology changed sometime in the future, consideration could be made for reinstalling the awnings if possible.

4.3.2 Alternative Action

The alternative action does not conduct any work on the towers as a single effort. Routine and replacement maintenance is possible as priority and funding becomes available. Routine and replacement maintenance maintains the historical integrity of the towers while preserving them. Remodeling will not take place so there is no risk of losing the historical integrity of the towers.

4.3.3 No Action Alternative

The no action alternative does not conduct any work on the towers as a single effort. Routine maintenance is possible as priority and funding becomes available. Routine maintenance maintains the historical integrity of the towers for a time, but eventually the lack of replacement maintenance will adversely affect the integrity of the historical towers due to weathering.

4.4 Military Mission

4.4.1 Proposed Action

The proposed action upgrades the facilities to allow the Air Force to upgrade the current Television Optical Scoring System (TOSS) to the Weapon Impact Scoring Set (WISS). The advantage of WISS over TOSS is increased scoring accuracy, improved night scoring capability, laser scoring capability (TOSS cannot score lasers), and integration into flight instrumentation. In short, the recent advances in air-to-ground weapon systems and more common night time tactics have made the current TOSS very limited. These limitations are overcome by the WISS. Most air-to-ground ranges currently use the WISS so that there is a familiarity and consistency with the training air crews. At the national level, APAFR with WISS offers another range with WISS resulting in air crews having more flexibility and fewer scheduling conflicts with other ranges. Finally, APAFR emphasizes training for forward ground controllers in simulated enemy hostile environments. The WISS allows better feedback scoring from these forward controllers to air crews in the air.

4.4.2 Alternative Action

The alternative action retains the current TOSS. Scoring air-to-ground weapons deliveries is limited in terms of accuracy and night time exercises. Scoring with lasers is not possible and integration with flight instrumentation is limited. Air crews training from other ranges must adapt
to the dated TOSS. Nationally, air crews demanding WISS are limited to the existing ranges with WISS. Finally, forward ground controllers are limited in feedback to aircrews.

4.4.3 No Action Alternative

The no action alternative retains the current TOSS with result the same as the alternative action.

5.0. LIST OF PREPARERS

Roger Grebing
Chief, Compliance Branch
Avon Park AFR, FL
MS, Water Resources and Bioenvironmental Engineering, Oklahoma State University, 1973
Years of Experience: 18

Tod Zechiel
Natural Resources Specialist – NEPA
Avon Park AFR, FL
M. Ag. Texas A&M University, 1987
Years of Experience: 14

6.0. AGENCIES AND PUBLICS CONTACTED

Dr. Janet Snyder Matthews, Ph.D.
Director and State Historic Preservation Officer
Division of Historic Resources
Florida Department of State
500 South Bronough Street
Tallahassee, FL 32399-0250

Ms. Sally B. Mann
Director of Intergovernmental Programs
Florida State Clearing House
Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

The News-Sun
2227 U.S. 27 South
Sebring, FL 33870
7.0. LITERATURE CITED


MEMORANDUM FOR Dr. Janet Snyder Matthews  
Historic Compliance Review Section  
Bureau of Historic Preservation  
Division of Historical Resources  
R.A. Gray Building 4th Floor  
500 South Bronough Street  
Tallahassee, FL 32399-0250

FROM: 18 ASOG, DET I/CC  
8707 N. Golf Course Avenue  
MacDill AFB, FL 33621-5321

26 August 2004

1. The purpose of this letter is to initiate a Section 106 consultation on a proposal to renovate the Bravo Range Center Tower located at the Avon Park Air Force Range (APAFR) in Polk County, Florida. This letter provides information following the instructions found in the Division of Historical Resources' Minimum Documentation for State and Local Reviews.

2. Division Involvement - This is a federally owned tower located on federally owned property. Section 106 of the National Historic Preservation Act prompts review of our actions by your office.

3. Project Description - The project involves both repair work and modification work to the cab and tower. Details of the work are described in Attachment 1, Statement of Work, Bravo Center Tower Renovation, Avon Park Air Force Range, Florida Updated 24 Aug '04.

4. Project Location and Maps - The tower is located in the North Conventional Range (aka Bravo Range) on APAFR with a legal location of T32S, R30E, S21, NWNE, and UTM (WGS-84) of E467769 N3062875. Attachment 2, Site Map, shows the location of the tower in relation to other man-made features nearby. Attachment 3 is a photocopy of a USGS 7.5 Quad Map of the project area. Attachment 4 is an aerial photograph of the general area showing the location of the observation tower and the Bravo Range Left and Right Flank Towers. The total acreage of the project site is less than 0.1 acre.

