

## CHAPTER 13.

# VISUAL RESOURCES

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### 13.1 INTRODUCTION

This chapter describes the potential environmental consequences associated with implementation of the alternatives within the region of influence (ROI) for this resource. For a description of the affected environment for all resources, refer to the respective chapter of Volume 2 (Marine Corps Relocation – Guam). The locations described in that Volume 2 include the ROI for the Army Air and Missile Defense Task Force (AMDTF); the chapters are presented in the same order as the resource areas contained in this volume.

### 13.2 ENVIRONMENTAL CONSEQUENCES

#### 13.2.1 Approach to Analysis

##### 13.2.1.1 Methodology

Information on visual resources was gathered through on-site visits, background research, and participation in stakeholder and public meetings. The analysis of potential impacts to visual resources is based on the long term (operational) effects – i.e., after construction has occurred and all buildings, facilities, and structures are in place. Construction-related activities related to the development of the Army AMDTF facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities).

##### 13.2.1.2 Determination of Significance

For the purpose of the Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OIES), the proposed action would cause a significant impact to visual resources if they:

- Would substantially alter the views or scenic quality associated with particularly significant and/or publicly recognized vistas, viewsheds, overlooks, or features.
- Would substantially change the light, glare, or shadows within a given area.
- Would substantially affect sensitive receptors – i.e., viewers with particular sensitivity (or intolerance) to a changed view (e.g., a hillside neighborhood with views of a relatively undisturbed, naturally-appearing landscape).

Significant impacts that cannot be mitigated to less-than-significant levels are considered unavoidable.

A discussion is presented for each significance criterion listed that would be triggered by the alternatives.

##### 13.2.1.3 Issues Identified During Public Scoping Process

No visual resource issues regarding the proposed action were raised at the June 2007 public scoping meetings.

### 13.2.2 Headquarters/Housing Alternatives

This description of environmental consequences addresses all components of the proposed actions for the Army AMDTF. This includes the headquarters/housing component and the munitions storage component, each of which has three alternatives. A full analysis of each alternative is presented beneath the individual headings of this chapter. The weapons emplacement component has four alternatives. Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L). A summary of impacts specific to each set of alternatives (including an unclassified summary of weapons emplacement impacts) is presented at the end of this chapter.

#### 13.2.2.1 Headquarters/Housing Alternative 1 (Preferred Alternative)

##### North

###### *NCTS Finegayan*

*Construction.* Construction-related activities related to the development of the Army AMDTF facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities); therefore, less than significant.

*Operation.* Under Alternative 1, the administration/headquarters (HQ) and maintenance operations would be co-located in the north portion of Naval Computer and Telecommunications Station (NCTS) Finegayan. Development of AMDTF at the NCTS Finegayan area would result in substantial alteration of the existing landscape. Public views from Highway 3 into the densely forested areas proposed for development would take on a more urban/suburban character where naturally-appearing, densely-forested landscape would be replaced with a mix of housing (two-story) and barracks (four-story). Refer to Volume 2, Chapter 13, Section 13.2 Environmental Consequences for a visual depiction of this area post construction.

None of the public views into the Finegayan area are of any particular significance (e.g., a recognized vista or overlook); however, because the proposed development would result in such a substantial and dramatic change to the existing landscape along a major and well-traveled public roadway, it is anticipated to have a significant impact on visual resources. These impacts could be reduced to a level less than significant with mitigation.

Haputo Point Overlook could be negatively impacted. Negative impacts to this overlook could be lessened to a level of less than significant with mitigation.

###### *South Finegayan*

*Construction.* Construction-related activities related to the development of the Army AMDTF facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities); therefore, less than significant.

*Operation.* Under Alternative 1, the accompanied housing facilities would be co-located with the Main Cantonment housing areas in the southern portion of NCTS Finegayan and in South Finegayan. Recreational and quality of life (QOL) facilities would be co-located within and adjacent to the housing areas. As the unaccompanied housing facilities would be located within NCTS Finegayan and are compatible with adjacent proposed Marine Corps land uses, South Finegayan would be completely transformed into a relatively dense area with numerous buildings, roads, parking lots, sidewalks, and landscaping. While this would represent a major change over the existing visual conditions and interior views at Finegayan, it would be expected to be less than significant. Most of the property is already under

Department of Defense (DoD) ownership and few, if any, sensitive views or receptors currently exist on these sites. Refer to Volume 2, Chapter 13, Section 13.2, Environmental Consequences for a visual depiction of this area post construction.

