

## CHAPTER 16.

# SOCIOECONOMICS AND GENERAL SERVICES

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### 16.1 INTRODUCTION

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

Socioeconomic impacts would be islandwide in nature with little difference in effects among the alternatives. Therefore, the summary of impacts presented below covers all of the alternatives except the no-action alternative, which is treated separately in Section 16.2.3.

### 16.2 ENVIRONMENTAL CONSEQUENCES

#### 16.2.1 Methodology

Refer to the corresponding section of Volume 2.

##### 16.2.1.1 Determination of Significance

Refer to the corresponding section of Volume 2.

##### 16.2.1.2 Issues Identified during Public Scoping Process

Refer to the corresponding section of Volume 2.

#### 16.2.2 Proposed Action

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. The weapons emplacement component has four alternatives. Detailed information on the weapons emplacements is contained in a Classified Appendix (Volume 9 Appendix L). A summary of impacts of the proposed action is presented at the end of this chapter.

##### 16.2.2.1 Population Impacts

###### Project Related Population

Refer to the corresponding section of Volume 2 for introductory statements.

###### *Approach to Analysis*

Table 16.2-1 provides assumptions made in conducting analysis for the construction phase, as well as the source of or rationale for those assumptions.

**Table 16.2-1. Construction Component Assumptions for Project Related Population Impacts**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Average number of dependents for in-migrating direct, on-site, construction jobs	0.20 - 0.35	Based on contractor interviews (Volume 9 Appendix F Socioeconomic Impact Assessment Study [SIAS])
Average number of dependents for in-migrating direct from purchases jobs	0.95 - 1.0	United States (U.S.) Census national data on persons per jobs (U.S. Census Bureau 2000a) and Guam Department of Labor (GDoL) interviews (Volume 9 Appendix F SIAS)
Average number of dependents for in-migrating indirect/induced jobs	0.95 - 1.0	U.S. Census national data on persons per jobs (U.S. Census Bureau 2000a) and GDoL interviews (Volume 9 Appendix F SIAS)

Table 16.2-2 provides assumptions made in conducting analysis for the operations phase, as well as the source of or rationale for those assumptions.

**Table 16.2-2. Operational Component Assumptions for Project Related Population Impacts**

<i>Assumption</i>	<i>Assumed Value</i>	<i>Source/Rationale</i>
Number of Army personnel by 2015.	630	Description of proposed action and alternatives
Number of Army dependents by 2015.	950	Description of proposed action and alternatives
Average number of dependents for in-migrating civilian military personnel.	0.95	U.S. Census national data on persons per jobs (U.S. Census Bureau 2000a)
Average number of dependents for in-migrating direct from purchases jobs.	0.95 - 1.0	U.S. Census national data on persons per jobs (U.S. Census Bureau 2000a) and GDoL interviews (Volume 9 Appendix F SIAS)
Average number of dependents for in-migrating indirect/induced jobs.	0.95 - 1.0	U.S. Census national data on persons per jobs (U.S. Census Bureau 2000a) and GDoL interviews (Volume 9 Appendix F SIAS)

### *Impacts*

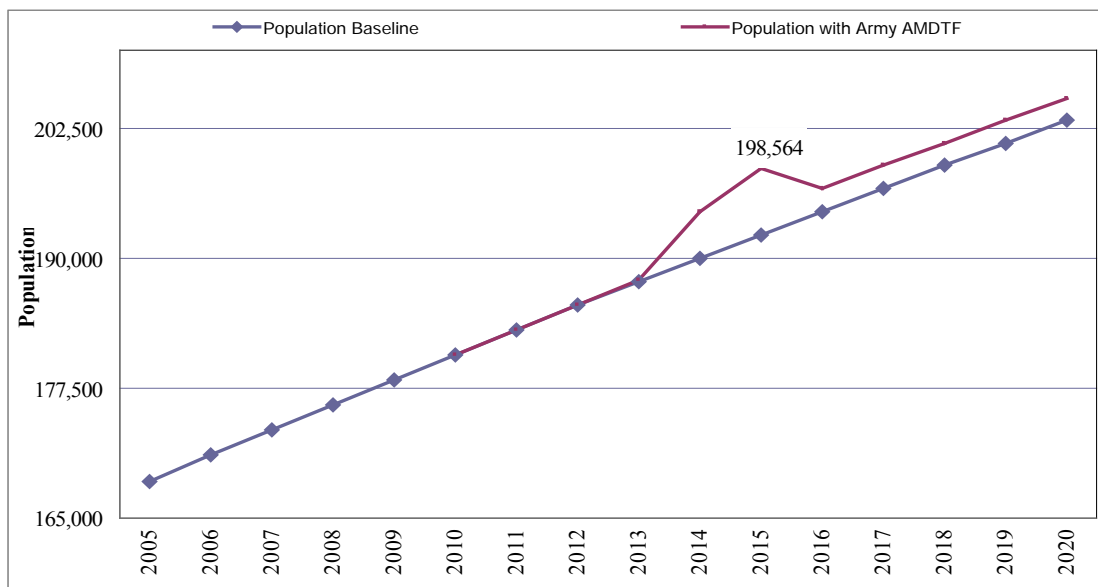
Table 16.2-3 indicates a 2015 peak-year total impact would be 6,262 in 2015, falling to 2,151 after construction ends.

**Table 16.2-3. Estimated Population Increase Associated with Proposed Army Action**

	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
Combined Construction and Operation Total Impact	0	89	89	89	4,353	6,262	2,151	2,151	2,151	2,151	2,151

*Note:* Population figures exclude existing Guam residents who obtain employment as a result of the proposed action.

Figure 16.2-1 illustrates that the 2015 population would exceed the baseline trend by about 3% (meeting the criteria for significance used in this analysis), while the increase from 2016 and into the future drops to a less than significant 1%. Population increases are considered to be inherently mixed (both beneficial and adverse), because population growth fuels economic expansion, but sudden growth also strains government services and the social fabric.



**Figure 16.2-1. Population With and Without Proposed Action**

Demographic Characteristics

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources), and qualitative analysis.

Household Characteristics

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources), and qualitative analysis.

16.2.2.2 Economic Impacts

Employment and Income

Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis (including data sources).

*Civilian Labor Force Demand*

Table 16.2-4 shows a combined total civilian labor force demand of 3,787 workers in the peak year of 2015, declining to a stable 553 workers after construction ceases.