5. Photographs - Digital photographs of the tower and nearby outbuilding are recorded on Attachment 5, an enclosed CD. Photographs labeled BRCN01-18 are of the exterior and interior features of the Bravo Center Tower, photographs labeled Outbld01-03 are of the nearby outbuilding, photograph BRLFTW is of the Left Flank Bravo Tower, and photograph BRRFTW is of the Right Flank Bravo Tower. All tower locations are shown in the attached aerial photograph. The aerial photograph is also reproduced on the CD as BRAVOTWRS.
6. **Description of the Project Area** – The tower is located on the southwest boundary of the North Conventional Range. The site location and adjacent area have been developed. The tower is centrally located along a service road. The soils around the tower are disturbed. The vegetation consists of introduced grass species. The vegetation is frequently mowed. Past and present use for the surrounding area is a bombing and gunnery range.

7. **Description of Buildings and Structures** – The tower is formed by a galvanized, angled steel skeleton which is bolted and welded together and set on a reinforced concrete foundation. The tower was constructed in 1945. The tower is potentially eligible for listing as an historic structure. The Air Force conducted an Historic American Buildings Survey (HABS) Level IV documentation of extant World War II structures on the installation in 1996 (*Avon Park Air Force Range: Cultural Resources Inventory and Assessment, United States Air Force, Air Combat Command, June, 1997*). Attachment 6, *Historical Structure Form Florida Site File*, is photocopied from the survey and describes the observation tower.

8. **Recorded Archaeological Sites or Historic Buildings/Structures** – the Bravo Left and Right Flank Towers have been identified as potentially eligible for listing as historic structures. Information was supplied to your office on these towers on 6 April 2004 when APAFR entered into Section 106 consultation with regard to their maintenance.

Florida Master Site Files for the project central tower and non-project flank towers are:

a. BLDG-01052 Bravo Central Tower  
b. BLDG-01051 Bravo Left Flank Tower  
c. BLDG-01053 Bravo Right Flank Tower

9. We believe that implementation of this proposal is unlikely to significantly impact these historic resources. We request your input. The repairs and replacements are greatly needed in order to accomplish our mission. We would appreciate your response within 30 days. If you have any questions, please contact Tod Zechiel of my staff at (863) 452-4119 ext 328 or by e-mail at Tod.Zechiel@avonpark.maccdill.af.mil.

FRANKLIN S. WALDEN, Lt Col, USAF  
Commander

Attachments:
1. Statement of Work  
2. Site Map  
3. USGS map (photocopy)  
4. Aerial Photograph  
5. CD  
6. Historical Structure Form Florida Site File
Lt Col Franklin S. Walden
Department of the Air Force
18 ASOG Detachment 1
29 South Boulevard
Avon Park Air Force Range, Florida 33825-5700

RE: DHR Project File Number: 2004-8327
Received by DHR August 31, 2004
Proposed Renovations to Tower No. 1052 - Bravo Center Flank Tower (8PO6153)
Avon Park Air Force Range, Polk County

Dear Colonel Walden:

Our office received and reviewed the above referenced projects in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended and 36 CFR Part 800: Protection of Historic Properties. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing in the National Register of Historic Places), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

A review of our files indicates that the Bravo Center Flank Tower (8PO6153) was previously evaluated by this office in 1999. It was our opinion then and still is, that the tower appears to meet the criteria for listing in the National Register. However, based on the information provided, it is the opinion of this office that the proposed undertakings will have no adverse effect on the historic character of the tower.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail sedwards@dos.state.fl.us, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick Gaske, Director, and
State Historic Preservation Officer
MEMORANDUM FOR Mr. Scott Edwards  
Historic Preservationist  
Bureau of Historic Preservation  
Division of Historical Resources  
R.A. Gray Building 4th Floor  
500 South Bronough Street  
Tallahassee FL 32399-0250

FROM: 18 ASOG, DET 1/CC  
8707 N. Golf Course Avenue  
MacDill AFB FL 33621-5321

SUBJECT: Renovation of Charlie Range's Flank Towers

1. The purpose of this letter is to reconsult with your office on the proposed work for Avon Park Air Force Range's (APAFR) 1067-Charlie Left Flank Tower (8HG1084) and 1060-Charlie Right Flank Tower (8HG1082). On 6 April 2004, APAFR consulted with your office for a proposal to renovate four flank observation towers: the two flank towers already mentioned on Charlie Range, the 1051-Bravo Left Flank Tower (8PO6164), and the 1053-Bravo Right Flank Tower (8PO6162). Your response, dated 20 April 2004, noted that the towers appear to meet the criteria for listing on the National Register of Historic Places; however, given the manner of the repair work, no adverse effect occurred to historic properties. APAFR is now adding changes to the proposed work on the Charlie flank towers and requests your office's input.