### Central

#### *Navy Barrigada*

The proposed activities would be confined to NCTS and South Finegayan and would not impact visual resources at Navy Barrigada.

#### *Air Force Barrigada*

The proposed activities would be confined to NCTS and South Finegayan and would not impact visual resources at Air Force Barrigada.

### Alternative 1 Potential Mitigation Measures

- Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).
- Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam's native flora.

#### 13.2.2.2 Headquarters/Housing Alternative 2

### North

#### *NCTS Finegayan*

The proposed activities would be confined to Navy Barrigada and would not impact visual resources at NCTS Finegayan.

#### *South Finegayan*

The proposed activities would be confined to Navy Barrigada and would not impact visual resources at South Finegayan.

### Central

#### *Navy Barrigada*

*Construction.* Construction-related activities related to the development of the Army AMDTF facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities); therefore, less than significant.

*Operation.* Under Alternative 2, the AMDTF administrative/HQ and maintenance facilities, bachelor quarters, accompanied housing, and QOL/recreational facilities would all be located in the central portion of Navy Barrigada. While much of Navy Barrigada is composed of mowed grass and low shrubs with antennae and associated facilities and structures, much of this central portion is heavily vegetated and exhibits a natural state.

Development of AMDTF at Navy Barrigada would replace this naturally-appearing landscape with suburban growth. Potentially sensitive receptors include residents of Barrigada Heights and viewers from Mount Barrigada, both located directly to the north of the proposed AMDTF area. However, proposed

AMDTF buildings and structures are not expected to be more than two-stories high and the area would be comparable to other land uses in the nearby vicinity. Nevertheless, this development, a stand-alone Army cantonment, would substantially modify the existing landscape and cause a significant impact to visual resources. These impacts could be expected to be reduced to a level less than significant with mitigation measures in place.

#### *Air Force Barrigada*

The proposed activities would be confined to Navy Barrigada and would not impact visual resources at Air Force Barrigada. Therefore, there would be no impact to visual resources at Air Force Barrigada.

#### Alternative 2 Potential Mitigation Measures

- Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).
- Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam's native flora.

#### 13.2.2.3 Headquarters/Housing Alternative 3

##### North

#### *NCTS Finegayan*

As previously noted, none of the public views into the NCTS Finegayan area are of any particular significance (e.g., a recognized vista or overlook); however, because the proposed development would substantially and dramatically change to the existing landscape along a major and well-traveled public roadway, it is anticipated to have a significant impact to visual resources. These impacts could be reduced to a level less than significant with the same mitigation measures in place as described for Alternative 1.

#### *South Finegayan*

The proposed actions would be confined to NCTS Finegayan, Navy Barrigada, and Air Force Barrigada; therefore, they would not impact visual resources at South Finegayan.

##### Central

#### *Navy Barrigada*

Under Alternative 3, approximately half of the Navy Barrigada properties would be developed for housing and related supporting facilities. While much of the area is composed of mowed grass and low shrubs with antennae and associated facilities and structures, a large portion is currently heavily vegetated and reflects a more natural state. Development at Navy Barrigada would occur in both the previously disturbed and the densely vegetated areas; thus replacing much of the low and shrub-type landscape, and the naturally-appearing landscape with suburban growth.

Potentially sensitive receptors include people traveling along Highways 15 and 16, residents of Barrigada Heights in the north adjacent to Navy Barrigada, and viewers from Mount Barrigada. Proposed buildings and structures are not expected to be more than two-stories high and the area would be comparable to other land uses in the nearby vicinity (residential neighborhoods). Nevertheless, this development would substantially modify the existing landscape and cause a significant impact to visual resources. These impacts could be expected to be reduced to a level less than significant with mitigation measures in place.

### *Air Force Barrigada*

Under Alternative 3, approximately half of the Air Force Barrigada properties would be developed for housing and related supporting facilities. While much of the area is composed of mowed grass and low shrubs with antennae and associated facilities and structures, a large portion is currently heavily vegetated and reflects a more natural state. Development at Air Force Barrigada would occur in both the previously disturbed and the densely vegetated areas; thus replacing much of the low and shrub-type landscape, and the naturally-appearing landscape with suburban growth.