**Table 16.2-4. Impact on Civilian Labor Force Demand (Full-Time Equivalent [FTE] Jobs)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Total Impact	0	37	37	37	3,272	3,787	553	553	553	553	553

Notes: Demand is in terms of FTE jobs. Portion assumed to be filled by Guam residents is not subtracted from these figures.

Figure 16.2-2 shows civilian labor force demand with and without the proposed action. The 2015 combined impact is 7% over the baseline trend, while the steady-state operational increase is only about 1% higher. The 7% figure meets the criteria used in this analysis for a beneficial significant impact, but the operational impact from 2016 on would be considered less than significant by itself.

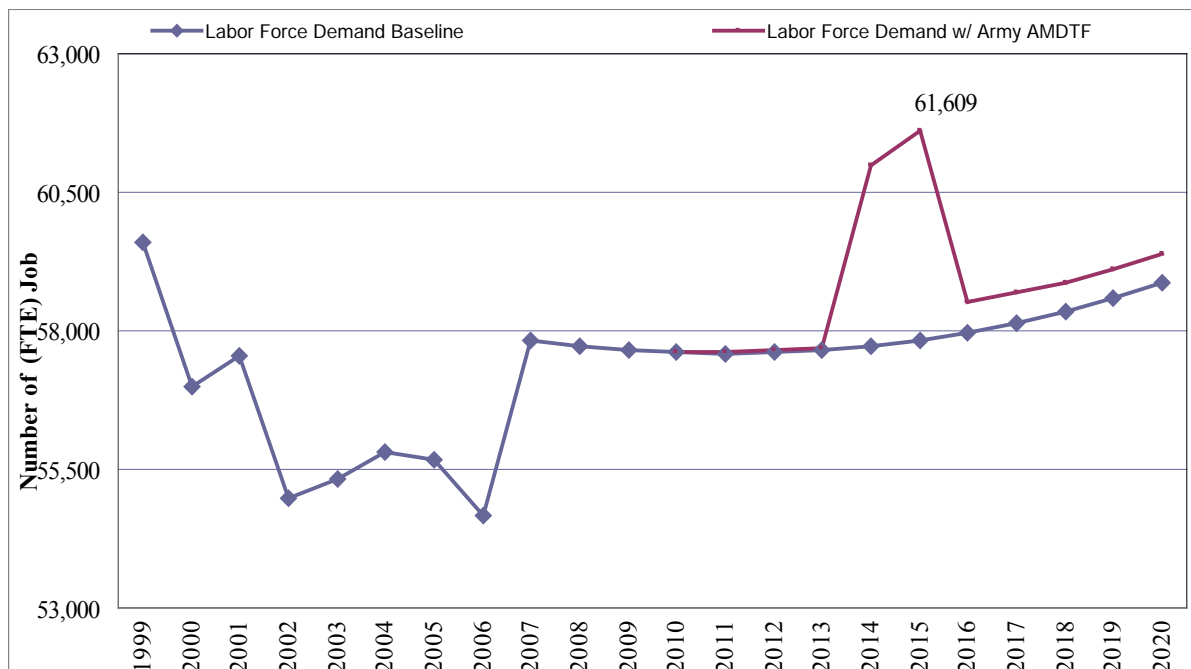


Figure 16.2-2. Labor Force Demand (FTE Jobs) With and Without Proposed Action

Civilian Labor Force Supply

Table 16.2-5 shows the probable labor force supply for direct onsite military construction jobs.

Table 16.2-5. Estimated Origin of Workers Constructing Army AMDTF Facilities

	2010	2011	2012	2013	2014	2015	2016
<b>TOTAL</b>	0	0	0	0	1,812	1,812	0
<b>GUAM</b>	0	0	0	0	232	232	0
<b>OFF-ISLAND</b>	0	0	0	0	1,580	1,580	0
H-2B Workers	0	0	0	0	1,101	1,101	0
Philippines	0	0	0	0	935	935	0
Other	0	0	0	0	165	165	0
CONUS/HI/Japan	0	0	0	0	281	281	0
CNMI	0	0	0	0	41	41	0
Other U.S. Pacific Islands	0	0	0	0	158	158	0

Note: Numbers may not add exactly due to rounding.

Table 16.2-6 estimates the share of non-military construction direct and indirect jobs, going to Guam residents versus off-island workers.

Table 16.2-6. Estimated Numbers of On-Island Workers for Various Job Categories other than Direct On-Site Construction

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Guam Workers	0	5	5	5	225	363	101	254	254	254	254
Off-Island Workers	0	32	32	32	1,235	1,613	451	299	299	299	299

Note: Demand is in terms of FTE jobs, and assumes one worker per FTE job.

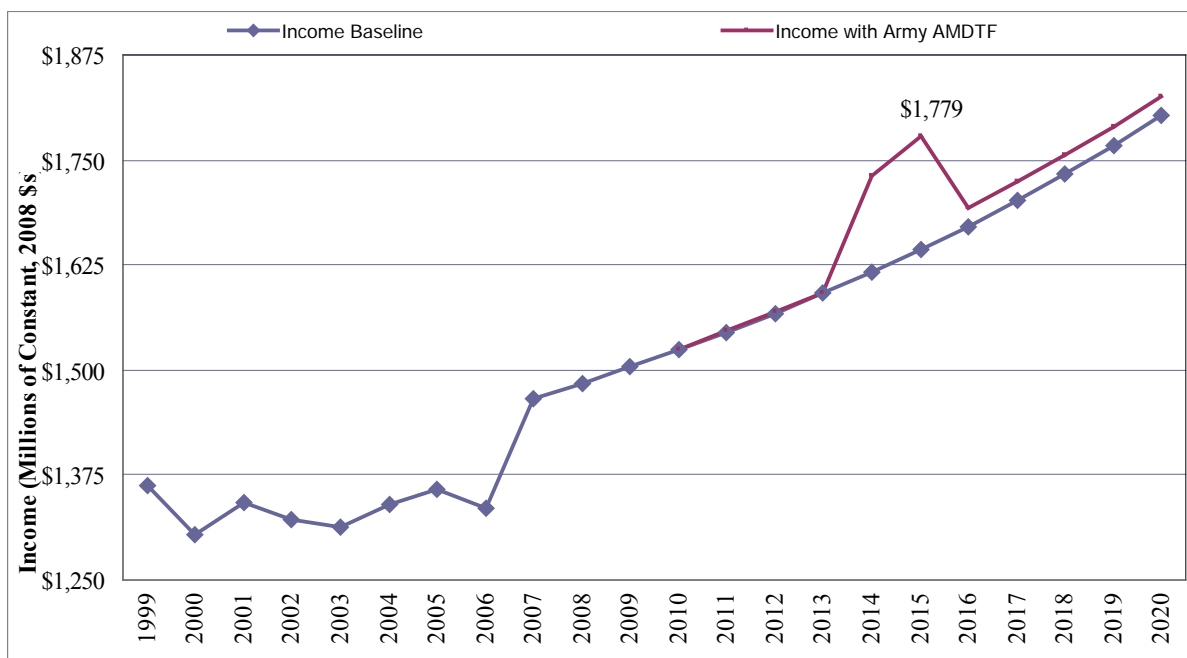
*Civilian Labor Force Income*

Table 16.2-7 shows that the peak figure for this analysis is \$136 million, falling back to \$23 million for the operational period from 2016 on.