2. The added changes are prompted by our adding a more modern scoring system to the ranges. This system requires that the new scoring cameras be located within the cabs of the flank towers as opposed to the cameras being placed on the platforms that are on top of the cabs as the older, existing cameras are. With the new cameras being located within the cabs, several structural changes to the cabs are made to allow visibility for and access to the cameras. For visibility, the major changes include replacing the current windows with solid fixed glass on three of the four sides of each cab, removing the existing window awnings and bringing the new roof down lower so that the roof overhang shades the windows, and relocating the existing ladders to the north sides of each of the cabs so that the cameras can view the South Conventional and South Tactical Ranges. For access, the cabs are still accessed through a trap door located in the floor; however, to physically move equipment into and out of each cab, a door is cut in one side of each cab and an external catwalk is placed around the entire cab. The existing ladder is attached to the catwalk and the platform that is above each cab. The catwalk also serves for access for cleaning the outside of the solid windows. These changes, as well as other minor changes, are described in the attached statement of work (SOW). Also, the two enclosed sketches show the towers before and after the modifications.
3. For the documentation of the project area and existing environment, please review the materials that APAFR supplied your office with during the first consultation on 6 April 2004.

4. The Bravo Flank Towers are not part of this continued consultation.

5. APAFR believes that these modifications adversely affect historic properties in terms of the structures' design. (36 CFR 800.5(a)(1)). APAFR requests your review. APAFR offers mitigation by documentation in accordance with Historic American Buildings Survey Level II Standards (36 CFR 800.6(a)). This survey will be conducted prior to any structural modification to the towers. APAFR would, however, like to proceed with the general maintenance of the towers prior to the survey. If you concur with APAFR in that historic properties are adversely affected, APAFR requests further consultation with your office. If you do not concur that historic properties are adversely affected, please consult with APAFR and explain why.

6. We appreciate your response within 30 days. If you have any questions, please contact Tod Zechiel at (863) 452-4119, ext 328, or by e-mail at Tod.Zechiel@avonpark.macdill.af.mil.

FRANKLIN S. WALDEN, Lt Col, USAF
Commander

Attachments:
1. SOW for Charlie Flank Towers (2 each)
2. Two sketches of a Charlie Flank Tower

cc: 18 ASOG, DET 1, OL A/CEV (Paul Ebersbach)
Lt Col Franklin S. Walden
Department of the Air Force
18 ASOG Detachment 1
29 South Boulevard
Avon Park Air Force Range, Florida 33825-5700

RE: DHR Project File Number: 2004-8156
Received by DHR August 19, 2004
Proposed Renovations to Charlie Range Flank Towers
- Tower No. 1067 – Charlie Left Flank Tower (8HG1084)
- Tower No. 1060 – Charlie Right Flank Tower (8HG1082)
Avon Park Air Force Range, Highland County

Dear Colonel Walden:

We determined that we have not been provided sufficient information to evaluate the effect the project may have on historic properties. Please provide a detailed description of the project related activities that involves the removal of the existing window awnings and lowering the roof. Please provide details of the new awnings and a discussion on possible options that would not involve alterations to the roof profile.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail sedwards@dos.state.fl.us, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick Gaske, Director, and
State Historic Preservation Officer
From: Zechiel Tod  Civ 18 ASOG DET 1 OL A/CEVN
Sent: Thursday, September 16, 2004 10:16 AM
To: "Edwards, Scott"
Cc: Riedel Ronald Civ 18 ASOG DET 1 OL A/RS; Reese Roger Contr 18 ASOG DET 1 OL A/FSSI; Ebersbach Paul F Civ 18 ASOG DET 1 OL A/CEV; Walden Franklin Lt Col 18 ASOG DET 1/CC
Subject: APAFR Charlie Flank Towers

Mr. Edwards:

APAFR received the SHPO response letter via FAX on 12 Sept 2004. The letter requested additional information regarding the removal of the existing window awnings and lowering the profile of the roofs for the proposed work on the Charlie Flank Towers.