Potentially sensitive receptors include people traveling along Highways 15 and 16, residents of Barrigada neighborhoods to the east and south of Air Force Barrigada, and viewers from Mount Barrigada. Proposed buildings and structures are not expected to be more than two stories high and the area would be comparable to other land uses in the nearby vicinity (residential neighborhoods). Nevertheless, this development would substantially modify the existing landscape and cause a significant impact to visual resources. These impacts could be expected to be reduced to a level less than significant with mitigation measures in place.

#### Alternative 3 Potential Mitigation Measures

- Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).
- Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam's native flora.
- Create a buffer area and screen development on NCTS between the Haputo Point Overlook and adjacent proposed development.

### **13.2.3 Munitions Storage Alternatives**

#### 13.2.3.1 Munitions Storage Alternative 1 (Preferred Alternative)

##### Construction

Construction-related activities related to the development of the Army AMDTF facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities); therefore, less than significant.

##### Operation

The eight new earth-covered magazines (ECMs) proposed within Munitions Storage Area (MSA) 1 would add similar features to a landscape dominated by numerous other ECMs. Thus, proposed ECMs would be in keeping with the current features of the area. Furthermore, this area is away from any public views or sensitive receptors. No impacts would be anticipated to visual resources as a result of the additional ECMs.

#### 13.2.3.2 Munitions Storage Alternative 2

Existing conditions do not vary between the three munitions storage alternatives at MSA 1. Therefore, impacts for Munitions Storage Alternative 2 are identical those described for Munitions Storage Alternative 1.

### 13.2.3.3 Munitions Storage Alternative 3

Existing conditions do not vary between the three munitions storage alternatives at MSA 1. Therefore, impacts for Munitions Storage Alternative 3 are identical those described for Munitions Storage Alternative 1.

### 13.2.4 Weapons Emplacement Alternatives

Detailed information on the weapons emplacements is contained in a Classified Appendix (Appendix L). An unclassified summary of impacts specific to each set of alternatives is presented at the end of this chapter.

### 13.2.5 No-Action Alternative

Under the no-action alternative, no construction or operations associated with the Marine Corps relocation would occur. Existing operations at the proposed project areas would continue; therefore, the no-action alternative would have no significant impacts to visual resources.

### 13.2.6 Summary of Impacts

Tables 13.2-1, 13.2-2, 13.2-3 summarize the potential impacts of each major component – headquarters/housing, munitions storage, and weapons emplacement, respectively. A text summary is provided below.

**Table 13.2-1. Summary of Headquarters/Housing Impacts – Alternatives 1, 2, and 3**

| <i>Alternative 1</i>   | <i>Alternative 2</i>   | <i>Alternative 3</i>   |
|--|--|--|
| <b>Construction</b>  |  |  |
| LSI <ul style="list-style-type: none"> <li>Construction-related activities would be short-term in duration and minimal in their impacts</li> </ul>   | LSI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul>   | LSI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul>   |
| <b>Operation</b>   |  |  |
| SI-M <ul style="list-style-type: none"> <li>Few, if any, sensitive views or receptors currently exist in NCTS Finegayan and Finegayan South. However, since the proposed development would result in such a substantial and dramatic change to the existing landscape, impacts would be less than significant with mitigation</li> </ul> NI <ul style="list-style-type: none"> <li>There would be no impact to visual resources at Navy and Air Force Barrigada</li> </ul> | SI-M <ul style="list-style-type: none"> <li>Development at Navy Barrigada would replace naturally-appearing landscape with suburban growth in areas with potentially sensitive receptors</li> </ul> NI <ul style="list-style-type: none"> <li>There would be no impact to visual resources in NCTS Finegayan, Finegayan South, or Air Force Barrigada</li> </ul> | SI-M <ul style="list-style-type: none"> <li>Few, if any, sensitive views or receptors currently exist in NCTS Finegayan and Finegayan South. However, since the proposed development would result in such a substantial and dramatic change to the existing landscape, impacts would be less than significant with mitigation</li> </ul> LSI <ul style="list-style-type: none"> <li>Development at Navy Barrigada and Air Force Barrigada would replace naturally-appearing landscape with suburban growth in areas with potentially sensitive receptors, impacts would be less than significant with mitigation</li> </ul> NI <ul style="list-style-type: none"> <li>There would be no impact to visual resources at South Finegayan</li> </ul> |

Legend: LSI = Less than significant impact, SI-M = Significant impact mitigable to less than significant, NI = No impact.