**Table 16.2-7. Impact on Civilian Labor Force Income (Millions of 2008 \$s)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Total Impact	\$0	\$2	\$2	\$2	\$115	\$136	\$23	\$23	\$23	\$23	\$23

Figure 16.2-3 adds the various combined total impact figures to the baseline trend. Higher construction-period income would result in a significant beneficial 8% increase over the baseline trend in 2015 (though a substantial amount of that benefit would accrue to foreign workers), whereas the steady-state increase from 2016 would be 1% greater than baseline trend and thus be considered less than significant.



**Figure 16.2-3. Labor Force Income (Millions of 2008 \$s) With and Without Proposed Action**

*Standard of Living*

Refer to the corresponding section of Volume 2 for general discussion.

*Unemployment*

Refer to the corresponding section of Volume 2 for general discussion.

Housing

Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis (including data sources).

*Impacts*

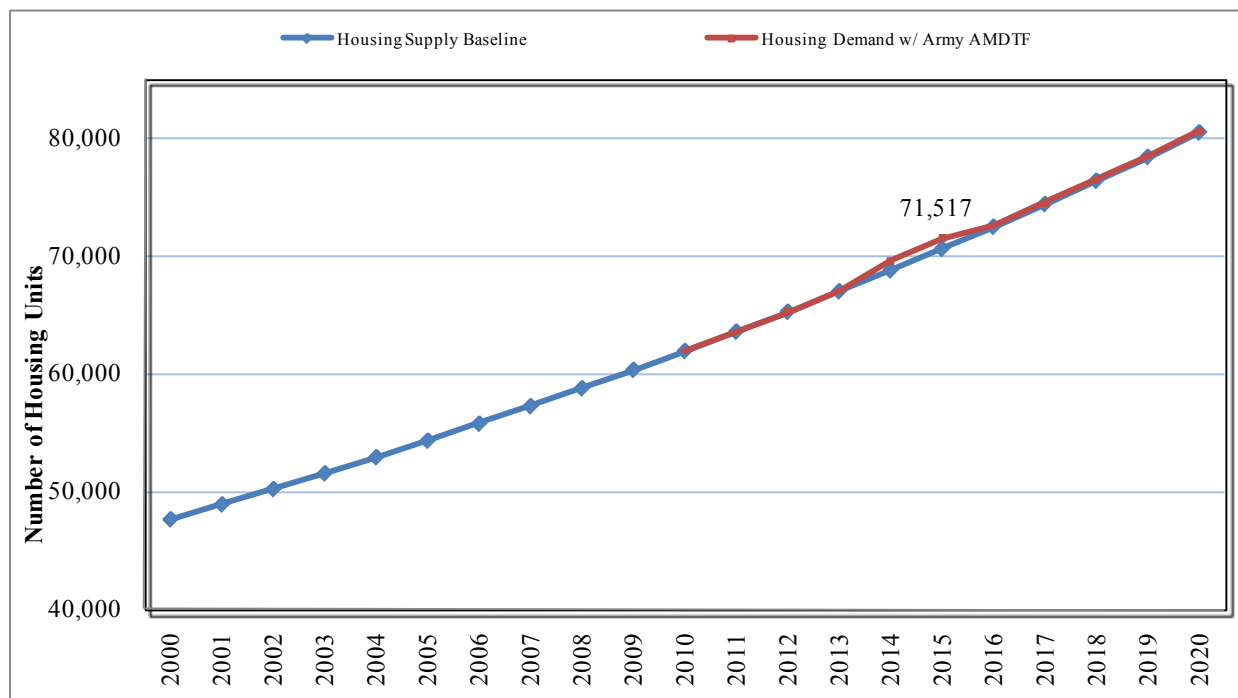
Refer to the corresponding section of Volume 2 for general discussion on housing supply.

Table 16.2-8 indicates the combined total impact of the proposed action would be a demand for 920 new civilian housing units in the peak year of 2015, falling to 147 after construction ends.

**Table 16.2-8. Demand for New Civilian Housing Units**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Total Impact	0	10	10	10	823	920	147	147	147	147	147

Figure 16.2-4 below projects a baseline trend in housing supply based on historical rates of development. The combined total 2015 peak demand is about 1% above the projected figure, but even this small increase drops to near equivalence with the projected baseline thereafter. This does not meet the 2% threshold for significance being used for this analysis.



**Figure 16.2-4. Housing Demand with Army AMDTF and Housing Supply**

Local Government Revenues

Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis (including data sources).