APAFR reconsulted with the tower operators and determined that the original awnings will remain on the towers, unless they are degraded beyond refurbishment. If degraded, they will be replace with like material and design. Retaining the awnings consequently does not require lowering the roof profile. The roofs will be replaced, but with like material and with their original configuration. Please respond to APAFR's new proposal to the awnings and roofs.

In our consultation letter dated 12 August 2004, APAFR offered an Historic American Buildings Survey Level II Standards as mitigation for the structural modifications to the towers. This survey would be conducted prior to any structural modification or repairs that require SHPO consultation as outlined in USAF/SHPO MOU. The survey would not necessarily be conducted prior to any general maintenance activities listed in the USAF/SHPO MOU that do not require SHPO consultation. Does the SHPO concur with this mitigation?

Again, thank you for your prompt past and present attention to these requests, especially in light of this year's hurricane season.

Sincerely,

Tod P. Zechiel
NEPA Coordinator
18 ASOG Det 1, OL A/CEVN
29 South Blvd
Avon Park AFR, FL 33825
DSN: 958-7119 ext 328
Com: (863) 452-4119 ext 328
Dear Colonel Walden:

Our office received and reviewed additional information for the above referenced projects in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended and 36 CFR Part 800: Protection of Historic Properties. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing, in the National Register of Historic Places), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

This office has been provided additional information provided by Mr. Tod Zechiel (Civ 18 ASOG DET 10L A/CEVN). We note that the existing window awnings and roof will not be modified. If the awning and roof need to be refurbished they will be replaced/repaired in kind. Therefore, based on the additional information provided, it is the opinion of this office that the proposed undertakings will have no adverse effect on the historic character of the flank towers.

Since refurbishment of the towers may take place prior to Historic American Building Survey (HABS) documentation, this office would recommend that the HABS photographic documentation be done prior to refurbishment. The remaining criteria (measured drawings and written data) of the HABS documentation can be conducted at a later date.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail sedwards@dos.state.fl.us, or at 850-245-6333 or 800-847-7278.

Sincerely,

Frederick Gaske, Director, and
State Historic Preservation Officer

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□ Palm Beach Regional Office □ St. Augustine Regional Office □ Tampa Regional Office
(561) 279-1475 • FAX: 279-1476 (904) 825-5045 • FAX: 825-5044 (813) 272-3843 • FAX: 272-2340
October 11, 2004

Mr. Paul Ebersbach
18 ASOG, DET 1, OL A/CEV
29 South Boulevard
Avon Park AFR, Florida 33825-5700

SAI # FL200410110112C

Dear Mr. Ebersbach:

Florida State Clearinghouse staff, pursuant to Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has reviewed the referenced final environmental assessment.

Based on the information contained in the document and previous comments by the Florida Department of State, Division of Historical Resources, the state has determined that the proposed federal project is consistent with the Florida Coastal Management Program.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2161.

Sincerely,

Sally B. Mann, Director
Office of Intergovernmental Programs

SBM/Im

cc: Scott Edwards, DOS, DHR

"More Protection, Less Process"
Printed on recycled paper.
MEMORANDUM FOR Mr. Scott Edwards
Historic Preservationist
Bureau of Historic Preservation
Division of Historical Resources
R.A. Gray Building 4th Floor
500 South Bronough Street
Tallahassee, FL 32399-0250

FROM: 18 ASOG, DET 1/CC
8707 N. Golf Course Avenue
MacDill AFB, FL 33621-5321

1. The purpose of this letter is to reconsult with your office on the proposed work for Avon Park Air Force Range’s (APAFR) 1067-Charlie Left Flank Tower (8HG1084) and 1060-Charlie Right Flank Tower (8HG1082). On 6 April 2004, APAFR consulted with your office for a proposal to renovate four flank observation towers: the two flank towers already mentioned on Charlie Range, the 1051-Bravo Left Flank Tower (8PO6164), and the 1053-Bravo Right Flank Tower (8PO6162). Your response, dated on 20 April 2004, noted that the towers appear to meet the criteria for listing on the National Register of Historic Places; however, given the manner of the repair work, no adverse effect occurred to historic properties. APAFR added changes to the proposed work on the Charlie Flank Towers in a second consultation letter dated 12 August 2004. These changes were made to accommodate a more modern camera scoring system. Your office responded by requesting additional information and expressed a concern with APAFR’s proposed roof modifications and removing the window awnings from the towers in a letter dated 13 September 2004. APAFR responded by stating that the roof and window awnings would not be modified and would be repaired with like materials and design in an e-mail dated 16 September 2004. APAFR also stated in the e-mail that we would conduct an Historic American Building Survey (HABS) Level II Survey. Your office concurred with the roof and awning repair and recommended that repair work take place after the HABS photo documentation in a letter dated 22 September 2004.