**Table 13.2-2. Summary of Munitions Storage Impacts – Alternatives 1, 2, and 3**

| <i>Alternative 1</i>  | <i>Alternative 2</i>   | <i>Alternative 3</i>   |
|---|--|--|
| <b>Construction</b>   |  |  |
| LSI <ul style="list-style-type: none"> <li>Construction-related activities would be short-term in duration and minimal in their impacts</li> </ul>  | LSI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> | LSI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> |
| <b>Operation</b>  |  |  |
| NI <ul style="list-style-type: none"> <li>Proposed ECMs would be in keeping with the current features of the area. Furthermore, this area is away from any public views or sensitive receptors</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul>  | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul>  |

Legend: LSI = Less than significant impact, NI = No impact.

**Table 13.2-3. Summary of Weapons Emplacement Impacts – Alternatives 1, 2, 3 and 4**

| <i>Alternative 1</i>   | <i>Alternative 2</i>  | <i>Alternative 3</i>  | <i>Alternative 4</i>  |
|--|---|---|---|
| <b>Construction</b>  |   |   |   |
| NI <ul style="list-style-type: none"> <li>The existing scenic points do not lend viewing ability towards the project area</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> |
| <b>Operation</b>   |   |   |   |
| NI <ul style="list-style-type: none"> <li>The existing scenic points do not lend viewing ability towards the project area</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> | NI <ul style="list-style-type: none"> <li>The impacts would be the same as Alternative 1</li> </ul> |

Legend: NI = No impact.

Construction

Construction-related activities related to the development of facilities would be short-term in duration and minimal in their impacts (i.e., earth-moving equipment clearing vegetation and constructing facilities); therefore, would have less than significant impacts.

Operation

Developing facilities for the Army AMDTF would result in substantial changes to the visual environment at specific locations on Guam. The changed visual environment would affect public views by substantially modifying naturally-appearing landscapes located adjacent to public roadways. It would also potentially affect sensitive receptors traveling along Highways 15 and 16, residents of Barrigada Heights in the north adjacent to Navy Barrigada, residents of Barrigada neighborhoods to the east and south of Air Force Barrigada, and viewers from Mount Barrigada. The changes to the visual environment, while substantial in scale and potentially significant in nature, would be expected to be brought to a level of less than significant with mitigation measures in place. Mitigation measures would include implementing

design guidelines for all buildings that is in keeping with the Guam archetype, implementing a landscape plan focused on retention of mature specimen trees during construction, establishment of a full suite of vegetation in keeping with Guam’s native flora, and using native flora to create a natural-appearing “screen” between public roadways and build-up areas.

**13.2.7 Summary of Potential Mitigation Measures**

Table 13.2-4 summarizes potential mitigation measures for each action alternative.

**Table 13.2-4. Summary of Potential Mitigation Measures**

| <i>Headquarters/Housing Alternatives</i>   | <i>Munitions Storage Alternatives</i>  | <i>Weapons Emplacement Alternatives</i>  |
|--|--|--|
| <b>Construction</b>  |  |  |
| <ul style="list-style-type: none"> <li>No mitigation recommended</li> </ul>  | <ul style="list-style-type: none"> <li>No mitigation recommended</li> </ul>  | <ul style="list-style-type: none"> <li>No mitigation recommended</li> </ul>  |
| <b>Operation</b>   |  |  |
| <ul style="list-style-type: none"> <li>Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).</li> <li>Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam’s native flora.</li> </ul> | <ul style="list-style-type: none"> <li>Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).</li> <li>Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam’s native flora.</li> </ul> | <ul style="list-style-type: none"> <li>Establish and implement design guidelines for all buildings that are comparable to the Guam archetype (e.g., Spanish – stucco over concrete with stamped tile concrete roofs, muted and earthen color palette).</li> <li>Develop and implement a landscape plan focused on retention of mature specimen trees during construction (where possible) and the establishment of a full suite of vegetation representing Guam’s native flora.</li> </ul> |

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