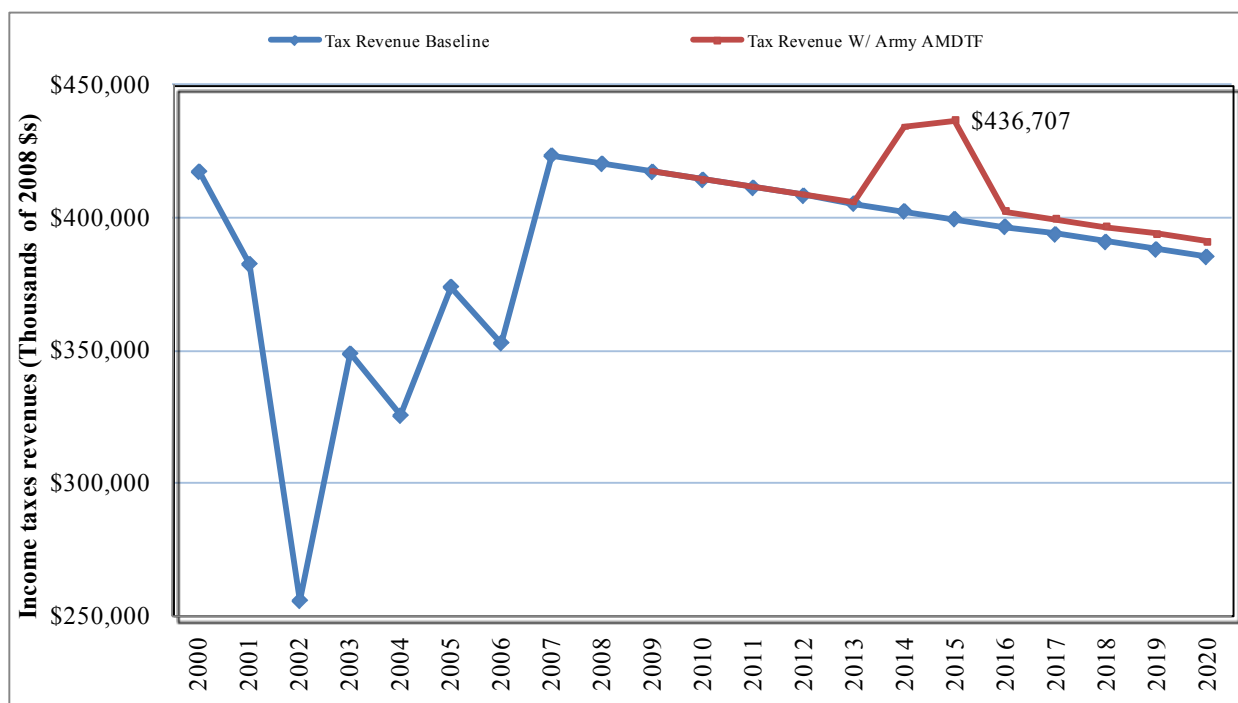
Note that this is not intended as a comprehensive estimate of all revenues, but only of primary ones. Tax revenue sources analyzed here include Gross Receipts Tax, Corporate Income Tax, and Personal Income Tax.

Table 16.2-9 shows the combined total impacts for each of the three primary revenue sources. The additional revenues from Gross Receipts Tax will reach \$12.8 million in the peak year of 2015, declining to a stable figure of \$901,000 after construction ends. New corporate income tax revenue would reach \$3.3 million in 2015, declining to a stable figure of \$230,000 in 2016. New personal income tax revenue would peak at \$21 million in 2015, declining to a stable figure of \$4.6 million thereafter.

**Table 16.2-9. Impact on Selected Tax Revenues (1,000s of 2008 \$s)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Receipts Tax	\$0	\$53	\$53	\$53	\$11,908	\$12,755	\$901	\$901	\$901	\$901	\$901
Corporate Income Tax	\$0	\$14	\$14	\$14	\$3,037	\$3,253	\$230	\$230	\$230	\$230	\$230
Personal Income Tax	\$0	\$305	\$305	\$305	\$16,760	\$21,047	\$4,591	\$4,591	\$4,591	\$4,591	\$4,591
Total	\$0	\$371	\$371	\$371	\$31,705	\$37,055	\$5,722	\$5,722	\$5,722	\$5,722	\$5,722

Figure 16.2-5 shows the projected total Government of Guam (GovGuam) tax revenue for the baseline trend (projected future without the proposed action) plus the impact of the proposed action. The chart shows tax revenues rising to \$436.7 million in 2015 and falling off as construction winds down. The 2015 figure represents the largest impact with a significant 9% increase over the baseline trend, while the steady-state level is less than 1% above the baseline trend. The 9% figure meets the criteria used in this analysis for a beneficial significant impact, but the operational impact would be less than significant.



**Figure 16.2-5. GovGuam Tax Revenue With and Without Proposed Action**

Gross Island Product

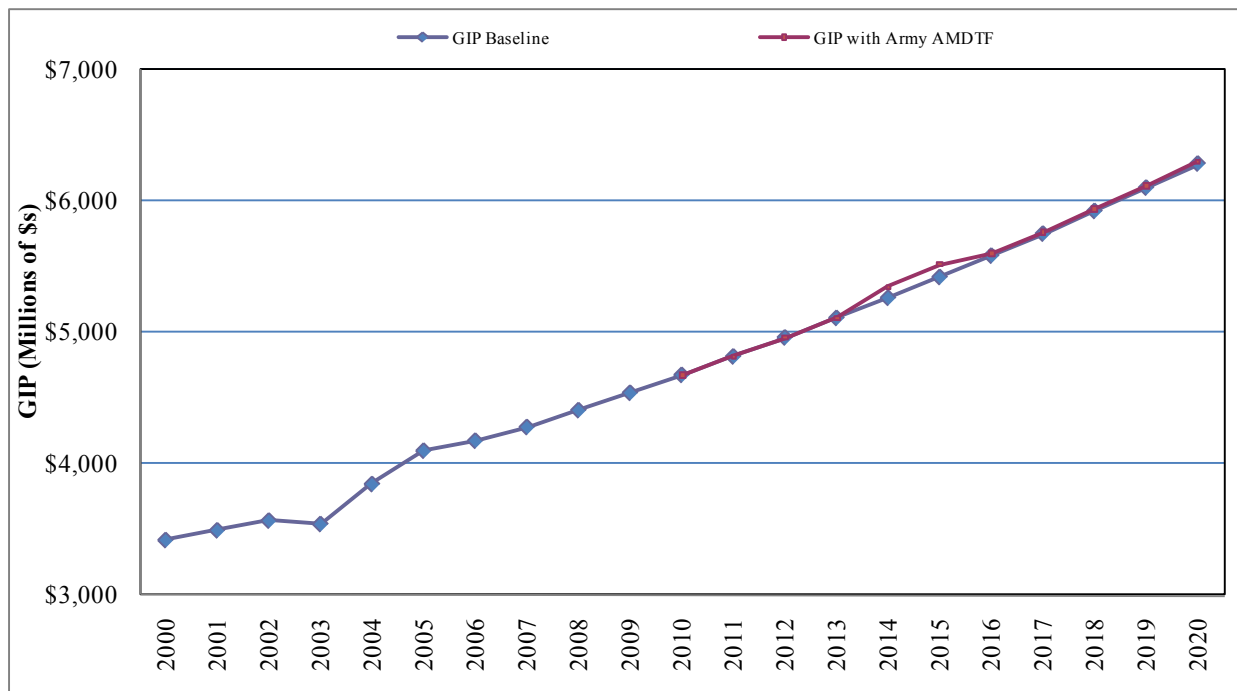
Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis.