2. The United States Navy is installing the cameras. The Navy reviewed the Charlie Flank Towers’ design for the modern camera scoring system and concluded that the window awnings must be removed in order to accommodate the new set of cameras so that they can properly view and score the ranges. APAFR is therefore consulting with your office for the removal of all window awnings from the Charlie Flank Towers. Archaeological Consults, Inc. of Sarasota, Florida has completed archival photo documentation of the Charlie Flank Towers at HABS Level
II. Contact photos of the Charlie Flank Towers on typing paper are enclosed for your review. Archival prints have not yet been developed.

3. With the archival photography a success, APAFR requests concurrence with your office for proceeding with the renovation and remodeling of the Charlie Flank Towers.

4. The Secretary of the Interior’s Standards and Guidelines for Architectural and Engineering Documentation HABS/HAER STANDARDS lists requirements and criteria for a HABS Level II Survey. APAFR will ensure that documentation follows these standards and guidelines but also recognizes that each building and context that the building resides in differs from one project to the next. Therefore, please communicate to APAFR any particular emphasis in documentation for the Charlie Range Towers that your office deems important to be supplied to you in the HABS Level II Survey.

5. APAFR recognizes that as per 36 CFR 800.3(c)(4) your office is allowed up to 30 days to respond to APAFR’s Section 106 consultation request. However, a response by 10 November 2004 for at least concurrence or non-concurrence for proceeding with the renovation and remodeling work on the Charlie Flank Towers would be greatly appreciated.

6. If you have any questions, please contact Tod Zechiel of my staff in the Environmental Flight at (863) 452-4119, ext 328, or by e-mail at Tod.Zechiel@avonpark.macdill.af.mil.

Attachment:
Contact photo prints

cc:
18 ASOG, DET 1, OL A/CEV (Paul Ebersbach)
Lt Col Franklin S. Walden  
Department of the Air Force  
18 ASOG Detachment 1  
29 South Boulevard  
Avon Park Air Force Range, Florida 33825-5700

Re:  DHR Project File Number: 2004-8156-C  
Additional Information Received by DHR November 2, 2004  
Proposed Renovations to Charlie Range Flank Towers  
- Tower No. 1067 - Charlie Left Flank Tower (8HG1084)  
- Tower No. 1060 - Charlie Right Flank Tower (8HG1082)  
Avon Park Air Force Range, Highland County

Dear Colonel Walden:

Our office received and reviewed additional information for the above referenced projects in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended and 36 CFR Part 800: Protection of Historic Properties. The State Historic Preservation Officer is to advise Federal agencies as they identify historic properties (listed or eligible for listing in the National Register of Historic Places), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

We note that the scope of work has changed to include removal of the window awnings from the two towers in order to accommodate for the modern camera scoring system.

This office has previously determined that the Charlie Left Flank Tower (#1067 - 8HG1084) and Charlie Right Flank Tower (#1060 - 8HG1082) appear to meet the criteria for listing in the National Register. Therefore, the removal of the window awnings will have an adverse effect on the historic character of the tower.

We have reviewed and concur with your justification for the removal of the window awnings. In order to mitigate the adverse effect, Historic American Building Survey (HABS) Level II documentation should serve as the appropriate level of mitigation.

In addition, we request that the window awnings be removed and kept in protective storage. A summary report detailing the removal and storage of the historic window awnings should be submitted to our office within thirty days of completion. In storing the historic window awnings, we recommend that each have a “Do Not Remove” tag attached to it. Additional information on the tags should include what the pieces are and why they are there.

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We look forward to reviewing that HABS documentation when it is completed.

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservationist, by electronic mail sedwards@dos.state.fl.us, or at 850-245-6333 or 800-847-7278.

Sincerely,

[Signature]

Frederick Galke, Director, and
State Historic Preservation Officer