Table 16.2-10 shows the Army AMDTF action would add \$99 million to the Gross Island Product (GIP) in 2015. When construction stops, the combined total impact would be reduced to \$17 million.

**Table 16.2-10. Impact on Gross Island Product (Millions of 2008 \$s)**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Combined Total Impact	\$0	\$1	\$1	\$1	\$83	\$99	\$17	\$17	\$17	\$17	\$17

Figure 16.2-6 shows the projected total GIP for the baseline trend (projected future without the proposed action) plus the total combined impact of the proposed action. The chart shows the GIP rising to \$5.5 billion in 2015. The 2015 figure represents a 2% increase over the baseline trend, while the steady-state operational level is about the same as the baseline trend.



**Figure 16.2-6. GIP (Millions of 2008 \$) With and Without Proposed Action**

Local Business Contracts

Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis (including data sources).

The construction portion of this action would warrant less construction activity than the Marine Corps relocation; however, as noted therein, local businesses would still experience benefits. The operational phase for the Army AMDTF project would present far fewer opportunities than Marine Corps activities.

Tourism

Refer to the corresponding section of Volume 2 for introductory statements and approach to analysis (including data sources).

16.2.2.3 Public Service Impacts

Refer to the corresponding section of Volume 2 for introductory statements.

Public Education

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources), and analysis.

Table 16.2-11 provides an overview of the proposed action’s impacts on Guam Public School System (GPSS) student populations for the action’s peak year and steady-state.



Table 16.2-12 provides an overview of the proposed action's impacts on GPSS staffing for the action's peak year and steady-state. The peak requirement in 2015, when the full effects of the proposed action are added to ongoing construction, requires a 2% increase over reported baseline staffing levels for GPSS. This increase falls to less than 1% after the peaks. The analysis indicates less than significant impacts in the long term to GPSS due to the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-11. GPSS Student Population Impacts Summary**

<i>Agency</i>	<i>Baseline Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GPSS Elementary	14,436	2015	316	2%	50	<1%
GPSS Middle	6,887	2015	133	2%	21	<1%
GPSS High	9,661	2015	176	2%	28	<1%

**Table 16.2-12. Primary and Secondary Education Teacher Requirements Impacts Summary**

<i>Agency</i>	<i>Baseline Teacher Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Teacher Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady State Additional Teacher Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GPSS Elementary	1,035	2015	23	2%	4	<1%
GPSS Middle	504	2015	10	2%	2	<1%
GPSS High	514	2015	9	2%	1	<1%

Table 16.2-13 and Table 16.2-14 provide overviews of the proposed action's impacts on Guam Community College (GCC) and University of Guam (UoG) student populations and non-adjunct faculty requirements for the action's peak year and steady-state. The peak requirement in 2015, when the full effects of the proposed action are added to ongoing construction, requires between a 2 and 3% increase over reported baseline staffing levels for agencies. This increase falls to less than 1% after the peak. The analysis indicates less than significant impacts in the long term to higher education agencies due to the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-13. Higher Education Student Population Impacts Summary**

<i>Agency</i>	<i>Baseline Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GCC	1,806	2015	45	2%	11	<1%
UoG	3,282	2015	79	2%	16	<1%

**Table 16.2-14. Higher Education Faculty Requirement Impacts Summary**

<i>Agency</i>	<i>Baseline Non-adjunct Faculty Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Non-adjunct Faculty Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Non-adjunct Faculty Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GCC	100	2015	3	3%	<1	<1%
UoG	185	2015	4	2%	1	<1%

### Public Health and Human Services

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources), and qualitative analysis.

Table 16.2-15 provides an overview of the proposed action's impacts on Guam Memorial Hospital Authority (GMHA), Guam Department Public Health and Social Services (GDPHSS), Guam Department of Mental Health and Substance Abuse (GDMHSA) and Guam Department of Integrated Services for Individuals with Disabilities (GDISID) service populations for the action's peak year and steady-state.

**Table 16.2-15. Impact on Public Health and Human Services, Service Population Summary**

<i>Agency</i>	<i>Baseline Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GMHA	160,797	2015	4,375	3%	264	<1%
GDPHSS	65,954	2015	2,348	4%	807	<1%
GDMHSA	65,954	2015	2,348	4%	807	<1%
GDISID	169,209	2015	6,262	4%	2,151	1%

Table 16.2-16 provides an overview of the proposed action's impacts on various public health and human services agency staffing requirements for the action's peak year and steady-state. The peak requirement in 2015, when the full effects of the proposed action are added to ongoing construction, requires between a 3% and 4.5% increase over reported baseline staffing levels for agencies. This increase falls to less than 1% for most agencies after the peak. The analysis indicates less than significant impacts to public health and human services agencies in the long term due to the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-16. Public Health and Human Services Impact Summary**

<i>Agency and Staffing Type</i>	<i>Baseline Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>
GMHA Physicians	57	2015	2	3.5%	<1	<1%
GMHA Nurses and Allied Health Professionals	355	2015	10	3%	1	<1%
GDPHSS - Primary Care Medical Providers and Nursing Staff	44	2015	2	4.5%	<1	1%
GDPHSS – Bureau of Communicable Disease Control Communicable Disease Prevention Professionals	33	2015	1	3%	<1	1%
GDPHSS – Bureau of Family Health and Nursing Services Nurses	22	2015	1	4.5%	<1	1%
GDMHSA – Mental Health Professionals	130	2015	5	4%	2	1.5%
GDISID Social Workers and Counselors	14	2015	1	3.5%	<1	1%

Public Safety Services

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources) and qualitative analysis.

Table 16.2-17 provides an overview of the proposed action's impacts on the Guam Police Department (GPD), Guam Fire Department (GFD), Guam Department of Corrections (GDoC), and Guam Department of Youth Affairs (GDYA) service populations for the action's peak year and steady-state.

**Table 16.2-17. Impact on Public Safety Service Population Summary**

<i>Agency</i>	<i>Baseline Service Population</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GPD	160,797	2015	6,262	4%	2,151	1%
GFD	175,877	2015	5,232	3%	571	<1%
GDoC	1,035	2015	23	2%	5	<1%
GDYA	39,813	2015	1,922	5%	1,105	3%

Table 16.2-18 provides an overview of the proposed action's impacts on various public safety services agency staffing requirements for the action's peak year and steady-state. The peak requirement in 2015, when the full effects of the proposed action are added to ongoing construction, requires between a 2% and 5% increase over reported baseline staffing levels for agencies. This increase falls to less than 1% for most agencies after the peak. The analysis indicates less than significant impacts to public safety agencies in the long term, due to the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-18. Public Safety Services Staffing Impacts Summary**

<i>Agency and Staffing Type</i>	<i>Baseline Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Staffing Requirements (going forward)</i>	<i>Steady Staffing Requirements Percentage Increase</i>
GPD – Police Officers	309	2015	11	3.5%	4	1%
GFD – Firefighters	190	2015	6	3%	1	<1%
GDoC – Custody and Security Personnel	188	2015	4	2%	1	<1%
GDYA – Youth Service Professionals	79	2015	4	5%	2	2.5%

#### Other Selected General Services

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources) and qualitative analysis.

Table 16.2-19 provides an overview of the proposed action's impacts on Guam Department of Parks and Recreation (GDPR), Guam Public Library System (GPLS), and Guam Judiciary key staffing requirements for the action's peak year and steady-state.

**Table 16.2-19. Impact on Other Selected General Service Agency Service Population**

	<i>Baseline Service Population Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Service Population</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Service Population Numbers (going forward)</i>	<i>Steady Service Population Percentage Increase</i>
GDPR, GPLS, and Judiciary Service Population	160,797	2015	6,262	4%	2,151	1%

Table 16.2-20 provides an overview of the proposed action's impacts on GDPR, GPLS and Guam Judiciary key staffing requirements for the action's peak year and steady-state. The peak requirement in 2015, when the full effects of the proposed action are added to ongoing construction, requires between a 3% and 3.5% increase over reported baseline staffing levels for agencies. This increase falls to 1% after the peak. The analysis indicates less than significant impacts in the long term to these agencies due to the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-20. Other Selected General Service Agency Impacts Summary**

<i>Agency and Staffing Type</i>	<i>Baseline Key Staffing Numbers</i>	<i>Peak Year</i>	<i>Peak Year Additional Key Staffing Requirements</i>	<i>Peak Year Percentage Increase</i>	<i>Steady Additional Key Staffing Requirements (going forward)</i>	<i>Steady Requirements Percentage Increase</i>
GDPR – General Staff	90	2015	3	3%	1	1%
GPLS – General Staff	28	2015	1	3.5%	<1	1%
Judiciary – Judges	6	2015	<1	3%	<1	1%

### Growth Permitting and Regulatory Agencies

Refer to the corresponding section of Volume 2 for introductory statements, approach to analysis (including data sources), and qualitative analysis.

Table 16.2-21 shows the estimated number of key professional staff required due to the proposed action. The peak requirement in 2014, when the full effects of the proposed action are added to ongoing construction, is up to 4.1% greater than reported baseline staffing levels for most agencies listed below. However, reflecting small baseline levels, even the small numbers below would represent a 20% increase for the Coastal Management Program (CMP) and 13% increase for Guam Department of Land Management (GDLM) at peak, and an even more sizeable 76% increase for the Alien Labor Processing and Certification Division (ALPCD). Starting in 2017 the required staffing levels would be up to 3% greater than baseline levels for most agencies, but still 8% for CMP and 10% for GDLM. Although the percentages vary by agency, the overall assessment will be one of less than significant impacts for the proposed action alone, except in conjunction with other aspects of the aggregate action.

**Table 16.2-21. Additional Growth Permitting Staff Required**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Guam Department of Public Works (GDPW) Permitting Staff	0.0	0.0	0.0	0.5	0.8	0.2	0.0	0.0	0.0	0.0	0.0
Guam Department of Land Management (GDLM) Permitting Staff	0.9	0.9	1.1	1.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Guam Environmental Protection Agency (GEPA) Permitting Staff	0.0	0.0	0.0	2.0	3.1	0.8	0.1	0.1	0.1	0.1	0.1
CMP Permitting Staff	0.0	0.0	0.0	0.9	1.1	0.7	0.3	0.3	0.3	0.3	0.3
Guam Power Authority (GPA) Permitting Staff	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Guam Waterworks Authority (GWA) Permitting Staff	0.0	0.0	0.0	0.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0
GFD Permitting Staff	0.0	0.0	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1
GDPHSS - DEH Permitting Staff	0.0	0.0	0.0	0.0	0.3	0.4	0.1	0.1	0.1	0.1	0.1
GDPR - HPO Permitting Staff*	0.0	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
GDoL - ALPCD Permitting Staff	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0

Note: Numbers show combined total impact.

\* The Programmatic Agreement (further described in the Cultural Resources chapter) helps the HPO with staffing issues by streamlining the Section 106 process. Because staffing requirements to meet federal regulations will be reduced by this agreement, freeing up current staff to work on non-federal projects, the staffing requirements noted in this table may not be as high.

#### 16.2.2.4 Sociocultural Impacts

Refer to the corresponding section of Volume 2 for introductory statements. Most sociocultural impacts are due to the overall aggregate effect of the proposed action, not the unique attributes of any particular service (i.e., Marines, Navy, or Army).

##### Crime and Serious Social Disorder

Refer to the corresponding section of Volume 2.

##### Political and Chamorro Issues

Refer to the corresponding section of Volume 2.

##### Community Cohesion

Refer to the corresponding section of Volume 2.

### **16.2.3 No-Action Alternative**

The no-action alternative assumes that all parts of the aggregate action, not just the proposed action covered in this volume, would not occur. Therefore, the no action conclusions given below are identical to those in Volume 2 for the Marine Corps Relocation – Guam and in Volume 7 for the aggregate action. The references below to substantial impacts with the proposed action would in fact apply more to those volumes than to this Volume 5.

Unlike physical resources, socioeconomic systems do not remain completely at baseline conditions if a proposed action is not implemented. Economies and population levels change due to other reasons as well. The various foregoing exhibits showing baseline trends for economic and demographic variables indicate long-term trends expected to continue without the proposed action, and Volume 7 will list a number of specific socioeconomic changes expected to occur independent of the proposed action. Furthermore, the announcement of the proposed action has already had socioeconomic consequences, such that a decision not to follow through on the military buildup would have short-term effects associated with a reversal of those existing consequences.

#### 16.2.3.1 Population/Economic Impacts

In the short term, a decision not to implement the proposed action would deflate any current speculative activity attributable the proposed action. Real estate values in particular would likely drop, hurting investors but increasing the affordability of housing. The contrast between the business community's expectations and a negative Record of Decision would likely produce a period of pessimism about Guam's economic future, especially if the national and international economic situation is weak.

In the long-term, the island's prospects would remain linked to international economic conditions and the health of its tourism industry. Conceivably, a smaller military profile might remove some barriers to growing the potential Chinese tourism market. Growth would resume, though probably with the same volatility experienced in recent decades.

#### 16.2.3.2 Public Service Impacts

In the case of the no-action alternative, the specific agencies discussed earlier in this chapter would not face the listed pressures to expand professional staffing, and agencies involved in planning and regulating growth would not experience such a sharp increase in workload. Although this was not specifically covered in the analysis, it may also be noted that agencies that are required to implement major

infrastructure developments, such as the ports and highways, would have more time to implement long-term plans rather than having to achieve much of their objectives over the next few years.

At the broader level, the no-action alternative and the elimination of prospective long-term revenues expected from the proposed action would leave GovGuam agencies in the difficult financial condition described in Volume 2. At least for the foreseeable future, this would adversely impact the various service agencies because of budget cuts, and would probably represent an important overall consequence for GovGuam.

#### 16.2.3.3 Sociocultural Impacts

To the extent that Guam experiences job losses, crime rates may rise in the short term. The political attention given to some contentious issues linked to public perceptions and concerns of the proposed action would likely recede. Military-civilian relations would likely remain at the current generally positive level.

The incentive for increased in-migration from the Freely Associated States of Micronesia (FAS) would decrease, reducing sociocultural issues associated with assimilating that population. However, the current incentives for providing support for those populations, both on Guam and the Micronesian states themselves, would also be lessened, with detrimental implications for those populations.

### 16.2.4 Summary of Impacts

Socioeconomic impacts are anticipated to be largely islandwide in nature with little difference in effects among the various alternatives. The impacts in this chapter are calculated under a scenario that assumes there would be no constraints (blockages) to the rapid development of spin-off private-sector economic activity driven by the military construction and permanent military operational stages. Most impacts are characterized by a burst of activity and impacts in the 2013-2014 timeframe, followed by relatively much lower impacts when only permanent personnel are present.

#### 16.2.4.1 Population Impacts

Including active-duty Army personnel and dependents (about 1,580 people), the proposed action would add nearly 6,300 residents to Guam's population in peak year 2015 and a subsequent more stable estimated 2,150 residents in the following years.

Population increases are considered to be inherently mixed (both beneficial and adverse), because population growth fuels economic expansion, but sudden growth also strains government services and the social fabric.

#### 16.2.4.2 Economic Impacts

Most long-term economic benefits would be beneficial though less than significant. The construction activity for the Army AMDTF would contribute to economic expansion, but also to substantial growing pains related to rapid population influx and public service agency impacts.

Including all the spin-off activity, the proposed action would provide jobs for about 3,800 civilian workers at the 2015 peak and about 550 on a more permanent basis. Guam residents are estimated to capture about 230 of the direct on-site construction jobs for Army AMDTF facilities at the 2015 peak, as well as 360 spin-off jobs that year and a more permanent 250 jobs a few years thereafter.

Standard of living impacts from the proposed action would be small, and some households would benefit from rising wages during the construction period, enough to slow deterioration of purchasing power over-time.

Civilian housing unit demand would peak at about 920 units in 2015, falling to about 150 units for the steady-state phase.

Although a more detailed fiscal impact assessment will be done by GovGuam using output from this EIS, preliminary estimates in this chapter suggest revenues from the three most important tax sources – gross receipts, corporate income, and personal income – would exceed \$37 million in peak year 2015 and stabilize at about \$5.7 million thereafter.

While Guam construction businesses would be expected to benefit from various opportunities, including military set-asides, there would likely be negligible impacts on tourism from the proposed action alone.

Guam's GIP would increase by \$99 million (2008 dollars) in peak year 2015 and by nearly \$17 million a year from 2016 on.

#### 16.2.4.3 Public Service Impacts

GovGuam's public service agencies would need to make only minor staffing increases to serve new population associated with the proposed action alone, though the impacts would be more notable during the construction timeframe. Most of these agencies would need to expand their services and staff slightly during the 2014-2015 peak (raising serious issues of availability of qualified workers), then cut them back as construction ends.

For public education services, the GPSS, GCC, and UoG together would need to hire a combined 49 teachers/faculty for the year 2015, falling to a combined eight after construction ends.

For health and human services, this chapter considered impacts on various aspects of the GMHA, GDPHSS, GDMHSA, and the GDISID. These agencies would need a combined 22 new key professional workers by 2015, dropping to a combined four for the next year and on.

Public safety agencies; Police, Fire, Corrections, and Youth Affairs, would require a combined 25 key professionals in 2015, falling to a combined seven for the next year and on.

Other selected general service agencies; Parks and Recreation, Libraries, and the Judiciary, would require a combined four key professionals in 2015, falling to a combined number of just two after construction ends.

Other agencies deal with permitting and regulating growth; they are affected more by the initial requests for permits than subsequent inspections and monitoring. Development permitting agencies on Guam would experience very low increases in demands for their services because the amount of housing and commercial space needed to serve this small population and employment increment would be below the existing stock of vacancies. That is, vacancies would absorb most of the demand, so that further new construction and the need for development permitting services would be minimal. GDLM, Guam Environmental Protection Agency, and the ALPCD would be the only agencies whose increased workloads would peak at more than one FTE (about one, three, and four, respectively).

#### 16.2.4.4 Sociocultural Impacts

The limited construction activity and operational aspects related to this proposed action likely would not impact the local community. In terms of assessing the possible impact of the operational phase of the component, sociocultural impacts would likely mirror those that accompany the proposed action described in Volume 2.



Table 16.2-22 summarizes the potential socioeconomic impacts of the Army AMDTF proposed actions.

**Table 16.2-22. Summary of Impacts of Army AMDTF Proposed Actions**

<i>Summary of Impacts</i>
<b>Construction</b>
<p>Population Impacts</p> <ul style="list-style-type: none"> <li>• Significant impact due to increase of about 6,300 in Guam's population during the construction phase</li> </ul> <p>Economic Impacts</p> <ul style="list-style-type: none"> <li>• Beneficial impact due to economic expansion fueled by increased population</li> <li>• Beneficial impacts to civilian labor force demand due to provision of construction-related jobs on Guam</li> <li>• Beneficial impacts to civilian labor force incomes due to infusion of income into the Guam economy</li> <li>• Beneficial impacts due to increase in local government revenue</li> <li>• Beneficial impacts to Gross Island Product due to increased GIP during the construction phase.</li> <li>• Beneficial impacts to local business opportunities due to increased military service contract opportunities for local Guam businesses. No impacts to tourism</li> <li>• No impacts to the standard of living</li> </ul> <p>Public Service Impacts</p> <ul style="list-style-type: none"> <li>• Significant impacts to public service agencies, most of which would need to expand their services and staff over 2% of the current reported baseline numbers during the 2014-2015 peak (raising issues of availability of qualified workers), then cut them back as construction ends.</li> <li>• Less than significant construction-related adverse impacts to growth permitting and regulatory agencies due to difficulty in meeting fluctuating staffing requirements with an existing environment of staffing and budget shortfalls and recruitment complications.</li> </ul> <p>Sociocultural Impacts</p> <ul style="list-style-type: none"> <li>• No impacts to community cohesion</li> <li>• No impacts to political and chamorro issues</li> <li>• No impacts to crime and social order</li> </ul>

**Table 16.2-22. Summary of Impacts of Army AMDTF Proposed Actions**

<i>Summary of Impacts</i>
<b>Operation</b>
<p>Population Impacts</p> <ul style="list-style-type: none"> <li>• Less than significant impact due to steady addition of about 2,150 in Guam's population during the operations phase</li> </ul> <p>Economic Impacts</p> <ul style="list-style-type: none"> <li>• Less than significant beneficial impact due to economic expansion fueled by increased population</li> <li>• Less than significant beneficial impacts to civilian labor force demand due to operations related jobs on Guam</li> <li>• Less than significant beneficial impacts to civilian labor force incomes due to infusion of income into the Guam economy</li> <li>• Less than significant beneficial impacts due to increase in local government revenue</li> <li>• Less than significant beneficial impact to Gross Island Product due to increased GIP during the operations phase</li> <li>• Less than significant beneficial impacts to local business opportunities due to increased military service contract opportunities for local Guam businesses No impacts to tourism</li> <li>• Less than significant direct and indirect impact of demand for civilian housing units peaking with permanent operational demand for 147 civilian housing units from 2016 on. No impacts to the standard of living</li> </ul> <p>Public Service Impacts</p> <ul style="list-style-type: none"> <li>• Less than significant impacts to public service agencies, most of which would need to expand their services and staff only slightly to accommodate increased demand for services. No significant lapse or decline in services would be expected.</li> </ul> <p>Sociocultural Impacts</p> <ul style="list-style-type: none"> <li>• No impacts to community cohesion</li> <li>• No impacts to political and chamorro issues</li> <li>• No impacts to crime and social order</li> </ul>

*Notes:* Impacts assessed for the proposed action in isolation from all other aspects of the overall collective action. Aggregate impacts are discussed in Volume 7. For "Growth Permitting and Regulatory Agencies," there are no meaningful distinctions between construction and operational component assumptions for permitting agencies because the permitting agency impacts are driven by population, employment, and spending, regardless of the project phase those drivers arise from.

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

### 16.2.5 Summary of Proposed Mitigation Measures

A review of the above impacts shows that the proposed action will largely have no significant or beneficial socioeconomic impacts on Guam.

During the construction phase, public service agencies will experience some strain. There is an acknowledged existing sub-standard condition of key public social service on Guam and documented historical difficulty in addressing and funding these conditions. Thus any increase in service population due to the proposed action will further strain these services, and significant impact was assessed as a 2% or greater increase in professional staffing levels required by the proposed action.

While this issue is more fully addressed in Volume 2 Chapter 16, the table below summarizes proposed mitigation measures to assist in decreasing any adverse impact to Guam's public service agencies.

Table 16.2-23 summarizes the proposed mitigation measures.

**Table 16.2-23. Summary of Proposed Mitigation Measures**

<i>Impact Area</i>	<i>Mitigation Measures</i>
Public Service and Growth Permitting and Regulatory Agencies	<p>Continue to support existing DoD programs that contribute and/or donate excess equipment to local agencies.</p> <p>DoD would continue to participate in CMTF to address community health needs such as facilitating information sharing between military and civilian health agencies, including health service needs data and health services utilization rates.</p> <p>DoD would coordinate with the Governor’s Office of Community Affairs to facilitate volunteer opportunities at Guam public service agencies for military personnel and their dependents.</p> <p>DoD would assist by leading a federal inter-agency effort to identify other federal programs and funding sources for GovGuam addressing the following:</p> <ol style="list-style-type: none"> <li>a) Enhancement of GovGuam Tax Revenue Collection efficacy. For example, improved revenue could be used to enhance recruitment and retention of GovGuam work force and contractual support;</li> <li>b) Examination of currently existing caps on benefits such as Medicaid and Medicare, and the non-provision of benefits such as Supplemental Security Income benefits, and the appropriateness of these caps and limits for Guam;</li> <li>c) Increase the number of Guam-based offices for the distribution of federal social service support, and to support the work of GovGuam public service agencies;</li> <li>d) Review and implementation of programs to assist GovGuam’s public agencies in adapting to peaks in service population growth;</li> <li>e) Provision of technical assistance for the development and implementation of a system of interpreters and translators available for the interpreting and translating needs of GovGuam public service agencies, to facilitate timely and appropriate provision of services for the English as a Second Language service population;</li> <li>f) The development of AmeriCorps, Teach for America, National Health Service Corps programs, and other similar programs on Guam;</li> <li>g) Improving the grant-writing capabilities within GovGuam agencies to improve possibilities of attracting federal support programs;</li> <li>h) Support for the recruitment of professionals during the construction phases of the proposed action for GovGuam public agency positions;</li> <li>i) Support for the use of the Interagency Personnel Act to support identified GovGuam agency personnel requirements, and/or</li> <li>j) Provision to GovGuam of technical assistance for, and development and implementation of, comprehensive data collection systems focused on the following topics: <ol style="list-style-type: none"> <li>1. GovGuam public services provided to FAS citizens, in order to facilitate GovGuam access to Compact Impact and other related funding.</li> <li>2. GovGuam agency services provided to military individuals, in order to facilitate GovGuam access of TRICARE and other related funding</li> <li>3. GovGuam public health agency patient information, records, and services accessed, in order to facilitate appropriate care administered in a timely manner</li> <li>4. GovGuam public agency billing systems, in order to facilitate GovGuam collection of payment for services</li> </ol> </li> </ol>

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